

# VICTOR<sup>®</sup>

## VICTOR FACTORY

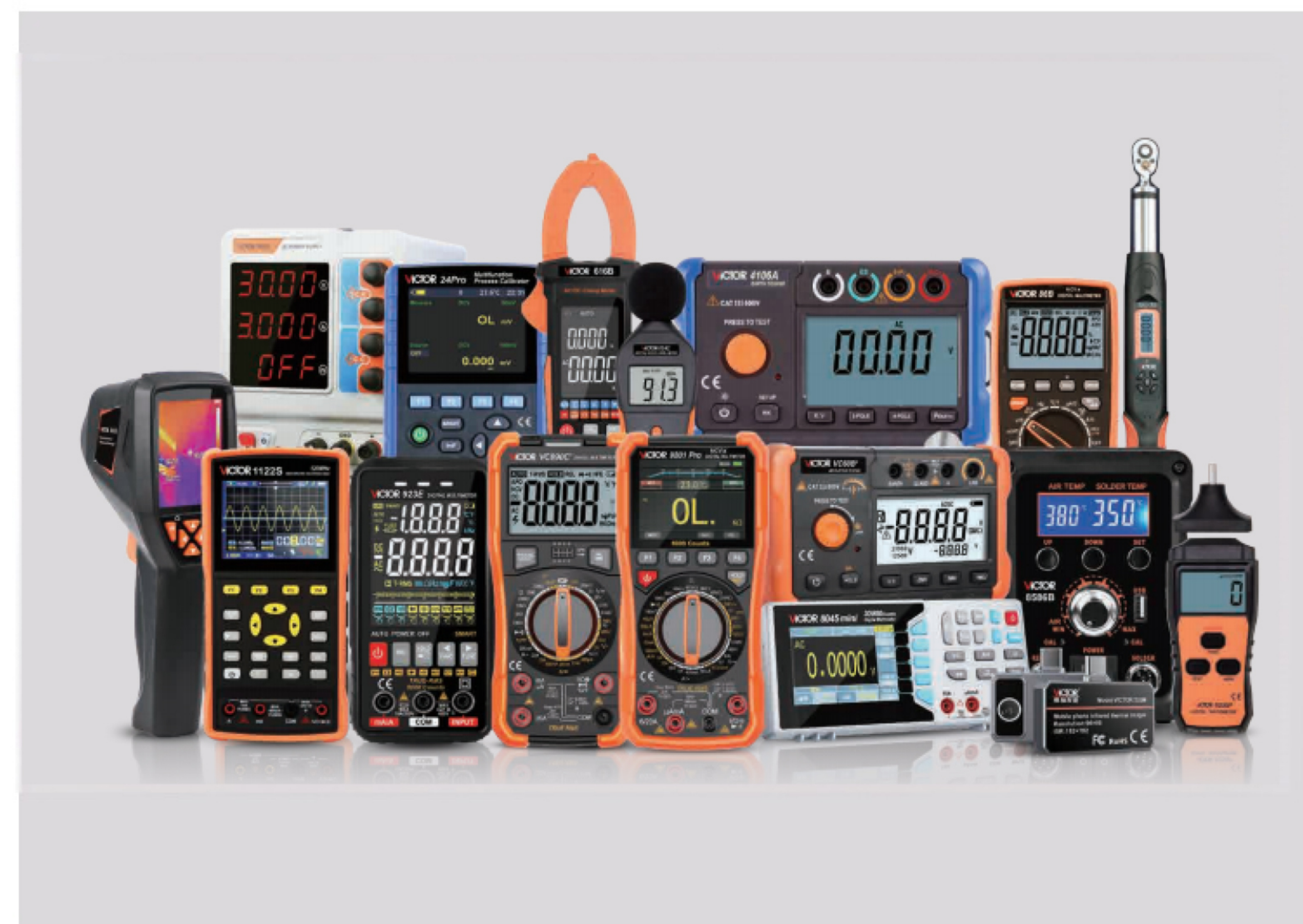
XI'AN BEICHENG ELECTRONICS CO.,LTD.  
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# VICTOR<sup>®</sup>

Starmeter Instruments Co.,Ltd

XI'AN BEICHENG ELECTRONICS CO., LTD.

# 2026 | NEW PRODUCTS CATALOG





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8045 mini

New Model



## Technical Specifications

| Function settings                                                                                                                                                                                                                                                                                                                                                                                                                                                        |       |                                                                                                                                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------------------------------------------------------------------------------------------------------------------------------------|
| Model: VICTOR 8045 mini                                                                                                                                                                                                                                                                                                                                                                                                                                                  |       |                                                                                                                                      |
| Structure: New design, newly opened mold (monochrome)                                                                                                                                                                                                                                                                                                                                                                                                                    |       |                                                                                                                                      |
| Functional features: No knife disc button function conversion, TFT color screen display, upper computer software.                                                                                                                                                                                                                                                                                                                                                        |       |                                                                                                                                      |
| Display: Number of words measured: 29999 (30000 Counts) LCD: 3.5 inch TFT Resolution 320 x RGB x 480                                                                                                                                                                                                                                                                                                                                                                     |       |                                                                                                                                      |
| Specification                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |                                                                                                                                      |
| DC Voltage (DCV): 300mV/3V/30V/300V/1000V (Can switch between automatic range and manual range)                                                                                                                                                                                                                                                                                                                                                                          |       |                                                                                                                                      |
| AC Voltage (ACV): 300mV/3V/30V/300V/750V (Frequency response: 40 ~ MAX: 10kHz) True RMS                                                                                                                                                                                                                                                                                                                                                                                  |       |                                                                                                                                      |
| DC current (DCI): 300μA/3mA/30mA/300mA/3A/10A (Can switch between automatic range and manual range)                                                                                                                                                                                                                                                                                                                                                                      |       |                                                                                                                                      |
| AC current (ACI): 300μA/3mA/30mA/300mA/3A/10A (Frequency response: 40 ~ MAX: 10kHz) True RMS                                                                                                                                                                                                                                                                                                                                                                             |       |                                                                                                                                      |
| Resistance (OHM): 300Ω/3k/30k/300k/3M/30M/300M (Can switch between automatic range and manual range)                                                                                                                                                                                                                                                                                                                                                                     |       |                                                                                                                                      |
| Capacitance (CAP): 30nF/300nF/3μF/30μF/300μF/3mF/30mF/300mF                                                                                                                                                                                                                                                                                                                                                                                                              |       |                                                                                                                                      |
| Temperature (Temp): -40°C ~ 1000°C, -40°F ~ 1832°F                                                                                                                                                                                                                                                                                                                                                                                                                       |       |                                                                                                                                      |
| Frequency (Freq): 30Hz/300Hz/30kHz/300kHz/3MHz/30MHz/300MHz                                                                                                                                                                                                                                                                                                                                                                                                              |       |                                                                                                                                      |
| (DIODE): Measure the voltage drop of the diode, with an open circuit voltage of approximately 3.2V                                                                                                                                                                                                                                                                                                                                                                       |       |                                                                                                                                      |
| Continuity (BZ): < about 30Ω Beep alarm+display indication                                                                                                                                                                                                                                                                                                                                                                                                               |       |                                                                                                                                      |
| Other functional items:                                                                                                                                                                                                                                                                                                                                                                                                                                                  |       |                                                                                                                                      |
| 1. Has measurement/stop (Run/Stop) function;                                                                                                                                                                                                                                                                                                                                                                                                                             |       |                                                                                                                                      |
| 2. Dual display function button switch (Dual), AC can dual display accompanying frequency, frequency can dual display duty cycle;                                                                                                                                                                                                                                                                                                                                        |       |                                                                                                                                      |
| 3. Math calculation button switch (Math), can display MAX/MIN;                                                                                                                                                                                                                                                                                                                                                                                                           |       |                                                                                                                                      |
| 4. Product model and version information button display (Utility);                                                                                                                                                                                                                                                                                                                                                                                                       |       |                                                                                                                                      |
| 5. Manual range switching and up/down conversion (Range/↑/↓);                                                                                                                                                                                                                                                                                                                                                                                                            |       |                                                                                                                                      |
| 6. The product is equipped with 2pcs 18650 lithium batteries (with a total charging capacity of 4400mAh), which can be charged and measured simultaneously with the product                                                                                                                                                                                                                                                                                              |       |                                                                                                                                      |
| 7. The display screen has a battery level grading display, which shows the charging status during charging. At the same time, there is a charging LED indicator next to the charging cable socket (as a charging indicator when the product is turned off). The red LED flashes during charging, and remains on when fully charged or not charged. After the product is turned off, the indicator light will turn off after about 30 seconds (when no load is detected). |       |                                                                                                                                      |
| 8. The upper computer software that comes with the product can be used for measurement, testing, and data recording and storage                                                                                                                                                                                                                                                                                                                                          |       |                                                                                                                                      |
| Packaging configuration                                                                                                                                                                                                                                                                                                                                                                                                                                                  |       |                                                                                                                                      |
| Manual                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1pc   | Brochure                                                                                                                             |
| 10A test lead                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 1pair |                                                                                                                                      |
| Temperature probe                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1pc   | K type (-20°C ~ 250°C)                                                                                                               |
| Color box                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1set  | (Bare machine mounted plastic bag, with pearl cotton padding used to secure and protect the product and separate accessories inside) |
| Type-C charging cable                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1pc   | 1 meter long                                                                                                                         |
| USB data cable                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 1pc   | USB (Square Type-B interface) 1 meter long                                                                                           |

8155



## Technical data 5 1/2

| Model                         |                    | 8155                                                    |
|-------------------------------|--------------------|---------------------------------------------------------|
| Display screen                |                    | 3.5" TFT LCD (resolution of 320*480)                    |
| Number of display digits      |                    | 5 1/2                                                   |
| Signal terminal               |                    | Front                                                   |
| Fastest measuring speed       |                    | 6 readings/s                                            |
| Function                      | No.                | Uncertainty, ± (% of reading + least significant digit) |
| DCV                           | Uncertainty        | 0.015% + 3                                              |
|                               | Measurement range  | 1 μV ~ 1000 V                                           |
|                               | Maximum resolution | 1 μV                                                    |
| ACV                           | Uncertainty        | 0.2% + 100                                              |
|                               | Measurement range  | 1 μV ~ 750 V                                            |
|                               | Maximum resolution | 1 μV                                                    |
| DCA                           | Frequency range    | 40 Hz ~ 100 kHz                                         |
|                               | Uncertainty        | 0.05% + 10                                              |
|                               | Measurement range  | 0.001 μA ~ 10 A                                         |
| ACA                           | Maximum resolution | 0.001 μA                                                |
|                               | Uncertainty        | 0.3% + 400                                              |
|                               | Measurement range  | 0.001 μA ~ 10 A                                         |
| Resistance                    | Maximum resolution | 0.001 μA                                                |
|                               | Frequency range    | 40 Hz ~ 5 kHz                                           |
|                               | Uncertainty        | 0.02% + 6                                               |
| Frequency/cycle               | Measurement range  | 0.001 Ω ~ 20 MΩ                                         |
|                               | Maximum resolution | 0.001 Ω                                                 |
|                               | Uncertainty        | 0.1% + 3                                                |
| Capacitance                   | Measurement range  | 200 Hz ~ 20 MHz                                         |
|                               | Maximum resolution | 0.001 Hz                                                |
|                               | Uncertainty        | 2% + 5                                                  |
| Capacitance                   | Measurement range  | 2 nF ~ 10 mF                                            |
|                               | Maximum resolution | 1 pF                                                    |
| Mathematical functions:       |                    | Relative measurement, max/min, dB, dBm, reading hold    |
| Data storage/reading          |                    | Yes                                                     |
| Interfaces                    |                    | USB Device, RS232, (Optional: USB Host LAN, Gpib)       |
| Trigger measurement           |                    | Yes                                                     |
| Squarewave output             |                    | Yes                                                     |
| Fast measurement              |                    | Yes                                                     |
| Resistance 4-line measurement |                    | Yes                                                     |
| External trigger measurement  |                    | Yes                                                     |
| AC+DC measurement             |                    | Yes                                                     |
| Calibration                   |                    | Yes                                                     |
| On-off/diode                  |                    | Yes                                                     |
| Limit test function           |                    | Yes                                                     |



8165A/8165



### Technical data 6 1/2

| Model                   |                          | 8165A                                                                                                  | 8165  |
|-------------------------|--------------------------|--------------------------------------------------------------------------------------------------------|-------|
| Display                 |                          | 3.5 inches color screen (with resolution of 320*480)                                                   |       |
| Displayed digit         |                          | 6 1/2                                                                                                  |       |
| Signal terminal         |                          | Front/Rear                                                                                             | Front |
| Maximum measuring speed |                          | 2300 readings/second                                                                                   |       |
| Function                | Item                     | Uncertainty, ± (% measurement value + % measurement range)                                             |       |
| DCV                     | Uncertainty              | 0.0030+0.0005                                                                                          |       |
|                         | Measurement range        | 0mV-1000V                                                                                              |       |
|                         | Maximum resolution       | 100nV                                                                                                  |       |
| ACV                     | Uncertainty              | 0.06+0.03                                                                                              |       |
|                         | Measurement range        | 1mV-750V                                                                                               |       |
|                         | Maximum resolution       | 100nV                                                                                                  |       |
| DCA                     | Uncertainty              | 0.05+0.006                                                                                             |       |
|                         | Measurement range        | 0uA-12A                                                                                                |       |
|                         | Maximum resolution       | 100pA                                                                                                  |       |
| ACA                     | Uncertainty              | 0.10+0.04                                                                                              |       |
|                         | Measurement range        | 1uA-12A                                                                                                |       |
|                         | Maximum resolution       | 100pA                                                                                                  |       |
| Resistance              | Frequency range          | 3Hz-10kHz                                                                                              |       |
|                         | Uncertainty              | 0.01+0.001                                                                                             |       |
|                         | Measurement range        | 0Ω-1GΩ                                                                                                 |       |
| Frequency/period        | Maximum resolution       | 10uΩ                                                                                                   |       |
|                         | Uncertainty              | 0.007                                                                                                  |       |
|                         | Measurement range        | 3Hz-300kHz                                                                                             |       |
| Capacitance             | Maximum resolution       | 1uHz                                                                                                   |       |
|                         | Uncertainty              | 1+0.3                                                                                                  |       |
|                         | Measurement range        | 0nF-100mF                                                                                              |       |
| On-off/Diode            | Maximum resolution       | 1pF                                                                                                    |       |
|                         | Reference terminal range | Yes                                                                                                    |       |
|                         | Input terminal range     | 100mV-10V                                                                                              |       |
| Proportion (DC: DC)     | Reference terminal range | 100mV-1000V                                                                                            |       |
|                         | Input terminal range     | 100mV-1000V                                                                                            |       |
|                         | Input terminal range     | 100mV-1000V                                                                                            |       |
| Temperature             | Type                     | Platinum resistance, thermistor and user-defined sensor                                                |       |
|                         | Maximum resolution       | 0.001°C                                                                                                |       |
|                         | Maximum resolution       | 0.001°C                                                                                                |       |
| Math function           |                          | Relative (ax+b), maximum/minimum/average, standard deviation, dB, dBm, reading-keeping and limits test |       |
| Graph                   |                          | Histogram and tendency chart                                                                           |       |
| Interface               |                          | RS-232, IEEE 488, LAN, USB Device, USB Host, Trig IN/OUT                                               |       |
| Programming language    |                          | SCPI compatible with Agilent 34401A and Fluke 45                                                       |       |

85C

### Technical data

| Mode         | 85C         |             | 85D                       |             |
|--------------|-------------|-------------|---------------------------|-------------|
| basic skills | Range       | Precision   | Range                     | Precision   |
| DC voltage   | 2V/20V/200V | ± (0.5%+3)  | 6V/60V                    | ± (0.5%+3)  |
|              | 600V        | ± (1.0%+10) | 600V                      | ± (1.0%+10) |
|              | 2V          | ± (1.0%+5)  | 6V                        | ± (0.8%+5)  |
| AC voltage   | 20V/200V    | ± (0.8%+5)  | 60V                       | ± (0.8%+5)  |
|              | 600V        | ± (1.2%+10) | 600V                      | ± (1.2%+10) |
|              | 600mA       | ± (1.0%+5)  | 600mA                     | ± (1.0%+5)  |
| DC current   | 6A          | ± (1.5%+10) | 6A                        | ± (1.5%+10) |
|              | 10A         | ± (2.0%+5)  | 10A                       | ± (2.0%+5)  |
|              | 600mA       | ± (1.5%+10) | 600mA                     | ± (1.5%+10) |
| AC current   | 6A          | ± (2.0%+5)  | 6A                        | ± (2.0%+5)  |
|              | 10A         | ± (3.0%+10) | 10A                       | ± (3.0%+10) |
|              | 2000Ω       | ± (1.3%+5)  | 600Ω                      | ± (1.3%+5)  |
| Resistance   | 20kΩ/200kΩ  | ± (0.8%+3)  | 6kΩ/60kΩ/600kΩ            | ± (0.8%+3)  |
|              | 2MΩ         | ± (1.5%+3)  | 6MΩ                       | ± (1.5%+3)  |
|              | 20MΩ        | ± (2.0%+10) | 60MΩ                      | ± (2.0%+10) |
| Capacitance  | *           |             | 60nF/600nF/6uF/60uF/600uF | ± (3.5%+20) |
|              |             |             | 6mF/60mF                  | ± (5.0%+10) |



85D

| Features             | 85C                              | 85D                              |
|----------------------|----------------------------------|----------------------------------|
| Display              | LCD digital display              | LCD digital display              |
| Operation            | Full intelligent automatic range | Full intelligent automatic range |
| Max display          | 1999                             | 5999                             |
| Diode test           | ✓                                | ✓                                |
| CAP                  | ✓                                | ✓                                |
| Firewire recognition | ✓                                | ✓                                |
| HOLD                 | ✓                                | ✓                                |
| NCV                  | ✓                                | ✓                                |
| Backlight            | ✓                                | ✓                                |
| Overload             | OL displayed on LCD              | OL displayed on LCD              |
| Low voltage          | ✓                                | ✓                                |
| On-off beep          | ✓                                | ✓                                |
| Operating °C         | 0~40°C <75%RH                    | 0~40°C <75%RH                    |
| Store (°C)           | -20~60°C <85%RH                  | -20~60°C <85%RH                  |
| Shut-down            | ✓                                | ✓                                |
| Unit symbol          | ✓                                | ✓                                |
| Resistance           | 10MΩ                             | 10MΩ                             |
| Frequency response   | 40~1KHz                          | 40~1KHz                          |
| Power supply         | AAA 1.5V*2                       | AAA 1.5V*2                       |
| Product Size         | 146*72*50mm                      | 146*72*50mm                      |
| Weight               | 210g                             | 210g                             |





201



202



203

| Function                     | Range          | 201                                       | 202          | 203                                   |
|------------------------------|----------------|-------------------------------------------|--------------|---------------------------------------|
| DCV                          | 200mV          | ±(0.5%+5)                                 | ±(0.5%+5)    | ±(0.5%+5)                             |
|                              | 2V/20V/200V    | ±(0.5%+3)                                 | ±(0.5%+3)    | ±(0.5%+3)                             |
|                              | 600V           | ±(1.0%+10)                                | ±(1.0%+10)   | ±(1.0%+10)                            |
| ACV                          | 200V/600V      | ±(1.2%+10)                                | ±(1.2%+10)   | ±(1.2%+10)                            |
|                              | 200uA          | ±(1.0%+10)                                | ±(1.0%+10)   | ±(1.0%+10)                            |
|                              | 200mA          | ±(1.2%+8)                                 | ±(1.2%+8)    | ±(1.2%+8)                             |
| DCA                          | 10A            | ±(2.0%+5)                                 | ±(2.0%+5)    | ±(2.0%+5)                             |
|                              | 200Q           | ±(0.8%+5)                                 | ±(0.8%+5)    | ±(0.8%+5)                             |
|                              | 2kQ/20kQ/200kQ | ±(0.8%+3)                                 | ±(0.8%+3)    | ±(0.8%+3)                             |
| Resistance                   | 2MΩ            |                                           | ±(1.0%+5)    | ±(1.0%+5)                             |
|                              | 200MΩ          |                                           | ±(5.0%+30)   |                                       |
|                              | 200MΩ          |                                           | ±(5.0%+10)   |                                       |
| Capacitance                  | 200uF          |                                           |              | ±(1.0%+10)                            |
| Frequency                    | 20kHz          |                                           |              | ±(1.0%+10)                            |
| Temperature                  | -20°C~1000°C   |                                           |              | <400°C ±(1.0%+5)<br>≥400°C ±(1.5%+15) |
|                              | -4°F~1832°F    |                                           |              | <752°F ±(1.0%+5)<br>≥752°F ±(1.5%+15) |
| Battery measurement function |                | ✓                                         |              |                                       |
| Diode test                   |                | ✓                                         | ✓            | ✓                                     |
| Continuity alarm             |                | ✓                                         | ✓            | ✓                                     |
| Data hold                    |                | ✓                                         | ✓            | ✓                                     |
| Torch function               |                | ✓                                         | ✓            | ✓                                     |
| Back light function          |                | ✓                                         | ✓            | ✓                                     |
| NCV measurement              |                | ✓                                         | ✓            | ✓                                     |
| Auto shutdown                |                | ✓                                         | ✓            | ✓                                     |
| True RMS                     |                | ✓                                         | ✓            | ✓                                     |
| Operating method             |                | Manual range                              | Manual range | Manual range                          |
| Low voltage display          |                | "CL" symbol appears.                      |              |                                       |
| Display method               |                | LCD display                               |              |                                       |
| Max. display                 |                | 5999 (3 1/2 digits) Auto polarity display |              |                                       |
| Measuring method             |                | AD conversion measurement                 |              |                                       |
| Sampling rate                |                | About 3 times/s                           |              |                                       |
| Over range indication        |                | The MSD displays "OL"                     |              |                                       |
| Dimension                    |                | 146mm*72mm*50mm                           |              |                                       |
| Weight                       |                | About 232g (include batteries)            |              |                                       |

### Technical data

| Function              | Range                             | 205                                       | 205A                                  |
|-----------------------|-----------------------------------|-------------------------------------------|---------------------------------------|
| DCV                   | 600mV                             | ±(0.5%+5)                                 | ±(0.5%+5)                             |
|                       | 6V/60V                            | ±(0.5%+3)                                 | ±(0.5%+3)                             |
|                       | 600V                              | ±(1.0%+10)                                | ±(1.0%+10)                            |
| ACV                   | 6V/60V                            | ±(0.8%+5)                                 | ±(0.8%+5)                             |
|                       | 600V                              | ±(1.2%+10)                                | ±(1.2%+10)                            |
|                       | 600uA/6000uA                      |                                           | ±(1.0%+10)                            |
| DCA                   | 60mA                              |                                           | ±(1.2%+8)                             |
|                       | 600mA                             | ±(1.2%+8)                                 |                                       |
|                       | 6A                                |                                           | ±(2.0%+5)                             |
| ACA                   | 600uA/6000uA                      |                                           | ±(1.0%+10)                            |
|                       | 60mA                              | ±(1.5%+15)                                | ±(1.5%+15)                            |
|                       | 600mA                             |                                           | ±(3.0%+10)                            |
| Resistance            | 600Ω                              | ±(0.8%+5)                                 | ±(0.8%+5)                             |
|                       | 6kΩ                               | ±(0.8%+5)                                 | ±(0.8%+5)                             |
|                       | 60kΩ/600kΩ/6MΩ                    | ±(0.8%+4)                                 | ±(0.8%+4)                             |
| Capacitance           | 10nF                              | ±(5.0%+40)                                | ±(5.0%+40)                            |
|                       | 100nF/1uF/10uF/100uF              | ±(3.5%+20)                                | ±(3.5%+20)                            |
|                       | 2mF                               | ±(5.0%+40)                                | ±(5.0%+40)                            |
| Frequency             | 10Hz/100Hz/1kHz/10kHz/100kHz/2MHz | ±(1.0%+10)                                | ±(1.0%+10)                            |
|                       | -20°C~1000°C                      |                                           | <400°C ±(1.0%+5)<br>≥400°C ±(1.5%+15) |
|                       | -4°F~1832°F                       |                                           | <752°F ±(1.0%+5)<br>≥752°F ±(1.5%+15) |
| Diode test            |                                   | ✓                                         | ✓                                     |
| Continuity alarm      |                                   | ✓                                         | ✓                                     |
| Data hold             |                                   | ✓                                         | ✓                                     |
| Torch function        |                                   | ✓                                         | ✓                                     |
| Back light function   |                                   | ✓                                         | ✓                                     |
| NCV measurement       |                                   | ✓                                         | ✓                                     |
| Auto shutdown         |                                   | ✓                                         | ✓                                     |
| True RMS              |                                   | ✓                                         | ✓                                     |
| Operating method      |                                   | Manual range                              | Auto range                            |
| Low voltage display   |                                   | "CL" symbol appears.                      |                                       |
| Display method        |                                   | LCD display                               |                                       |
| Max. display          |                                   | 5999 (3 1/2 digits) Auto polarity display |                                       |
| Sampling rate         |                                   | About 3 times/s                           |                                       |
| Over range indication |                                   | The MSD displays "OL"                     |                                       |
| Dimension             |                                   | 146mm*72mm*50mm                           |                                       |
| Weight                |                                   | About 232g (include batteries)            |                                       |

205



205A





9205



## Technical data

| Model       | VC9205            |                                 | VC9208                       |                                         |
|-------------|-------------------|---------------------------------|------------------------------|-----------------------------------------|
|             | Resolution        | Accuracy                        | Resolution                   | Accuracy                                |
| DC Voltage  | 200mV/2V/20V/200V | $\pm(0.5\%+4)$                  | 200mV/2V/20V/200V            | $\pm(0.5\%+4)$                          |
|             | 1000V             | $\pm(0.8\%+15)$                 | 1000V                        | $\pm(0.8\%+15)$                         |
| AC Voltage  | 2V/20V/200V       | $\pm(0.8\%+8)$                  | 2V/20V/200V                  | $\pm(0.8\%+8)$                          |
|             | 750V              | $\pm(1.2\%+15)$                 | 750V                         | $\pm(1.2\%+15)$                         |
| DC Current  | 200uA/2mA/20mA    | $\pm(1.5\%+10)$                 | *                            | *                                       |
|             | 200mA             | $\pm(1.5\%+10)$                 | 200mA                        | $\pm(1.5\%+10)$                         |
| AC Current  | 10A               | $\pm(2.5\%+15)$                 | 10A                          | $\pm(2.5\%+15)$                         |
|             | 200mA             | $\pm(2.0\%+15)$                 | 200mA                        | $\pm(2.0\%+15)$                         |
| Capacitance | 10A               | $\pm(3.5\%+15)$                 | 10A                          | $\pm(3.5\%+15)$                         |
|             | 20nF/2uF          | $\pm(2.5\%+20)$                 | 20nF/2uF                     | $\pm(2.5\%+20)$                         |
| Resistance  | 200uF             | $\pm(5.0\%+10)$                 | 200uF                        | $\pm(5.0\%+10)$                         |
|             | *                 | *                               | 2kH/200kHz                   | $\pm(3.0\%+18)$                         |
| Frequency   | 200Ω              | $\pm(0.8\%+5)$                  | 200Ω                         | $\pm(0.8\%+5)$                          |
|             | 2kΩ/20kΩ/200kΩ    | $\pm(0.8\%+3)$                  | 2kΩ/20kΩ/200kΩ/2MΩ           | $\pm(0.8\%+3)$                          |
| Celsius     | 20MΩ              | $\pm(1.0\%+25)$                 | 20MΩ                         | $\pm(1.0\%+25)$                         |
|             | 200MΩ             | $\pm 5\%(\text{reading}+10)+30$ | *                            | *                                       |
|             | *                 | *                               | $(-20-1000)^{\circ}\text{C}$ | $\pm(1.5\%+15)\geq 400^{\circ}\text{C}$ |

9208



| Special Function       | VC9205            | VC9208                                               |
|------------------------|-------------------|------------------------------------------------------|
| Display                |                   | LCD                                                  |
| Transistor test        |                   | ✓                                                    |
| Low voltage indication |                   | ✓                                                    |
| Data Hold              |                   | ✓                                                    |
| Auto power off         |                   | 1999 (3 1/2 digits) digit automatic polarity display |
| Max. Display           |                   |                                                      |
| Size                   | 174 * 87 * 34mm   |                                                      |
| Weight                 | About 190g        |                                                      |
| Power                  | 9V Battery (6F22) |                                                      |
| Color                  | Orange + Black    |                                                      |
| Dimensions             | 61*32mm           |                                                      |

9205B



## Technical parameter

| Model        | 9205B                        | 9205C                | Precision       |
|--------------|------------------------------|----------------------|-----------------|
| Basic skills | Range                        |                      |                 |
| DCV          | 200mV/2V/20V/200V/1000V      |                      | $\pm(0.5\%+3)$  |
| ACV          | 2V/20V/200V/750V             |                      | $\pm(0.8\%+5)$  |
| DC A         | 20mA/200mA/20A               |                      | $\pm(1.0\%+3)$  |
| ACA          | 20mA/200mA/20A               |                      | $\pm(1.0\%+3)$  |
| Resistance   | 200Ω/2kΩ/20kΩ/200kΩ/2MΩ/20MΩ |                      | $\pm(0.8\%+2)$  |
| Capacitance  | 20nF/200nF/2uF/20uF/200uF    | 200nF/2uF/20uF/200uF | $\pm(3.0\%+3)$  |
| Frequency    | /                            | 200kHz               | $\pm(0.5\%+3)$  |
| Temperature  | /                            | -40 C ~ 1000 C       | $\pm(0.75\%+4)$ |

## VICTOR 9205D 3 1/2 Digital Multimeter

### Technical data

| Basic Function           | 9205D                                               | Accuracy        |
|--------------------------|-----------------------------------------------------|-----------------|
| DCV                      | 200mV/2V/20V/200V                                   | $\pm(0.5\%+4)$  |
|                          | 1000V                                               | $\pm(0.8\%+15)$ |
| ACV                      | 2V/20V/200V                                         | $\pm(0.8\%+4)$  |
|                          | 750V                                                | $\pm(1.0\%+15)$ |
| DCA                      | 200uA/2mA/20mA/200mA                                | $\pm(0.8\%+5)$  |
|                          | 10A                                                 | $\pm(1.0\%+15)$ |
| ACA                      | 200mA                                               | $\pm(2.0\%+15)$ |
|                          | 10A                                                 | $\pm(3.5\%+15)$ |
| Resistance               | 200Ω                                                | $\pm(0.8\%+5)$  |
|                          | 2kΩ/20kΩ/200kΩ/2MΩ/20MΩ                             | $\pm(1.0\%+25)$ |
| Capacitance              | 200Ω                                                | $\pm(5.0\%+30)$ |
|                          | 20nF/2uF                                            | $\pm(2.5\%+20)$ |
|                          | 200uF                                               | $\pm(5.0\%+10)$ |
| <b>Special Functions</b> |                                                     |                 |
| Maximum Display          | 1999 (3 1/2) bit automatic polarity display         |                 |
| Diode test               | ✓                                                   |                 |
| On/Off Beep              | ✓                                                   |                 |
| Triode                   | ✓                                                   |                 |
| True effective value     | ✓                                                   |                 |
| Low voltage display      | Battery symbol display                              |                 |
| Fire line judgment       | ✓                                                   |                 |
| Automatic shutdown       | No operation for 15 minutes                         |                 |
| Sampling rate            | 3 times/second                                      |                 |
| ACV frequency response   | (40-1000)Hz                                         |                 |
| Over range prompt        | Display OL at the highest position                  |                 |
| Work environment         | (0-40) $^{\circ}\text{C}$ , relative humidity<80%   |                 |
| Storage environment      | (-20-60) $^{\circ}\text{C}$ , relative humidity<85% |                 |
| Power                    | 9V battery                                          |                 |
| Size                     | 167*81*43mm                                         |                 |
| Weight                   | About 167g                                          |                 |

| Basic Function                                                                                                  | 9205E                                                                         | Accuracy        |
|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|-----------------|
| DC mV                                                                                                           | 200mV                                                                         | $\pm(1.0\%+5)$  |
|                                                                                                                 | 200mV/2V/20V/200V                                                             | $\pm(1.0\%+2)$  |
| DCV                                                                                                             | 1000V                                                                         | $\pm(1.2\%+10)$ |
|                                                                                                                 | 200mV                                                                         | $\pm(1.0\%+8)$  |
| AC mV                                                                                                           | 2V/20V/200V                                                                   | $\pm(1.2\%+2)$  |
|                                                                                                                 | 750V                                                                          | $\pm(1.4\%+10)$ |
| DCA                                                                                                             | 200uA/2000uA/20mA/200mA                                                       | $\pm(1.2\%+3)$  |
|                                                                                                                 | 2A/10A                                                                        | $\pm(1.5\%+10)$ |
| ACA                                                                                                             | 200uA/2000uA/20mA/200mA                                                       | $\pm(2.0\%+15)$ |
|                                                                                                                 | 2A/10A                                                                        | $\pm(3.5\%+15)$ |
| Resistance                                                                                                      | 200Ω/2kΩ/20kΩ/200kΩ/2MΩ/20MΩ                                                  | $\pm(1.0\%+25)$ |
|                                                                                                                 | 20MΩ                                                                          |                 |
| Capacitance                                                                                                     | 20nF/200nF/2uF/20uF                                                           | $\pm(2.0\%+25)$ |
|                                                                                                                 | 200uF                                                                         | $\pm(5.0\%+10)$ |
| Frequency                                                                                                       | 20Hz/200Hz/2kHz/20kHz/200kHz                                                  | $\pm(0.5\%+10)$ |
| <b>Special Functions</b>                                                                                        |                                                                               |                 |
| Maximum Display                                                                                                 | 1999                                                                          |                 |
| Power supply                                                                                                    | 9V                                                                            |                 |
| Diode forward voltage drop                                                                                      | *Test current: approximately 1mA<br>Open circuit voltage: approximately 2.5V* |                 |
| "The buzzer makes a long sound, and the resistance value of the testing two points is about less than (50±20)Ω" | Test current: about 0.28mA                                                    |                 |

9205D

New Model



9205E

New Model



830L



3 1/2



## Technical data

| Basic Function | Range                                | Basic accuracy<br>VC830L | VC921     |
|----------------|--------------------------------------|--------------------------|-----------|
| DC Voltage     | 200mV/2V/20V/200V/600V               | ±(0.5%+4)                |           |
| AC Voltage     | 400mV/4V/40V/400V/600V               | ±(1.2%+10)               | ±(0.5%+4) |
| DC Current     | 200mV/4V/40V/400V/600V               | ±(1.5%+3)                |           |
| Resistance     | 200Ω/2kΩ/20kΩ/200kΩ/20MΩ             | ±(0.8%+5)                | ±(0.8%+6) |
| Capacitance    | 4nF/40nF/400nF/4μF/40μF/2000μF       |                          | ±(0.8%+4) |
| Frequency      | 100Hz/1000Hz/10kHz/100kHz/1MHz/10MHz |                          | ±(3.5%+8) |

921



3 3/4



| Special Function               | VC830L       | VC921      |
|--------------------------------|--------------|------------|
| Max. value measurement         |              | ✓          |
| Data hold                      |              | ✓          |
| Auto power off                 |              | ✓          |
| Diode test / Continuity buzzer | ✓            | ✓          |
| Low battery indication         | ✓            | ✓          |
| Shock proof protection         | ✓            | ✓          |
| Duty cycle measurement         |              | ✓          |
| Input impedance                | 10MΩ         | 10MΩ       |
| Sampling rate                  | 3 times/s    | 3 times/s  |
| AC Frequency response          | (40-400)Hz   | (40-400)Hz |
| Operation way                  | Manual range | Auto range |
| Max. Display                   | 1999         | 3999       |
| LCD size                       | 57×33mm      | 55×43mm    |
| Battery                        | 9V(6F22)     | 3V(1.5V×2) |

## General Characters

|                              |                                         |                    |
|------------------------------|-----------------------------------------|--------------------|
| Product Net Weight           | Approx:180g                             | 150g(830L)         |
| Product dimension            | 145×80×28mm                             | 138×72×35mm (830L) |
| Standard Accessories         | Test leads; battery; instruction manual |                    |
| Standard Quantity Per Carton | 60PCS                                   |                    |
| Carton size                  | 470×325×350mm                           |                    |
| Standard Gross Weight        | Approx:16.4kg                           |                    |

923E

New Model



VICTOR 923E Intelligent Large Screen Digital Multimeter  
with VA color screen 5999 bit display

## Technical data

| Basic Function        | 923E                                        | Accuracy   |
|-----------------------|---------------------------------------------|------------|
| DC voltage            | 600mV/6V/60V/600V                           | ±(0.5%+3)  |
| AC voltage            | 6V/60V/600V                                 | ±(1.0%+3)  |
| DC current            | 600mA/6A/10A                                | ±(1.2%+3)  |
| AC current            | 600mA/6A/10A                                | ±(1.2%+3)  |
| Resistance            | 600Ω/6kΩ/60kΩ/600kΩ/6MΩ                     | ±(1.0%+5)  |
| Capacitance           | 6nF/60nF/600nF/6μF/60μF/600μF               | ±(2.0%+10) |
| Frequency             | 6Hz/60Hz/600Hz/6kHz/60kHz/600kHz/6MHz/10MHz | ±(4.0%+5)  |
| Temperature           | (-40~1000)°C or (-40~1832)°F                | ±(5.0%+5)  |
| Essential information |                                             |            |
| LCD display           | 5999 max                                    | ±(10%+10)  |
| Overload              | OL                                          |            |
| Alarm signal          | Audible and visual alarm                    |            |
| Power                 | 1.5V AAA*4                                  |            |
| Low voltage           | ✓                                           |            |
| Auto shutdown         | No operation for 15 minutes                 |            |
| Size                  | 144*73*27mm                                 |            |
| Weight                | About 235g                                  |            |
| Work environment      | 0~40°C(<75%RH)                              |            |
| Storage               | -20~60°C(<85%RH)                            |            |
| Jack prompt           | ✓                                           |            |
| NCV                   | ✓                                           |            |
| Flashlight            | ✓                                           |            |
| Data retentio         | ✓                                           |            |
| Diode                 | ✓                                           |            |
| On off buzzer         | ✓                                           |            |



925



### Technical data

| Model                   | 925                                     |            |
|-------------------------|-----------------------------------------|------------|
| Basic Function          | Range                                   | Accuracy   |
| DC Voltage              | 10V/100V                                | ±(0.5%+3)  |
|                         | 600V                                    | ±(1.0%+10) |
| AC Voltage              | 10V/100V                                | ±(0.8%+5)  |
|                         | 600V                                    | ±(1.2%+10) |
| DC Current              | 60mA                                    | ±(1.0%+5)  |
|                         | 600mA                                   | ±(1.5%+10) |
| AC Current              | 60mA                                    | ±(1.5%+10) |
|                         | 600mA                                   | ±(2.0%+5)  |
| Capacitance             | 100nF/1000nF                            | ±(4.0%+20) |
|                         | 10uF/100uF/1000uF/1mF                   | ±(3.5%+20) |
|                         | 10mF/100mF                              | ±(10%±10)  |
| Frequency               | 10Hz~1MHz                               | ±(0.1%±5)  |
| Resistance              | 1000Ω                                   | ±(1.3%±5)  |
|                         | 10kΩ/100kΩ/1MΩ                          | ±(0.8%±3)  |
|                         | 10MΩ                                    | ±(1.5%±3)  |
|                         | 20MΩ                                    | ±(2.0%±10) |
| Special Function        |                                         |            |
| High battery indication | ✓                                       |            |
| Auto power off          | ✓                                       |            |
| Diode                   | ✓                                       |            |
| Display                 | LCD displaying                          |            |
| Over range indication   | MSD displays "OL"                       |            |
| Max. Display            | 9999                                    |            |
| Size                    | 137×70×20 mm                            |            |
| Weight                  | approx.133g                             |            |
| Power                   | built-in 3.7V 500mA lithium battery     |            |
| Operating environment   | Temperature (0 - 40)°C,humidity<75%RH   |            |
| Storage environment     | Temperature (-20 - 60)°C,humidity<85%RH |            |

### VICTOR 15B 17B MAX NEW Full Function Digital Multimeter 1000V fuse True RMS Multimeter

### Technical data

| Model                 | 15B MAX                                                       | 17B MAX    |
|-----------------------|---------------------------------------------------------------|------------|
| Basic Function        | Range                                                         | Accuracy   |
| DCV                   | 600mV                                                         | ±(1.0%+10) |
|                       | 6V/60V/600V/1000V                                             | ±(0.5%+3)  |
| ACV                   | 600mV                                                         | ±(3.0%+3)  |
|                       | 6V/60V/600V/1000V                                             | ±(1.0%+3)  |
| DCA                   | 600uA/6000uA/60mA/500mA/6A/10A                                | ±(1.5%+3)  |
|                       | 600uA/6000uA                                                  | ±(1.2%+8)  |
| ACA                   | 60mA/500mA                                                    | ±(1.5%+8)  |
|                       | 6A/10A                                                        | ±(2.0%+8)  |
| Resistance            | 600Ω/6kΩ/60kΩ/600kΩ/6MΩ                                       | ±(0.5%+3)  |
|                       | 60MΩ                                                          | ±(2.0%+5)  |
| Capacitance           | 6nF                                                           | ±(5.0%+10) |
|                       | 60nF/600nF                                                    | ±(2.0%+5)  |
|                       | 6uF/60uF/600uF/6mF                                            | ±(5.0%+5)  |
| Frequency             | 10Hz~10MHz                                                    | ±(0.1%+3)  |
| Duty cycle            | 1%~99%                                                        | ±(1.0%+4)  |
| Temperature           | (-55~1000)°C/(-67~1832)°F                                     | /          |
| Special Functions     |                                                               |            |
| Display               | LCD display                                                   |            |
| Max display           | 5999 (3 5/6) digit and unit display                           |            |
| Conversion rate       | 3 times per second                                            |            |
| Over range            | The highest position displays "OL"                            |            |
| Low voltage           | The battery symbol appears                                    |            |
| T-RMS                 | ✓                                                             |            |
| Diode                 | ✓                                                             |            |
| on/offbuzzing         | ✓                                                             |            |
| Max/min               | ✓                                                             |            |
| One click wake-up     | ✓                                                             |            |
| Sound and light alarm | Sound and light alarm for incorrect operation of current mode |            |
| Data retention        | ✓                                                             |            |
| Backlight display     | ✓                                                             |            |
| Relative value        | ✓                                                             |            |
| Automatic shutdown    | ✓                                                             |            |
| work environment      | (0-40) °C, relative humidity<75%                              |            |
| Storage environment   | -10-50° C, relative humidity<85%                              |            |
| Power Supply          | 1.5V * 2 AA batteries                                         |            |
| size                  | 187x88x45mm                                                   |            |
| weight                | About 427g                                                    |            |

15B MAX

New Model



17B MAX

New Model



6012C



### VICTOR 6012C VICTOR 6012D 3 5/6 Pen Type Multimeter Instruction manual

#### Summary

It is a pen-type multimeter with 3 5/6 digit display, stable performance, high precision, high reliability, clear reading. 180-degree flip display and overload protection function. Powered by AAA 1.5V battery, the instrument features a LCD display, it is easy to carry and can measure AC/DC voltage (True RMS). AC/DC current, resistance and on-off test, capacitance, diode, zero-line judgment, non-contact voltage detection. It is a multimeter with excellent performance, the ideal tool for laboratories, factories, radio enthusiasts and families.

| Model                     | VICTOR 6012C                       |            | VICTOR 6012D                           |            |
|---------------------------|------------------------------------|------------|----------------------------------------|------------|
|                           | Resolution                         | Accuracy   | Resolution                             | Accuracy   |
| DC Voltage                | 6V/60V/600V                        | ±(0.5%+4)  | 6V/60V/600V/1000V                      | ±(0.5%+4)  |
|                           | 1000V                              | ±(0.8%+10) | 1000V                                  | ±(0.8%+10) |
| AC Voltage                | 6V/60V/600V                        | ±(0.5%+4)  | 6V/60V/600V                            | ±(0.5%+4)  |
|                           | 750V                               | ±(0.8%+10) | 750V                                   | ±(0.8%+10) |
| Capacitance               | 10nF/100nF/1μF/10μF/100μF/1mF/10mF | ±(3.5%+20) | 10nF/100nF/1μF/10μF/100μF/1mF/10mF     | ±(3.5%+20) |
|                           | 60mF                               | ±(5%+3)    | 60mF                                   | ±(5%+3)    |
| Frequency                 |                                    |            | 10Hz/100Hz/1kHz/10kHz/100kHz/1MHz/8MHz | ±(0.1%+3)  |
|                           |                                    |            |                                        |            |
| Resistance                | 600Ω                               | ±(0.8%±5)  | 600Ω                                   | ±(0.8%±5)  |
|                           | 6kΩ/60kΩ/600kΩ/6MΩ                 | ±(0.8%±3)  | 6kΩ/60kΩ/600kΩ/6MΩ                     | ±(0.8%±3)  |
| Environmental temperature |                                    |            |                                        |            |
|                           |                                    |            |                                        |            |

| Special Function           | VICTOR 6012C                    | VICTOR 6012D                    |
|----------------------------|---------------------------------|---------------------------------|
| Diode                      | ✓                               | ✓                               |
| Continuity buzzer          | ✓                               | ✓                               |
| Flashlight Function        | ✓                               | ✓                               |
| Data Hold                  | ✓                               | ✓                               |
| Display                    | Black and White screen          | Color screen                    |
| Auto power off             | ✓                               | ✓                               |
| Flashlight                 | ✓                               | ✓                               |
| Sample rate                | about 3/sec                     | about 3/sec                     |
| Overrange indication       | The highest digit displays "OL" | The highest digit displays "OL" |
| Phase sequence measurement |                                 | ✓                               |
| Zero/Fire Line measurement | ✓                               | ✓                               |
| NCV measurement            | ✓                               | ✓                               |
| Operation way              | Auto range                      | Auto range                      |

|              |                |
|--------------|----------------|
| Size         | 170X24X21mm    |
| Weight       | Approx.50g     |
| Power supply | 1* 1.5V AAA    |
| Display size | 30x11.5mm      |
| Color        | Black + Orange |

6012D



86B



86C



| Model                  | 86B                                     | 86C                                                                                                                                               | 86D                                     | Accuracy    |
|------------------------|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|-------------|
| DC Voltage             | 400mV/4V/40V/400V                       | 400mV/4V/40V/400V                                                                                                                                 | 600mV/6V/60V/600V                       | ±(0.5%+4)   |
|                        | 1000V                                   | 1000V                                                                                                                                             | 1000V                                   | ±(1.0%+6)   |
| DC millivolts          | 40mV/400mV                              | /                                                                                                                                                 | /                                       | ±(0.5%+5)   |
| AC millivolts          | 40mV/400mV                              | /                                                                                                                                                 | /                                       | ±(1.0%+6)   |
| AC voltage             | 4V/40V/400V                             | 4V/40V/400V                                                                                                                                       | 6V/60V/600V                             | ±(0.8%+10)  |
|                        | 750V                                    | 750V                                                                                                                                              | 750V                                    | ±(1.0%+10)  |
| DC current             | 400uA/4000uA/40mA/400mA                 | 400uA/4000uA/40mA/400mA                                                                                                                           | 600uA/6000uA/60mA/600mA                 | ±(1.0%+10)  |
|                        | 4A/10A                                  | 4A/10A                                                                                                                                            | 6A/10A                                  | ±(1.2%+10)  |
| AC current             | 400uA/4000uA/40mA/400mA                 | 400uA/4000uA/40mA/400mA                                                                                                                           | 600uA/6000uA/60mA/600mA                 | ±(1.5%+10)  |
|                        | 4A/10A                                  | 4A/10A                                                                                                                                            | 6A/10A                                  | ±(2.0%+15)  |
| Resistance             | 400Ω                                    | 400Ω                                                                                                                                              | 600Ω                                    | ±(0.8%+4)   |
|                        | 4kΩ/40kΩ/400kΩ/4MΩ                      | 4kΩ/40kΩ/400kΩ/4MΩ                                                                                                                                | 6kΩ/60kΩ/600kΩ/6MΩ                      | ±(0.8%+4)   |
| Capacitance            | 40nF                                    | 40nF                                                                                                                                              | 60nF                                    | ±(1.2%+10)  |
|                        | 400nF/4μF/40μF                          | 400nF/4μF/40μF                                                                                                                                    | 600nF/6μF/60μF                          | ±(5.0%+30)  |
| Frequency              | 10Hz/100Hz/1kHz/10kHz/100kHz/1MHz/30MHz | 10Hz/100Hz/1kHz/10kHz/100kHz/1MHz/30MHz                                                                                                           | 10Hz/100Hz/1kHz/10kHz/100kHz/1MHz/30MHz | ±(3.5%+8)   |
|                        |                                         |                                                                                                                                                   |                                         | ±(5.0%+10)  |
| Temperature            | -20°C~400°C                             | -20°C~400°C                                                                                                                                       | -20°C~400°C                             | ±(0.5%+4)   |
|                        | 400°C~1000°C                            | 400°C~1000°C                                                                                                                                      | 400°C~1000°C                            | ±(1.0%+5°C) |
| General specifications |                                         |                                                                                                                                                   |                                         |             |
| Max Display            | 3999 (3 3/4)                            | 3999 (3 3/4)                                                                                                                                      | 5999 (3 5/6)                            |             |
| Simulated bar          | /                                       | 61 segment simulation bar                                                                                                                         |                                         |             |
| Transistor             | /                                       | /                                                                                                                                                 | ✓                                       |             |
| Diode                  |                                         | ✓                                                                                                                                                 |                                         |             |
| On/off buzzing         |                                         | ✓                                                                                                                                                 |                                         |             |
| USB                    |                                         | ✓                                                                                                                                                 |                                         |             |
| Relative value         |                                         | ✓                                                                                                                                                 |                                         |             |
| Max/min                |                                         | ✓                                                                                                                                                 |                                         |             |
| Data retention         |                                         | ✓                                                                                                                                                 |                                         |             |
| LIVE                   |                                         | ✓                                                                                                                                                 |                                         |             |
| NCV                    |                                         | ✓                                                                                                                                                 |                                         |             |
| Backlight              |                                         | Display battery symbols                                                                                                                           |                                         |             |
| Low voltage            |                                         | Display "OL"                                                                                                                                      |                                         |             |
| Over range             |                                         | Shutdown after about 15 minutes of inactivity                                                                                                     |                                         |             |
| Auto shutdown          |                                         | 3 times/second                                                                                                                                    |                                         |             |
| Sampling rate          |                                         | 0~40°C, relative humidity<80%                                                                                                                     |                                         |             |
| Work environment       |                                         | -10~50°C, relative humidity<80%                                                                                                                   |                                         |             |
| Storage environment    |                                         | Four AAA batteries                                                                                                                                |                                         |             |
| Source                 |                                         | 189*88*56mm                                                                                                                                       |                                         |             |
| Size                   |                                         | Approximately 423g                                                                                                                                |                                         |             |
| Weight                 |                                         | Instruction manual, color box, certificate of conformity, pen, crocodile clip, cloth bag, USB data cable, K-type thermocouple, adapter (only 86D) |                                         |             |
| Parts                  |                                         |                                                                                                                                                   |                                         |             |



86D



TRUE RMS

86E New Model



| Model                  | 86E                                                                                                                           |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------|
|                        | Resolution Accuracy                                                                                                           |
| DC Voltage             | 220mV/2.2V/22V/220V ±(0.5%+10)                                                                                                |
|                        | 1000V ±(0.1%+10)                                                                                                              |
| AC voltage             | 220mV ±(1.0%+25)                                                                                                              |
|                        | 2.2V/22V/220V ±(0.8%+25)                                                                                                      |
|                        | 750V ±(1.0%+25)                                                                                                               |
| DC current             | 220uA/2200uA/22mA ±(0.5%+10)                                                                                                  |
|                        | 220mA ±(0.8%+10)                                                                                                              |
|                        | 10A ±(2.0%+25)                                                                                                                |
| AC current             | 220uA/2200uA/22mA ±(1.2%+25)                                                                                                  |
|                        | 220mA ±(1.5%+25)                                                                                                              |
|                        | 10A ±(2.5%+35)                                                                                                                |
| Resistance             | 200Ω ±(0.5%+30)                                                                                                               |
|                        | 2.2kΩ/22kΩ/220kΩ/2.2MΩ ±(0.4%+5)                                                                                              |
|                        | 22MΩ ±(0.5%+25)                                                                                                               |
|                        | 220MΩ ±(5.0%+10)                                                                                                              |
| Capacitance            | 22nF/220uF/2.2uF/22uF/220uF ±(2.5%+15)                                                                                        |
|                        | 2.2mF ±(4.0%+10)                                                                                                              |
|                        | 22mF/220mF                                                                                                                    |
| Frequency              | 22Hz/220Hz/22kHz/220kHz/2.2MHz/22MHz ±(1.0%+4)                                                                                |
|                        | 50MHz ±(0.2%+4)                                                                                                               |
|                        | >50MHz                                                                                                                        |
| Temperature            | -20°C~400°C ±(1.0%+5°C)                                                                                                       |
|                        | 400°C~1000°C ±(1.5%+15°C)                                                                                                     |
| General specifications |                                                                                                                               |
| Max Display            | 22000 (4 1/2)                                                                                                                 |
| Simulated bar          | 46 segment simulation bar                                                                                                     |
| Diode                  | ✓                                                                                                                             |
| On/off buzzing         | ✓                                                                                                                             |
| USB                    | ✓                                                                                                                             |
| Relative value         | ✓                                                                                                                             |
| Max/min                | ✓                                                                                                                             |
| Data retention         | ✓                                                                                                                             |
| Backlight              | ✓                                                                                                                             |
| Low voltage            | Display battery symbols                                                                                                       |
| Over range             | Display "OL"                                                                                                                  |
| Auto shutdown          | Shutdown after about 15 minutes of inactivity                                                                                 |
| Sampling rate          | 2times/second                                                                                                                 |
| Work environment       | 0-40 °C, relative humidity<80%                                                                                                |
| Storage environment    | -10-50 °C, relative humidity<80%                                                                                              |
| Source                 | Four AAA batteries                                                                                                            |
| Size                   | 189*88*56mm                                                                                                                   |
| Weight                 | Approximately 423g                                                                                                            |
| Parts                  | Instruction manual, color box, certificate of conformity, pen, crocodile clip, cloth bag, USB data cable, K-type thermocouple |

### Technical data

| Basic Function | Range                              | Basic accuracy 88B | 88C        |
|----------------|------------------------------------|--------------------|------------|
| DC Voltage     | 200mV/2V/20V/200V/1000V            | ±(0.5%+3)          | ±(0.5%+3)  |
| AC Voltage     | 2V/20V/200V/750V                   | ±(0.8%+5)          |            |
|                | 200mV/2V/20V/200V/750V             |                    | ±(0.8%+5)  |
| DC Current     | 200uA/2mA/20mA/200mA/20A           | ±(0.8%+4)          |            |
|                | 2mA/20mA/200mA/20A                 |                    | ±(0.8%+3)  |
| AC Current     | 20mA/200mA/20A                     | ±(1.0%+5)          |            |
|                | 2mA/20mA/200mA/20A                 |                    | ±(1.0%+5)  |
| Resistance     | 200Ω/2kΩ/20kΩ/200kΩ/2MΩ/20MΩ/200MΩ | ±(0.8%+3)          |            |
|                | 200Ω/2kΩ/20kΩ/200kΩ/2MΩ/20MΩ/200MΩ |                    | ±(0.8%+3)  |
| Capacitance    | 20nF/200nF/2uF/20uF/200uF/2000uF   | ±(2.5%+20)         |            |
|                | 20nF/200nF/2uF/20uF/200uF          |                    | ±(2.5%+20) |
| Frequency      | 10Hz/100Hz/1kHz/10kHz/100kHz/1MHz  | ±(3.0%+15)         |            |
|                | 2kHz/20kHz/200kHz/2000kHz/10MHz    |                    | ±(0.5%+4)  |
| Inductance     | 2mH/20mH/200mH/2H/20H              |                    | ±(2.5%+20) |
| Celsius        | (-20~1000)°C                       | ±(1.0%+3)          |            |
| Fahrenheit     | (0-1832)°F                         | ±(1.5%+15)         | ±(1.0%+4)  |

| Special Function           | 88B          | 88C          |
|----------------------------|--------------|--------------|
| Diode test                 | ✓            | ✓            |
| Continuity buzzer          | ✓            | ✓            |
| Low battery indication     | ✓            | ✓            |
| Backlight                  | ✓            | ✓            |
| Data hold                  | ✓            | ✓            |
| Auto power off             | ✓            | ✓            |
| Function protection        | ✓            | ✓            |
| Restorable Fuse Protection | ✓            | ✓            |
| Shock proof protection     | ✓            | ✓            |
| Input impedance            | 10MΩ         | 10MΩ         |
| Sampling rate              | 3 time/s     | 3 time/s     |
| AC Frequency response      | (40-400)Hz   | (40-400)Hz   |
| Operation way              | Manual range | Manual range |
| Max. Display               | 1999         | 1999         |
| LCD size                   | 65×45mm      | 65×45mm      |
| Battery                    | 9V(6F22)     | 9V(6F22)     |

### General Characters

|                              |                                                                                                |
|------------------------------|------------------------------------------------------------------------------------------------|
| Product color                | Case:Black;Holster color:orange                                                                |
| Product Net Weight           | Approx:400g                                                                                    |
| Product dimension            | 189×97×35mm                                                                                    |
| Standard Accessories         | Test leads; battery; instruction manual ; TP01 temperature probe(88B/C); Testing accessories ; |
| Standard inner packing       | Color box                                                                                      |
| Carton size                  | 465×317×506mm                                                                                  |
| Standard Quantity Per Carton | 30PCS                                                                                          |
| Standard Gross Weight        | Approx: 21kg                                                                                   |

88B



3 1/2



88C



3 1/2



88D



3 3/4



### Technical data

| Basic Function | Range                                | Basic accuracy |            |
|----------------|--------------------------------------|----------------|------------|
|                |                                      | 88D            | 88E        |
| DC Voltage     | 200mV/2V/20V/200V/1000V              | ±(0.1%+5)      |            |
|                | 400mV/4V/40V/400V/1000V              |                | ±(0.5%+4)  |
| DC Voltage     | 40mV/400mV                           |                | ±(0.5%+4)  |
|                | 2V/20V/200V/750V                     | ±(0.8%+25)     |            |
|                | 4V/40V/400V/750V                     |                | ±(0.8%+6)  |
| AC Voltage     | 40mV/400mV                           |                | ±(1.6%+6)  |
|                | 200uA/2mA/20mA/200mA/20A             | ±(0.5%+4)      |            |
| DC Current     | 400uA/4mA/40mA/400mA/20A             |                | ±(1.0%+10) |
|                | 2mA/20mA/200mA/20A                   | ±(1.5%+25)     |            |
| AC Current     | 400uA/4mA/40mA/400mA/20A             |                | ±(1.5%+5)  |
|                | 200Ω/2kΩ/20kΩ/200kΩ/2MΩ/20MΩ/200MΩ   | ±(0.4%+5)      |            |
| Resistance     | 400Ω/4kΩ/40kΩ/400kΩ/4MΩ/40MΩ         |                | ±(0.8%+4)  |
|                | 20nF/200nF/2uF/20uF/200uF/2000uF     | ±(3.5%+10)     |            |
| Capacitance    | 40nF/400nF/4uF/40uF/200uF            |                | ±(2.5%+8)  |
|                | 10Hz/100Hz/1kHz/10kHz/100kHz/1MHz    | ±(3.0%+150)    |            |
| Frequency      | 100Hz/1000Hz/10kHz/100kHz/1MHz/10MHz |                | ±(0.5%+4)  |
|                | Celsius (-20~1000)°C                 | ±(0.8%+40)     | ±(1.0%+4)  |
| Celsius        | Fahrenheit (0~1832)°F                |                | ±(0.8%+5)  |

| Special Function           | 88D          | 88E               |
|----------------------------|--------------|-------------------|
| Diode test                 | ✓            | ✓                 |
| Continuity buzzer          | ✓            | ✓                 |
| Low battery indication     | ✓            | ✓                 |
| Relative value measurement |              | ✓                 |
| Max./Min. Value selection  |              | ✓                 |
| Backlight                  | ✓            |                   |
| Data hold                  |              | ✓                 |
| Auto power off             | ✓            | ✓                 |
| Bar graph display          | ✓            | ✓                 |
| Function protection        | ✓            | ✓                 |
| Restorable Fuse Protection | ✓            | ✓                 |
| Shock proof protection     | ✓            | ✓                 |
| Input impedance            | 10MΩ         | 10MΩ              |
| Sampling rate              | 3 time/s     | 3 time/s          |
| AC Frequency response      | (40-400)Hz   | (40-400)Hz        |
| Operation way              | Manual range | Manual/Auto range |
| Max. Display               | 19999        | 3999              |
| LCD size                   | 65×45mm      | 65×45mm           |
| Battery                    | 9V(6F22)     | 9V(6F22)          |

### General Characters

|                              |                                                                                             |
|------------------------------|---------------------------------------------------------------------------------------------|
| Product color                | Case:Black;Holster color:orange                                                             |
| Product Net Weight           | Approx:400g                                                                                 |
| Product dimension            | 189×97×35mm                                                                                 |
| Standard Accessories         | Test leads; battery; instruction manual ; TP01 temperature probe(with temperature function) |
| Standard inner packing       | Color box                                                                                   |
| Carton size                  | 465×317×506mm                                                                               |
| Standard Quantity Per Carton | 30PCS                                                                                       |
| Standard Gross Weight        | Approx:23kg                                                                                 |

### Technical data

| Basic Function | Range                            | Basic accuracy |            |
|----------------|----------------------------------|----------------|------------|
|                |                                  | 89A            | 89B        |
| DC Voltage     | 200mV/2V/20V/200V/1000V          | ±(0.5%+3)      | ±(0.5%+3)  |
|                | 400mV/4V/40V/400V/1000V          |                | ±(0.5%+4)  |
| DC Voltage     | 40mV/400mV                       |                | ±(0.5%+4)  |
|                | 2V/20V/200V/750V                 | ±(0.8%+5)      | ±(0.8%+5)  |
|                | 4V/40V/400V/750V                 | ±(1.2%+8)      |            |
| DC Current     | 2mA/20mA/200mA/20A               |                | ±(1.2%+8)  |
|                | 20mA/200mA/20A                   | ±(1.5%+15)     |            |
| AC Current     | 20mA/200mA/20A                   |                | ±(1.5%+15) |
|                | 200Ω/2kΩ/20kΩ/200kΩ/2MΩ/20MΩ     | ±(0.8%+3)      | ±(0.8%+3)  |
| Resistance     | 20MΩ                             |                | ±(1.0%+25) |
|                | 20nF/200nF/2uF/20uF/200uF/2000uF | ±(2.5%+20)     | ±(2.5%+20) |
| Capacitance    |                                  |                | ±(0.8%+4)  |
|                | Celsius (-20~1000)°C (0~1832)°F  |                |            |

| Special Function           | 89A          | 89B          |
|----------------------------|--------------|--------------|
| Diode test                 | ✓            | ✓            |
| Continuity buzzer          | ✓            | ✓            |
| Low battery indication     | ✓            | ✓            |
| Data Hold                  | ✓            | ✓            |
| Auto power off             | ✓            | ✓            |
| Function protection        | ✓            | ✓            |
| Restorable Fuse protection | ✓            | ✓            |
| Shock proof protection     | ✓            | ✓            |
| Input impedance            | 10MΩ         | 10MΩ         |
| Sampling rate              | 3 times/s    | 3 times/s    |
| AC Frequency response      | 40~400Hz     | 40~400Hz     |
| Operation way              | Manual range | Manual range |
| Max. Display               | 1999         | 1999         |
| LCD size                   | 61×36mm      | 61×36mm      |
| Battery                    | 9V(6F22)     | 9V(6F22)     |

### General Characters

|                              |                                                                                             |
|------------------------------|---------------------------------------------------------------------------------------------|
| Product color                | Case:Black;Holster color:orange                                                             |
| Product Net Weight           | Approx:270g                                                                                 |
| Product dimension            | 155×90×48mm                                                                                 |
| Standard Accessories         | Test leads; battery; instruction manual ; TP01 temperature probe(with temperature function) |
| Standard inner packing       | Color box                                                                                   |
| Carton size                  | 435×335×425mm                                                                               |
| Standard Quantity Per Carton | 30PCS                                                                                       |
| Standard Gross Weight        | Approx:18.1kg                                                                               |

89A



TRUE RMS

3 1/2



89B



TRUE RMS

3 1/2



°C

## VC890C+

New Model



3 1/2



## VC890D

New Model



3 1/2



### Technical data

| Basic function | Range                     | Accuracy<br>VC890C+ | Accuracy<br>VC890D |
|----------------|---------------------------|---------------------|--------------------|
| DCV            | 200mV/2V/20V/200V         | ±(0.5%+3)           | ±(0.5%+3)          |
|                | 1000V                     | ±(0.8%+10)          | ±(0.8%+10)         |
| ACV            | 2V/20V/200V               | ±(0.8%+5)           | ±(0.8%+5)          |
|                | 750V                      | ±(1.2%+10)          | ±(1.2%+10)         |
| DCA            | 200uA/2mA/20mA            | ±(0.8%+10)          | ±(0.8%+10)         |
|                | 200mA                     | ±(1.2%+8)           | ±(1.2%+8)          |
|                | 20A                       | ±(2.0%+5)           | ±(2.0%+5)          |
| ACA            | 20mA                      | ±(2.0%+5)           | ±(1.0%+15)         |
|                | 200mA                     | ±(2.0%+5)           | ±(2.0%+5)          |
|                | 20A                       | ±(3.0%+10)          | ±(3.0%+10)         |
| Resistance     | 200Ω                      | ±(0.8%+5)           | ±(0.8%+5)          |
|                | 2kΩ/20kΩ/200kΩ/2MΩ        | ±(0.8%+3)           | ±(0.8%+3)          |
|                | 20MΩ                      | ±(1.0%+25)          | ±(1.0%+25)         |
| Capacitance    | 6nF                       | ±(5.0%+40)          | ±(5.0%+40)         |
|                | 60nF/600nF/6uF/60uF       | ±(3.5%+20)          | ±(3.5%+20)         |
|                | 600uF/6mF/20mF            | ±(5.0%+10)          | ±(5.0%+10)         |
| Celsius        | (-20~1000)°C (-4~-1832)°F | <400°C±(1.0%+5)     | ≥400°C±(1.5%+15)   |

| Special Function        | VC890C+       | VC890D |
|-------------------------|---------------|--------|
| Diode & Continuity test | ✓             | ✓      |
| Backlight               | ✓             | ✓      |
| Continuity buzzer       | ✓             | ✓      |
| Low battery indication  | ✓             | ✓      |
| Auto power off          | ✓             | ✓      |
| Function protection     | ✓             | ✓      |
| 200mA/20A Protection    | ✓             | ✓      |
| TRUE RMS                | ✓             | ✓      |
| NCV measurement         | ✓             | ✓      |
| Torch function          | ✓             | ✓      |
| Shock proof protection  | ✓             | ✓      |
| Input impedance         | About 10MΩ    | ✓      |
| Sampling rate           | 3 times/s     | ✓      |
| Frequency response      | (40~1000)Hz   | ✓      |
| Operation way           | Manual Range  | ✓      |
| Max. Display            | 1999          | ✓      |
| LCD size                | 61 x 36mm     | ✓      |
| Battery                 | 2*1.5V AA LR6 | ✓      |

| General Characters        |                                           |
|---------------------------|-------------------------------------------|
| Product Color             | Case: black ; Holster color: orange       |
| Product Net Weight        | Approx. 335g (including battery)          |
| Product Dimension         | 178*86*52mm                               |
| Standard Accessories      | Test leads, battery, manual, K-type probe |
| Standard inner packing    | Color box                                 |
| Carton size               | 435*335*425mm                             |
| Standard Quantity /Carton | 30Pcs                                     |
| Standard Gross Weight     | Approx. 18.2kg                            |



## 890H+

## 890G+

TRUE RMS



### Technical data

| Basic function         | Range                                  | Accuracy<br>VICTOR 890H+ | Accuracy<br>VICTOR 890G+ |
|------------------------|----------------------------------------|--------------------------|--------------------------|
| DCV                    | 600mV/6V/60V/600V/1000V                | ±(0.5%+3)                | ±(0.5%+3)                |
| ACV                    | 600mV/6V/60V/600V/750V                 | ±(0.8%+5)                | ±(0.8%+5)                |
| ACV                    | 6V/60V/600V/750V                       | ±(0.8%+5)                | ±(0.8%+5)                |
| DCA                    | 600uA/6000uA/60mA/600mA/10A            | ±(1.2%+3)                | ±(1.2%+3)                |
| DCA                    | 60uA/60mA/600mA/10A                    | ±(1.2%+3)                | ±(1.2%+3)                |
| ACA                    | 600uA/6000uA/60mA/600mA/10A            | ±(1.5%+3)                | ±(1.5%+3)                |
| ACA                    | 60mA/600mA/10A                         | ±(1.5%+3)                | ±(1.5%+3)                |
| Resistance             | 600Ω/6kΩ/60kΩ/600kΩ                    | ±(1.0%+3)                | ±(1.0%+3)                |
|                        | 6MΩ/60MΩ                               | ±(1.5%+3)                | ±(1.5%+3)                |
| Capacitance            | 10nF/100nF/1000nF/10uF/100uF/1000uF    | ±(4%+5)                  | ±(4%+5)                  |
|                        | 10mF/100mF                             | ±(5%+5)                  | ±(5%+5)                  |
| Frequency/duty cycle   | 10Hz/100Hz/1000Hz/10kHz/100kHz/1000kHz | ±(1.0%+3)                | ±(1.0%+3)                |
|                        | 10MHz/1~99%                            | ±(3.0%+3)                | ±(3.0%+3)                |
| Special function       |                                        | 890H+                    | 890G+                    |
| Temperature            | -20°C~1000°C -4°F~1832°F               | ✓                        | ✓                        |
| NCV test               |                                        | ✓                        | ✓                        |
| Live wire test         |                                        | ✓                        | ✓                        |
| Battery test           |                                        | ✓                        | ✓                        |
| Input terminal prompt  |                                        | ✓                        | ✓                        |
| High voltage prompt    |                                        | ✓                        | ✓                        |
| Diode test             |                                        | ✓                        | ✓                        |
| Continuity alarm       |                                        | ✓                        | ✓                        |
| Low battery            |                                        | ✓                        | ✓                        |
| Backlight              |                                        | ✓                        | ✓                        |
| Flashlight             |                                        | ✓                        | ✓                        |
| Auto power off         |                                        | ✓                        | ✓                        |
| Function protection    |                                        | ✓                        | ✓                        |
| shakeproof protection  |                                        | ✓                        | ✓                        |
| Input impedance        | 10MΩ                                   | 10MΩ                     | 10MΩ                     |
| ACV frequency response | 10Hz~1kHz                              | 10Hz~1kHz                | 10Hz~1kHz                |
| Operation method       | auto range                             | auto range               | auto range               |
| Display                | 6000 counts                            | 6000 counts              | 6000 counts              |
| Supply                 | Battery 2*1.5V AA                      | Battery 2*1.5V AA        | Battery 2*1.5V AA        |



### VC97 old model



### Technical data

| Basic Function | Range                        | Basic accuracy<br>97 |
|----------------|------------------------------|----------------------|
| DC Voltage     | 400mV/4V/40V/400V/1000V      | ±(0.5%+4)            |
| AC Voltage     | 400mV/4V/40V/400V/750V       | ±(0.8%+10)           |
| DC Current     | 400uA/4000uA/40mA/400mA/10A  | ±(1%+10)             |
| AC Current     | 400uA/4000uA/40mA/400mA/10A  | ±(1.5%+10)           |
| Resistance     | 400Ω/4kΩ/40kΩ/400kΩ/4MΩ/40MΩ | ±(0.8%+4)            |
| Capacitance    | 10nF                         | ±(5.0%+20)           |
|                | 100nF/1uF/10uF/100uF         | ±(3.5%+8)            |
|                | 1mF/10mF/100mF               | ±(5.0%+10)           |
| Frequency      | 100/1000/10k/100k/1M/30MHz   | ±(0.5%+10)           |
| Celsius        | (-20~1000)°C                 | ±(1.0%+5)            |
| Fahrenheit     | (-4~1832)°F                  | ±(1.0%+5)            |

### General Characters

|                              |                                                                                            |
|------------------------------|--------------------------------------------------------------------------------------------|
| Product color                | Case: black ; Holster color: orange                                                        |
| Product Net Weight           | Approx:420g                                                                                |
| Product dimension            | 190×93.5×37mm                                                                              |
| Standard Accessories         | Test leads; battery; instruction manual ;Tp01 temperature probe(with temperature function) |
| Standard inner packing       | Color box                                                                                  |
| Standard Quantity Per Carton | 40PCS                                                                                      |
| Carton size                  | 465×317×506mm                                                                              |
| Standard Gross Weight        | Approx:22kg                                                                                |

| Special Function       | 97         |
|------------------------|------------|
| Diode/Transistor       | ✓          |
| Continuity buzzer      | ✓          |
| Low battery indication | ✓          |
| Data hold              | ✓          |
| Auto power off         | ✓          |
| Analog bar graph       | ✓          |
| Shockproof protection  | ✓          |
| Function protection    | 1%~99%     |
| Input impedance        | 10MΩ       |
| Sampling rate          | 3 time/s   |
| AC Frequency response  | (40-400)Hz |
| Operation way          | Auto range |
| Max.Display            | 3999       |
| LCD size               | 70×50mm    |
| Battery                | 9V         |



### VC97 3 3/4 Auto Range Digital Multimeter

- New type holster, streamline design.
- Large LCD makes the reading clearly. Backlight.
- Metallic screen board with stronger antimagnetic and anti-interferential function.
- Full function protection, anti-high voltage circuit design.
- CAT-IV
- True RMS
- NCV

### Technical data

| Basic Function        | Range                          | Accuracy   |
|-----------------------|--------------------------------|------------|
| DC Voltage            | 4V/40V/400V                    | ±(0.5%+4)  |
| DC Voltage            | 1000V                          | ±(1.0%+6)  |
| DC mV                 | 40mV/400mV                     | ±(0.5%+5)  |
| ACmV (True RMS)       | 40mV/400mV                     | ±(1.0%+6)  |
| AC Voltage (True RMS) | 4V/40V/400V                    | ±(0.8%+10) |
| AC Voltage (True RMS) | 750V                           | ±(1.2%+10) |
| DC Current            | 400uA/4000uA/40mA/400mA/4A/10A | ±(1%+10)   |
| AC Current (True RMS) | 400uA/4000uA/40mA/400mA/4A/10A | ±(1.5%+10) |
| Resistance            | 400Ω/4kΩ/40kΩ/400kΩ/4MΩ/40MΩ   | ±(0.8%+4)  |
| Capacitance           | 6nF                            | ±(5.0%+40) |
|                       | 60nF/600nF/6uF/60uF/600uF      | ±(3.5%+20) |
|                       | 6mF                            | ±(5.0%+10) |
|                       | 60mF/100mF                     | ±10%       |
| Frequency             | 10/100/1000/10k/100k/1M/20MHz  | ±(0.5%+10) |
| Celsius               | -20~1000°C (-4~1832)°F         | ±(1.0%+5)  |

| Special Function       |            |
|------------------------|------------|
| NCV                    | ✓          |
| Flashlight             | ✓          |
| Diode                  | ✓          |
| Transistor             | ✓          |
| Continuity buzzer      | ✓          |
| Low battery indication | ✓          |
| Data Hold              | ✓          |
| Auto power off         | ✓          |
| Analog bar graph       | ✓          |
| Shockproof protection  | ✓          |
| Function protection    | 1%~99.9%   |
| Input impedance        | 10MΩ       |
| Auto power off         | 3 times/s  |
| Analog bar graph       | 40~400Hz   |
| Shockproof protection  | Auto range |
| Function protection    | 3999       |
| Input impedance        | 65×35mm    |

### VC97 2021



VC97 2024

New Model



## VICTOR VC97 3 5/6 Auto Range Digital Multimeter

Comprehensive Characteristics

- Large LCD makes the reading clearly. Backlight.
- Metallic screen board with stronger antimagnetic and anti-interferential function.
- Full function protection, anti-high voltage circuit design.
- Working environment: (0~40) °C, relative humidity<75% RH;
- Storage environment: -20 °C~60 °C, relative humidity<85% RH;
- True RMS
- NCV

## Technical data

| Basic Function                   | VC97                                   | Accuracy   |
|----------------------------------|----------------------------------------|------------|
| DC Voltage                       | 60mV/600mV                             | ±(0.5%+5)  |
|                                  | 6V/60V/600V                            | ±(0.5%+4)  |
|                                  | 1000V                                  | ±(1.0%+6)  |
| AC Voltage (True RMS)            | 60mV/600mV                             | ±(1.0%+6)  |
|                                  | 6V/60V/600V                            | ±(0.8%+10) |
|                                  | 750V                                   | ±(1.2%+10) |
| DC Current                       | 600uA/6000uA/60mA/600mA/6A/10A         | ±(1.2%+8)  |
| AC Current                       | 600uA/6000uA/60mA/600mA                | ±(1.5%+10) |
|                                  | 6A/10A                                 | ±(2.0%+5)  |
| Resistance                       | 600Ω/6kΩ/60kΩ/600kΩ/6MΩ/60MΩ           | ±(0.8%+4)  |
| Capacitance                      | 10nF                                   | ±(5.0%+40) |
|                                  | 100nF/1uF/10uF/100uF/1mF               | ±(3.5%+20) |
|                                  | 10mF                                   | ±(5.0%+10) |
|                                  | 100mF                                  | ±(10%+0D)  |
| Frequency/Duty cycle measurement | 10Hz~30MHz                             | ±(0.5%+10) |
|                                  | 1%~99.9%                               | ±(2%+10)   |
| Celsius                          | -20~1000°C(-4~1830)°F                  | ±(1.0%+5)  |
| Special Functions                |                                        |            |
| Diode                            | ✓                                      |            |
| Transistor                       | ✓                                      |            |
| Continuity buzzer                | ✓                                      |            |
| Low battery indication           | ✓                                      |            |
| Data Hold                        | ✓                                      |            |
| Auto power off                   | ✓                                      |            |
| Sampling rate                    | 3 times/s                              |            |
| Shockproof protection            | Auto range                             |            |
| Function protection              | 5999                                   |            |
| Volume (size)                    | (189 x 88 x 56) mm                     |            |
| Weight                           | Approximately 385g (including battery) |            |
| Power supply                     | Four 1.5V AAA batteries                |            |

## VICTOR 970 3 5/6 Digital Multimeter

This instrument is a highly reliable automatic 6000 word counting device with a 2.4-inch color screen display, full range overload protection, and patented appearance design. It is a practical electrical measuring instrument with superior performance.

This instrument can be used to measure AC/DC voltage and current, resistance, capacitance, diodes, circuit on/off, frequency, and duty cycle. It has functions such as data hold, automatic/manual range conversion, relative value measurement, battery level indication, and automatic shutdown (APO).

## Technical Specifications

| Basic Function | Range                   | Accuracy   |
|----------------|-------------------------|------------|
| DC Voltage     | 60mV/600mV              | ±(0.5%+5)  |
|                | 6V/60V/600V             | ±(0.5%+4)  |
|                | 1000V                   | ±(1.0%+6)  |
| AC Voltage     | 60mV/600mV              | ±(1.0%+6)  |
|                | 6V/60V/600V             | ±(0.8%+10) |
|                | 750V                    | ±(1.2%+10) |
| DC Current     | 600uA/6000uA            | ±(1.0%+10) |
|                | 60mA/600mA              | ±(1.2%+8)  |
| AC Current     | 6A/10A                  | ±(1.2%+10) |
|                | 600uA/6000uA/60mA/600mA | ±(1.5%+10) |
|                | 6A/10A                  | ±(2.0%+5)  |
| Resistance     | 600Ω                    | ±(0.8%+5)  |
|                | 6kΩ/60kΩ/600kΩ/6MΩ      | ±(0.8%+4)  |
|                | 60MΩ                    | ±(1.2%+10) |
| Capacitance    | 6nF                     | ±(5.0%+10) |
|                | 60nF/600nF              | ±(2.0%+5)  |
|                | 6uF/60uF/600uF/6mF/60mF | ±(5.0%+5)  |
| Frequency      | 100Hz~10MHz             | ±(0.1%+3)  |

| Features       |                                                             |
|----------------|-------------------------------------------------------------|
| Display mode   | 2.4-inch color screen display                               |
| Max display    | 5999 (3 5/6 digits)                                         |
| Sample Rate    | About 3 times per second                                    |
| OVER RANGE     | Display 'OL' at the highest position                        |
| Low voltage    | have                                                        |
| Diode tube     | have                                                        |
| Data hold      | have                                                        |
| On/Off buzzing | have                                                        |
| Auto shutdown  | About 15 minutes after startup                              |
| POWER          | 2000mAh Lithium battery Type-C charging                     |
| Size           | 166*83*35mm                                                 |
| Weight         | Approximately 303g (including battery and protective cover) |

970

New Model



81B



3 1/2



### Technical data

| Basic Function | Range                                  | Basic accuracy<br>81B | Basic accuracy<br>81D |
|----------------|----------------------------------------|-----------------------|-----------------------|
| DC Voltage     | 200mV/2V/20V/200V/600V                 | ±(0.5%+4)             |                       |
|                | 400mV/4V/40V/400V/600V                 |                       | ±(0.5%+4)             |
| AC Voltage     | 200mV/2V/20V/200V/600V                 | ±(0.8%+6)             |                       |
|                | 4V/40V/400V/600V                       |                       | ±(0.8%+6)             |
| DC Current     | 200uA/2000uA/20mA/200mA/10A            | ±(1.0%+10)            |                       |
|                | 400uA/4000uA/40mA/400mA/10A            |                       | ±(1.0%+10)            |
| AC Current     | 200uA/2000uA/20mA/200mA/10A            | ±(1.5%+10)            |                       |
|                | 400uA/4000uA/40mA/400mA/10A            |                       | ±(1.5%+10)            |
| Resistance     | 200Ω/2kΩ/20kΩ/200kΩ/2MΩ/20MΩ           | ±(0.8%+4)             |                       |
|                | 400Ω/4kΩ/40kΩ/400kΩ/4MΩ/40MΩ           |                       | ±(0.8%+4)             |
| Capacitance    | 4nF/40nF/400nF/4uF/40uF/100uF/1000uF   |                       |                       |
| Frequency      | 1Hz/10Hz/100Hz/1kHz/10kHz/100kHz/30MHz |                       | ±(0.5%+10)            |
| Celsius        | (-20~1000)°C                           | ±(1.0%+5)             | ±(1.0%+5)             |
|                | Fahrenheit                             | (0~1832)°F            | ±(1.0%+5)             |

| Special Function                   | 81B               | 81D          |
|------------------------------------|-------------------|--------------|
| Diode test&Continuity buzzer       | ✓                 | ✓            |
| Low battery indication             | ✓                 | ✓            |
| Data hold                          | ✓                 | ✓            |
| Auto power off                     | ✓                 | ✓            |
| Function protection                | ✓                 | ✓            |
| 10A fuse                           | ✓                 | ✓            |
| Shock proof protection             | ✓                 | ✓            |
| Self-resume fuse protection for mA | ✓                 | ✓            |
| Unit symbol display                | ✓                 | ✓            |
| Max. Value measurement             | ✓                 |              |
| Relative value measurement         |                   | ✓            |
| Duty cycle measurement             |                   | 0.1%~99.9%   |
| Input impedance                    | 10MΩ              | 10MΩ         |
| Sampling rate                      | 3 time/s          | 3 time/s     |
| AC Frequency response              | (50-200)Hz        | (50-200)Hz   |
| Operation way                      | Auto/Manual range | Auto range   |
| Max. Display                       | 3 1/2 (1999)      | 3 3/4 (3999) |
| LCD size                           | 57×33mm           | 57×33mm      |
| Battery                            | 3V(1.5×2)         | 3V(1.5×2)    |

### General Characters

|                              |                                                                          |
|------------------------------|--------------------------------------------------------------------------|
| Product color                | Case: black ; Holster color: orange                                      |
| Product Net Weight           | Approx:200g(including battery)                                           |
| Product dimension            | 145×80×30mm                                                              |
| Standard Accessories         | Test leads; battery; instruction manual ; TP01 K style temperature probe |
| Standard inner packing       | Color box                                                                |
| Standard Quantity Per Carton | 60PCS                                                                    |
| Carton size                  | 470×325×35mm                                                             |
| Standard Gross Weight        | Approx:20kg                                                              |

### Technical data

| Basic Function | Range                 | VC9801A+<br>VC9802A+ | VC9804A+                          | VC9805A+   | VC9808+ |
|----------------|-----------------------|----------------------|-----------------------------------|------------|---------|
| DC Voltage     | 200mV                 | ±(0.5%+5)            |                                   |            |         |
|                | 2V/20V/200V           | ±(0.5%+3)            |                                   |            |         |
|                | 1000V                 | ±(1.0%+10)           |                                   |            |         |
| AC Voltage     | 200mV                 | *                    | ±(1.0%+5)                         |            |         |
|                | 2V/20V/200V           | ±(0.8%+5)            |                                   |            |         |
|                | 750V                  | *                    | ±(1.2%+10)                        |            |         |
|                | 1000V                 | ±(1.2%+10)           | *                                 |            |         |
| DC Current     | 200uA/2mA/20mA/200mA  | ±(1.2%+8)            |                                   |            |         |
|                | 2A                    | ±(1.5%+10)           | *                                 |            |         |
|                | 20A                   | ±(2.0%+5)            |                                   |            |         |
| AC Current     | 200uA/2mA/20mA        | *                    | ±(1.5%+15)                        |            |         |
|                | 200mA                 | ±(1.5%+15)           |                                   |            |         |
|                | 2A                    | ±(2.0%+5)            | *                                 |            |         |
| Resistance     | 20A                   | ±(3.0%+10)           |                                   |            |         |
|                | 200Ω                  | ±(0.8%+5)            |                                   |            |         |
|                | 2kΩ/20kΩ/200kΩ/2MΩ    | ±(0.8%+3)            |                                   |            |         |
|                | 20MΩ                  | ±(1.0%+25)           |                                   |            |         |
| Capacitance    | 200MΩ                 | ±(5.0%+30)           |                                   |            |         |
|                | 2nF                   | *                    | ±(3.5%+20)                        | *          |         |
|                | 20nF/200nF/20uF/200uF | *                    | ±(3.5%+20)                        |            |         |
|                | 2mF/20mF              | *                    | ±(5.0%+10)                        | *          |         |
| Frequency      | 100mF                 | *                    | Unspecified                       |            |         |
|                | 6nF                   | ±(5.0%+40)           | *                                 |            |         |
|                | 60nF/600nF/6uF/60uF   | ±(3.5%+20)           | *                                 |            |         |
|                | 600uF/6mF             | ±(5.0%+10)           | *                                 |            |         |
|                | 20mF                  | ±(5.0%+40)           | *                                 |            |         |
|                | 10Hz                  | *                    |                                   |            |         |
|                | 100Hz                 | *                    |                                   |            |         |
| Temperature    | 1kHz                  | *                    | ±(1.0%+10)                        |            |         |
|                | 10kHz                 | *                    |                                   |            |         |
|                | 100kHz                | *                    |                                   |            |         |
|                | 1MHz                  | *                    | ±(1.0%+10)                        | *          |         |
|                | 20MHz                 | *                    | ±(1.0%+10)                        |            |         |
| Inductance     | (-20~1000)°C          | *                    | <400C +(1.0%+5)≥400°C +(1.5%+15)  |            |         |
|                | (-4~1832)°F           | *                    | <752°F +(1.0%+5)≥752°F +(1.5%+15) |            |         |
| Inductance     | 2mH/20mH/200mH        | *                    |                                   | ±(2.5%+30) |         |
|                | 2mH/20mH              | *                    |                                   | ±(5.0%+20) |         |

| Special Function      |                     |                    |                                              |
|-----------------------|---------------------|--------------------|----------------------------------------------|
| Max Display           | 1999 (3) 1/2 Bit    | Dual display       | Only 9808+                                   |
| On/off buzzing        | ✓                   | Progress bar       | Only 9808+                                   |
| Sound and light alarm | ✓                   | Low voltage prompt | ✓                                            |
| Data retention        | ✓                   | Over range prompt  | Display "OL"                                 |
| Backlight display     | ✓                   | Sampling rate      | About 3 times/second                         |
| Relative value        | ✓                   | NCV/LIVE           | 9801A+/02A+/04A+/08+                         |
| Flashlight lighting   | ✓                   | Working conditions | (0-40)°C<75% RH                              |
| Max/min               | 9804A+/9805A+/9808+ | Storage conditions | (-20~60) °C<85% RH                           |
| Automatic shutdown    | ✓                   | source             | Four AAA batteries                           |
| Diode/transistor      | ✓                   | size               | 189 * 88 * 56mm                              |
| T-RMS                 | ✓                   | weight             | 0.1A+0.02A+0.04A+: 383g<br>0.05A+0.01A+ 400g |

VC9801A+



VC9804A+



VC9805A+





## VC980+



## VC9806+



## VC9807A+



| Basic Function | Range                    | Accuracy                  |                 |                |
|----------------|--------------------------|---------------------------|-----------------|----------------|
| Model          |                          | VC980+                    | VC9806+         | VC9807A+       |
| DC Voltage     | 200mV/2V/20V/200V        | $\pm(0.5\%+5)$            |                 | $\pm(0.1\%+5)$ |
|                | 1000V                    | $\pm(1.0\%+10)$           |                 | $\pm(0.2\%+5)$ |
|                | 200mV                    | $\pm(1.0\%+25)$           |                 |                |
| AC Voltage     | 2V/20V/200V              | $\pm(0.8\%+25)$           |                 |                |
|                | 750V                     | $\pm(1.2\%+50)$           |                 |                |
|                | 200uA/2000uA/20mA        | $\pm(0.5\%+4)$            |                 |                |
| DC Current     | 200mA                    | $\pm(0.8\%+6)$            |                 |                |
|                | 2A                       | $\pm(2.0\%+15)$           |                 | *              |
|                | 20A                      | $\pm(2.0\%+15)$           |                 |                |
| AC Current     | 20mA/200mA               | $\pm(1.5\%+15)$           |                 |                |
|                | 20A                      | $\pm(2.5\%+35)$           |                 |                |
|                | 200Ω                     | $\pm(0.3\%+10)$           | $\pm(0.4\%+10)$ |                |
| Resistance     | 2kΩ/20kΩ/200kΩ           | $\pm(0.3\%+5)$            | $\pm(0.4\%+5)$  |                |
|                | 2MΩ                      | $\pm(1.2\%+25)$           |                 |                |
|                | 20MΩ/200MΩ               | $\pm(5.0\%+45)$           |                 |                |
| Capacitance    | 20nF                     | $\pm(5.0\%+50)$           |                 |                |
|                | 200nF/2uF/20uF/200uF/2mF | $\pm(4.0\%+50)$           |                 |                |
|                | 20mF/200mF               | Unspecified               |                 |                |
| Frequency      | 200Hz~2MHz               | $\pm(1.0\%+3)$            |                 |                |
|                | > 20.000MHz              | Unspecified               |                 |                |
|                | Duty cycle               | 5.0% ~ 95.0%(<10KHz@3Vpp) |                 |                |

| AC voltage | Frequency range | Resolution | 980+            |
|------------|-----------------|------------|-----------------|
| 200.00mV   | 40Hz ~ 400Hz    | 0.01mV     | $\pm(1.5\%+25)$ |
|            | 401Hz ~ 20kHz   |            | $\pm(2.5\%+60)$ |
| 2.0000V    | 40Hz ~ 400Hz    | 0.0001V    | $\pm(0.8\%+25)$ |
|            | 401Hz ~ 20kHz   |            | $\pm(2.5\%+60)$ |
| 20.000V    | 40Hz ~ 400Hz    | 0.001V     | $\pm(0.8\%+25)$ |
|            | 401Hz ~ 20kHz   |            | $\pm(2.5\%+60)$ |
| 200.00V    | 40Hz ~ 400Hz    | 0.01V      | $\pm(0.8\%+25)$ |
|            | 401Hz ~ 5kHz    |            | $\pm(1.5\%+25)$ |
| 750.0V     | 40Hz ~ 200Hz    | 0.1V       | $\pm(1.0\%+25)$ |
|            | 201Hz ~ 1kHz    |            | $\pm(1.5\%+25)$ |

Note: The VC980+instrument extends frequency response and can accurately measure the effective values of various voltage waveforms

### Conductivity measurement(only VC9806+/9807A+)

| Range          | Resolution | Display Range   | Open circuit voltage |
|----------------|------------|-----------------|----------------------|
| (0.01 ~ 100)nS | 0.01nS     | $\pm(1.0\%+30)$ | -1.02V               |

### General characteristics

|                       |                  |                      |                    |
|-----------------------|------------------|----------------------|--------------------|
| Max Display           | 19999 (4) ½ Bit  | True effective value | Only 980+          |
| On/off buzzing        | √                | Low voltage prompt   | √                  |
| Sound and light alarm | √                | Over range           | Display "OL"       |
| Data retention        | √                | Sampling rate        | 2.8 times /second  |
| Backlight             | √                | Hz% mode key         | Only 9806+/9807A+  |
| Relative value        | √                | work                 | (0-40)°C<75% RH    |
| Low pass filtering    | √                | storage              | (-20~60)°C<85% RH  |
| Max/min               | Only 980+        | source               | Four AAA batteries |
| Automatic shutdown    | about 15 minutes | size                 | 189*88*56mm        |
| Diode/transistor      | √                | weight               | 400g               |

## Technical Specifications

| Basic Function | Range                | Accuracy        |
|----------------|----------------------|-----------------|
| DC voltage     | 600mV                | $\pm(0.5\%+5)$  |
|                | 6V/60V/600V          | $\pm(0.5\%+3)$  |
| AC voltage     | 1000V                | $\pm1.0\%+10)$  |
|                | 6V/60V/600V          | $\pm(0.8\%+5)$  |
|                | 1000V                | $\pm(1.2\%+10)$ |
| DC current     | 60μA                 | $\pm(1.5\%+10)$ |
|                | 600μA/6mA/60mA/600mA | $\pm(1.2\%+8)$  |
|                | 6A                   | $\pm(1.5\%+10)$ |
|                | 20A                  | $\pm(2.0\%+5)$  |
| AC current     | 60mA/600mA           | $\pm(1.5\%+15)$ |
|                | 6A                   | $\pm(2.0\%+5)$  |
|                | 20A                  | $\pm(3.0\%+10)$ |
|                | 200MΩ                | $\pm(5.0\%+30)$ |
| Resistor       | 600Ω                 | $\pm(0.8\%+5)$  |
|                | 6kΩ/60kΩ/600kΩ/6MΩ   | $\pm(0.8\%+3)$  |
|                | 60MΩ                 | $\pm(1.0\%+25)$ |
|                | 200MΩ                | $\pm(5.0\%+30)$ |
|                | 200MΩ                | $\pm(5.0\%+30)$ |
| Capacitor      | 6nF                  | $\pm(5.0\%+40)$ |
|                | 60nF/600nF/6μF/60μF  | $\pm(3.5\%+20)$ |
|                | 600μF/6mF            | $\pm(5.0\%+10)$ |
|                | 60mF/100mF           | Not specified   |

| Features             |                                           |
|----------------------|-------------------------------------------|
| Display              | 5999 (3 5/6) indicates dual display       |
| Sampling rate        | 3 times per second                        |
| Diode                | Yes                                       |
| On-off beeping       | Yes                                       |
| Data retention       | Yes                                       |
| Lighting             | Yes                                       |
| Optimum value        | Maximum/Minimum                           |
| Simulated pointer    | Yes                                       |
| NCV/LIVE             | Yes                                       |
| Automatic shutdown   | No operation for approximately 15 minutes |
| True effective value | Yes                                       |
| Battery power        | Display the battery icon                  |
| Display screen       | 2.8-inch IPS TFT color screen             |
| Power supply method  | Type-C interface 1800mAh lithium battery  |
| Size                 | 181*87*54mm                               |
| Weight               | 346g                                      |

## 9801 Pro

**Color screen**  
**6000 counts display**  
**Rechargeable lithrum battery**



## New Model

9820

New Model



## VICTOR 9820 HIGH-VOLTAGE MULTIMETER

The instrument has the function of measuring DCV, ACV, DCA, ACA, resistance, capacitance, frequency, diode, continuity test, temperature and automatic power off, backlight, and DCV and ACV up to 2000V. The instrument takes dual-integral A/D converter as key point, it is an excellent tool.

### Technical Specifications

| Basic Function | Range                                                          | Accuracy        |
|----------------|----------------------------------------------------------------|-----------------|
| DC Voltage     | 600mV                                                          | $\pm(0.5\%+5)$  |
|                | 6V/60V/600V/1000V                                              | $\pm(0.5\%+4)$  |
|                | 2000V                                                          | $\pm(1.0\%+6)$  |
| AC Voltage     | 6V/60V/600V/750V                                               | $\pm(0.8\%+10)$ |
|                | 2000V                                                          | $\pm(1.2\%+10)$ |
| DC Current     | 600uA/6000uA                                                   | $\pm(1.0\%+10)$ |
|                | 60mA/600mA                                                     | $\pm(1.2\%+10)$ |
| AC Current     | 600uA/6000uA/60mA/600mA                                        | $\pm(1.5\%+10)$ |
| Resistance     | 600Ω                                                           | $\pm(0.8\%+5)$  |
|                | 6kΩ/60kΩ/600kΩ/6MΩ                                             | $\pm(0.8\%+4)$  |
|                | 60MΩ                                                           | $\pm(1.2\%+10)$ |
| Capacitance    | 10nF                                                           | $\pm(5.0\%+40)$ |
|                | 100nF/1uF/10uF/100uF                                           | $\pm(3.5\%+20)$ |
|                | 1mF                                                            | $\pm(5.0\%+10)$ |
|                | 20mF                                                           | $\pm(10\%+0d)$  |
| Frequency      | 10Hz/100Hz/1kHz/10kHz/100kHz/1MHz/10MHz                        | $\pm(0.5\%+10)$ |
| Temperature    | $(-20\sim 1000)^{\circ}\text{C}/(-4\sim 1832)^{\circ}\text{F}$ | $\pm(1.5\%+15)$ |

| Features            |                     |
|---------------------|---------------------|
| Display method      | LCD display         |
| Operation           | Auto Range          |
| Max Display         | 5999 (3 5/6 digits) |
| Diode               | √                   |
| Data retention      | √                   |
| Overload indication | OL                  |
| Low voltage prompt  | √                   |
| On/off buzzing      | √                   |
| Flashlight          | √                   |
| NCV                 | √                   |
| Relative value      | √                   |
| Backlight display   | √                   |
| work environment    | 0~40 °C < 75% RH    |
| Sampling rate       | 3 times/second      |
| Automatic shutdown  | √                   |
| Unit symbol         | √                   |
| Input impedance     | 10MΩ                |
| source              | 4 AAA batteries     |
| Product size        | 186*92*52mm         |
| Product weight      | 395g                |



2003A/2004A/2006A

## Two-channel Function/ Arbitrary Waveform Generator

### Key Features

- 3.5-inch 480×320TFT LCD with clear graphic interface
- With RS232 interface, USB Device, USB Host interface supporting USB flash disk storage (USB Host Optional)

### Technical Specifications

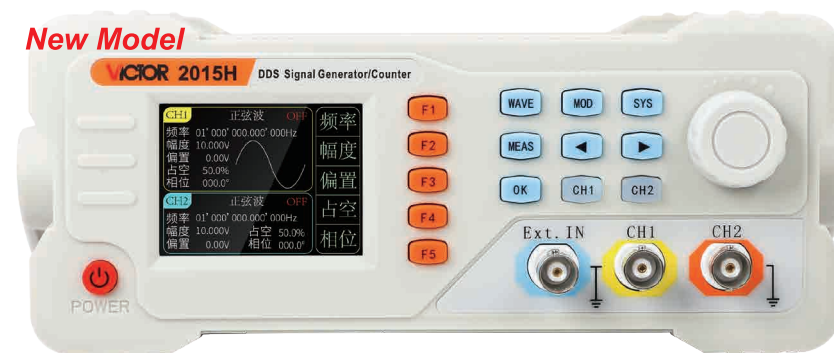
| Frequency Characteristics                          |                                                                                                                                                       |                                                                                        |               |
|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|---------------|
| MODEL                                              | 2003A                                                                                                                                                 | 2004A                                                                                  | 2006A         |
| Sine                                               | 1μHz ~ 25MHz                                                                                                                                          | 1μHz ~ 40MHz                                                                           | 1μHz ~ 60MHz  |
| Square                                             | 1μHz ~ 15MHz                                                                                                                                          | 1μHz ~ 15MHz                                                                           | 1μHz ~ 15MHz  |
| Triangle                                           | 1μHz ~ 15MHz                                                                                                                                          | 1μHz ~ 15MHz                                                                           | 1μHz ~ 15MHz  |
| Pulse                                              | 100μHz ~ 6MHz                                                                                                                                         | 100μHz ~ 6MHz                                                                          | 100μHz ~ 6MHz |
| Arbitrary                                          | 1μHz ~ 6MHz                                                                                                                                           | 1μHz ~ 6MHz                                                                            | 1μHz ~ 6MHz   |
| Noise (-3dB)                                       | 7MHz Bandwidth                                                                                                                                        |                                                                                        |               |
| Frequency Resolution                               | 1μHz                                                                                                                                                  |                                                                                        |               |
| Frequency Accuracy                                 | ±5ppm                                                                                                                                                 |                                                                                        |               |
| Frequency Stability                                | ±1ppm/3hour                                                                                                                                           |                                                                                        |               |
| Frequency Characteristics                          |                                                                                                                                                       |                                                                                        |               |
| Waveform Types                                     | Sine, square, triangle, pulse, noise and arbitrary waves (including DC).<br>There are 32 kinds of arbitrary waves and 50 kinds of user-defined waves. |                                                                                        |               |
| Waveform Length                                    | 8192 points                                                                                                                                           |                                                                                        |               |
| Waveform Sampling Rate                             | 200 MSa/s                                                                                                                                             |                                                                                        |               |
| Waveform Vertical Resolution                       | 13 bits                                                                                                                                               |                                                                                        |               |
| Sine Wave Characteristics                          |                                                                                                                                                       |                                                                                        |               |
| Sine Wave                                          | Harmonic Distortion                                                                                                                                   | ≥45dBc(<1MHz);≥40dBc(1MHz~20MHz)                                                       |               |
|                                                    | Total Harmonic Distortion                                                                                                                             | <0.8%(20Hz ~ 20kHz, 0dBm)                                                              |               |
| Square Wave Signal Characteristics                 |                                                                                                                                                       |                                                                                        |               |
| Square Wave                                        | Rise/Fall                                                                                                                                             | <20ns                                                                                  |               |
|                                                    | Overshoot                                                                                                                                             | <5%                                                                                    |               |
|                                                    | Duty Cycle                                                                                                                                            | freq<100kHz: 1%~99%;100kHz≤freq<5MHz: 20% ~ 80%; 5MHz≤freq: 40% ~ 60%(0.1% resolution) |               |
| Pulse Wave Characteristics                         |                                                                                                                                                       |                                                                                        |               |
| Pulse Wave                                         | Pulse Width                                                                                                                                           | Min 20ns; 1ns resolution                                                               |               |
|                                                    | Edge Transition Time                                                                                                                                  | Min 20ns;                                                                              |               |
|                                                    | Overshoot                                                                                                                                             | <5%                                                                                    |               |
|                                                    | Jitter                                                                                                                                                | 6ns±0.1% Period                                                                        |               |
| Ramp Wave                                          | Linearity Degree                                                                                                                                      | ≥98%(0.01Hz~10kHz)                                                                     |               |
|                                                    | Symmetry                                                                                                                                              | 0.0 ~ 100.0%(resolution 0.1%)                                                          |               |
| Output Characteristics                             |                                                                                                                                                       |                                                                                        |               |
| Amplitude                                          |                                                                                                                                                       |                                                                                        |               |
| Amplitude Range                                    | freq<10MHz                                                                                                                                            | 10MHz≤freq<30MHz                                                                       | 30MHz≤freq    |
|                                                    | 2mVpp ~ 20Vpp                                                                                                                                         | 2mVpp ~10Vpp                                                                           | 2mVpp ~5Vpp   |
| Amplitude Resolution                               | 1mV                                                                                                                                                   |                                                                                        |               |
| Amplitude Stability                                | ±1% set value±1mVpp( 1kHz Sine, 0 offset, >10mVpp)                                                                                                    |                                                                                        |               |
| Amplitude Flatness<br>(relative to 1K Sine, 1 Vpp) | ±0.4dB <10MHz;                                                                                                                                        |                                                                                        |               |
|                                                    | ±1.0dB ≥10MHz.                                                                                                                                        |                                                                                        |               |
| Output Impedance                                   | 50Ω±10%(Typical)                                                                                                                                      |                                                                                        |               |
| Protection                                         | All the signal output terminal can be shorted within 60s                                                                                              |                                                                                        |               |
| DC Offset                                          |                                                                                                                                                       |                                                                                        |               |
| DC Offset                                          | Output Amplitude>0.1V                                                                                                                                 | 2mV<Output Amplitudes0.1V                                                              |               |
|                                                    | ±10Vpk, ac + dc                                                                                                                                       | ±0.250Vpk, ac + dc                                                                     |               |
| Offset Adjusting Range                             | ±10Vpk, ac + dc                                                                                                                                       |                                                                                        |               |
| Offset Resolution                                  | 1mV                                                                                                                                                   |                                                                                        |               |



2015H/2040H/2060H

| External Measurement Function |                                                                  |                                                   |                                                                  |
|-------------------------------|------------------------------------------------------------------|---------------------------------------------------|------------------------------------------------------------------|
| Frequency Meter               | Frequency measurement range                                      | 1Hz ~ 100MHz                                      |                                                                  |
|                               | Measurement accuracy                                             | Gate time continuously adjusted between 0.01s~10s |                                                                  |
| Counter Function              | Counting region                                                  | 0 ~ 4294967295                                    |                                                                  |
|                               | Control mode                                                     | Manual operation                                  |                                                                  |
| Input Signal Voltage Range    |                                                                  | 2Vpp~20Vpp                                        |                                                                  |
| Coupled Mode                  |                                                                  | AC or DC                                          |                                                                  |
| Pulse Width Measurement       |                                                                  | 1ns (resolution), 20s (MAX measuring time)        |                                                                  |
| Period Measurement            |                                                                  | 1ns (resolution), 20s (MAX measuring time)        |                                                                  |
| SYNC Output                   |                                                                  | Trigger Input                                     |                                                                  |
| Output Channel                | CH1 or CH2, default CH1                                          | Signal Range                                      | 2Vpp~20Vpp                                                       |
| Level                         | TTL                                                              | Coupling                                          | AC or DC                                                         |
| Impedance                     | 50Ω                                                              | Pulse Width                                       | >100ns                                                           |
| Rise/Fall Time                | < 25ns                                                           | Reaction Time                                     | <500ns(Burst)                                                    |
| Maximum Frequency             | 25MHz                                                            |                                                   | <10μs(Sweep)                                                     |
| Phase characteristics         |                                                                  | Modulation Input                                  |                                                                  |
| Phase Adjusting Range         | 0~359.9°                                                         | Impedance                                         | 1MΩ                                                              |
| Phase Resolution              | 0.1°                                                             | Signal range                                      | ±2.5V ac+dc                                                      |
| AM Modulation                 |                                                                  | FM Modulation                                     |                                                                  |
| Output Channel                | CH1 or CH2, default CH1                                          | Output Channel                                    | CH1 or CH2, default CH1                                          |
| Carrier Wave                  | Sine, square, ramp, pulse and arbitrary waveforms (excluding DC) | Carrier Wave                                      | Sine, square, ramp, pulse and arbitrary waveforms (excluding DC) |
| Source                        | Internal/External                                                | Source                                            | Internal/External                                                |
| Modulation Wave               | Sine, square, triangle and ramp                                  | Modulation Wave                                   | Sine, square, triangle and ramp                                  |
| Modulation Frequency          | 2mHz~20kHz                                                       | Modulation Frequency                              | 2mHz~20kHz                                                       |
| Modulation Depth              | 0%~120%                                                          | Frequency Offset                                  | 0~Maximum carrier frequency                                      |
| PM Modulation                 |                                                                  | ASK Modulation                                    |                                                                  |
| Output Channel                | CH1 or CH2, default CH1                                          | Output Channel                                    | CH1 or CH2, default CH1                                          |
| Carrier Wave                  | Sine, square, ramp, pulse and arbitrary waveforms (excluding DC) | Carrier Wave                                      | Sine, square, ramp, pulse and arbitrary waveforms (excluding DC) |
| Source                        | Internal/External                                                | Source                                            | Internal/External                                                |
| Modulation Wave               | Sine, square, triangle and ramp                                  | Modulation Wave                                   | Square wave of 50% duty ratio                                    |
| Modulation Frequency          | 2mHz~20kHz                                                       | Keying Frequency                                  | 2mHz~1MHz                                                        |
| Phase Offset                  | 0°~ 360°                                                         | Modulation Amplitude                              | 0~Carrier Amplitude                                              |
| FSK Modulation                |                                                                  | PSK Modulation                                    |                                                                  |
| Output Channel                | CH1 or CH2, default CH1                                          | Output Channel                                    | CH1 or CH2, default CH1                                          |
| Carrier Wave                  | Sine, square, ramp, pulse and arbitrary waveforms (excluding DC) | Carrier Wave                                      | Sine, square, ramp, pulse and arbitrary waveforms (excluding DC) |
| Source                        | Internal/External                                                | Source                                            | Internal/External                                                |
| Modulation Wave               | Square wave of 50% duty ratio                                    | Modulation Wave                                   | Square wave of 50% duty ratio                                    |
| Keying Frequency              | 2mHz~1MHz                                                        | Keying Frequency                                  | 2mHz~1MHz                                                        |
| Hop Frequency                 | Carrier frequency range                                          | Modulation Phase                                  | 0°~ 360°                                                         |
| Frequency Sweep               |                                                                  | Burst Characteristics                             |                                                                  |
| Output Channel                | CH1 or CH2, default CH1                                          | Output Channel                                    | CH1 or CH2, default CH1                                          |
| Types                         | Linearity/Logarithm                                              | Carrier Wave                                      | Sine, square, ramp, pulse and arbitrary waveforms (excluding DC) |
| Sweep Frequency Time          | 1ms ~ 500.000s                                                   | Pulse Count                                       | 1~65535 or infinite, gated                                       |
| Start/Stop Frequency          | 1μHz~Maximum carrier frequency                                   | Start/Stop Phase                                  | 0~360°                                                           |
| Sweep Direction               | Forward, Backward                                                | Internal Period                                   | 1μs~500s                                                         |
| Trigger Source                | Manual operating, internal, external                             | Gating Source                                     | External                                                         |
|                               |                                                                  | Trigger Source                                    | Internal, external, manual operating                             |

New Model



## Technical data

| Model                              | 2015H                                                                     | 2040H                                                                                                                | 2060H         |
|------------------------------------|---------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|---------------|
| Sine wave                          | 1μHz~ 20MHz                                                               | 1μHz ~ 40MHz                                                                                                         | 1μHz ~ 60MHz  |
| Square wave                        | 1μHz ~ 15MHz                                                              | 1μHz ~ 15MHz                                                                                                         | 1μHz ~ 15MHz  |
| Triangle wave                      | 1μHz ~ 15MHz                                                              | 1μHz ~ 15MHz                                                                                                         | 1μHz ~ 15MHz  |
| Pulse wave                         | 100μHz ~ 6MHz                                                             | 100μHz ~ 6MHz                                                                                                        | 100μHz ~ 6MHz |
| Arbitrary                          | 1μHz ~ 6MHz                                                               | 1μHz ~ 6MHz                                                                                                          | 1μHz ~ 6MHz   |
| Frequency resolution               | 1uHz                                                                      |                                                                                                                      |               |
| Frequency accuracy                 | ±20ppm                                                                    |                                                                                                                      |               |
| Frequency stability                | ±1ppm/3hours                                                              |                                                                                                                      |               |
| Waveform characteristics           |                                                                           |                                                                                                                      |               |
| Waveform type                      | Sine、Square、triangular wave, pulse, noise, arbitrary wave (including DC). |                                                                                                                      |               |
| Wave length                        | 8192 points                                                               |                                                                                                                      |               |
| Waveform sampling rate             | 200MSa/s                                                                  |                                                                                                                      |               |
| Waveform vertical resolution       | 13-bits                                                                   |                                                                                                                      |               |
| Sine wave characteristics          |                                                                           |                                                                                                                      |               |
| Sine wave                          | Harmonic Suppression                                                      | ≥45dBc(<1MHz); ≥40dBc(1MHz~20MHz)                                                                                    |               |
|                                    | Total harmonic distortion                                                 | <0.8%(20Hz~20kHz, 0dBm)                                                                                              |               |
| Square wave signal characteristics |                                                                           |                                                                                                                      |               |
| Square wave                        | Rise/Fall time                                                            | <20ns                                                                                                                |               |
|                                    | Overshoot                                                                 | <5%                                                                                                                  |               |
|                                    | Duty cycle range                                                          | Frequency < 100 KHz: 1% ~ 99%;<br>100kHz≤ frequency <5MHz: 20% ~ 80%;<br>5MHz≤ frequency: 40% ~ 60%(0.1% resolution) |               |
| Pulse wave characteristics         |                                                                           |                                                                                                                      |               |
| Pulse wave                         | Pulse width                                                               | Minimum 20ns; 1 ns resolution.                                                                                       |               |
|                                    | Edge jumping time                                                         | Minimum 20ns                                                                                                         |               |
|                                    | Overshoot                                                                 | <5%..                                                                                                                |               |
|                                    | Shaking                                                                   | 6ns+0.1% period cycle                                                                                                |               |
| Sawtooth wave characteristics      |                                                                           |                                                                                                                      |               |
| Sawtooth wave                      | Linearity                                                                 | ≥98%(0.01Hz~10kHz)                                                                                                   |               |
|                                    | Symmetry                                                                  | 0.0 ~ 100.0%(resolution 0.1%)                                                                                        |               |
| Trigger Input                      |                                                                           |                                                                                                                      |               |
| Signal Range                       | 2Vpp~20Vpp                                                                |                                                                                                                      |               |
| Coupling                           | AC or DC                                                                  |                                                                                                                      |               |
| Pulse Width                        | >100ns                                                                    |                                                                                                                      |               |
| Reaction Time                      | <500ns(Burst)                                                             |                                                                                                                      |               |
|                                    | <10μs(Sweep)                                                              |                                                                                                                      |               |
| Modulation Input                   |                                                                           |                                                                                                                      |               |
| Impedance                          | 1MΩ                                                                       |                                                                                                                      |               |
| Signal Range                       | ±2.5V ac+dc                                                               |                                                                                                                      |               |



## Output characteristics

| Amplitude                                              | 2015H                                                                   | 2040H                           | 2060H             |
|--------------------------------------------------------|-------------------------------------------------------------------------|---------------------------------|-------------------|
| Amplitude range                                        | Frequency <10MHz                                                        | 10MHz ≤ Frequency ≤ 30MHz       | 30MHz ≤ Frequency |
|                                                        | 2mVpp~20Vpp                                                             | 2mVpp~10Vpp                     | 2mVpp~5Vpp        |
| Amplitude resolution                                   | 1mV                                                                     |                                 |                   |
| Amplitude accuracy                                     | 1% +2mVpp of set value (1kHz sine wave, 0 offset, >10mVpp)              |                                 |                   |
| Amplitude flatness<br>(Relative to 1k sine wave, 1Vpp) | ±0.4dB <10MHz ; ±1.0dB ≥10MHz                                           |                                 |                   |
| Output impedance                                       | 50Ω±10% (typical)                                                       |                                 |                   |
| Protection                                             | All signal outputs can work within 60 when the load is short-circuited. |                                 |                   |
| Offset                                                 |                                                                         |                                 |                   |
| Output range                                           | Output amplitude > 0.1V                                                 | 2mV < Output amplitude ≤ 0.1V   |                   |
|                                                        | ±10Vpk, ac + dc                                                         | ±0.250Vpk, ac + dc              |                   |
| Offset resolution                                      | 1mV                                                                     |                                 |                   |
| Phase characteristics                                  |                                                                         |                                 |                   |
| Phase adjustment range                                 | 0~359.9°                                                                |                                 |                   |
| Phase resolution                                       | 0.1°                                                                    |                                 |                   |
| External measurement function                          |                                                                         |                                 |                   |
| Frequency meter function                               | Frequency measurement range                                             | 1Hz~100MHz                      |                   |
|                                                        | Gate time                                                               | 0.01S~10s continuous adjustment |                   |
| Counter function                                       | Counting range                                                          | 0~4294967295                    |                   |
|                                                        | Counting method                                                         | Manually                        |                   |
| Input signal voltage range                             | 2Vpp~20Vpp                                                              |                                 |                   |
| Coupling                                               | DC or AC                                                                |                                 |                   |
| Pulse width measurement                                | 1ns resolution, maximum measurable 20s                                  |                                 |                   |
| Period measurement                                     | 1ns us resolution, maximum measurable 20s                               |                                 |                   |

| AM Modulation        |                                                                     | FM Modulation        |                                                                     |
|----------------------|---------------------------------------------------------------------|----------------------|---------------------------------------------------------------------|
| Output channel       | CH1 or CH2                                                          | Output Channel       | CH1 or CH2                                                          |
| Signal Carrier       | Sine, square,sawtooth, pulse and arbitrary waveforms (excluding DC) | Carrier Wave         | Sine, square,sawtooth, pulse and arbitrary waveforms (excluding DC) |
| Source               | Internal/External VCO(external is optional)                         | Source               | Internal/External(external is optional)                             |
| Modulation Wave      | Sine, square, triangle and ramp                                     | Modulation Wave      | Sine, square, triangle and ramp                                     |
| Modulation Frequency | 2mHz~20kHz                                                          | Modulation Frequency | 2mHz~20kHz                                                          |
| Modulation Depth     | 0%~120%                                                             | Frequency Offset     | 0~Maximum carrier frequency                                         |
| PM Modulation        |                                                                     | ASK Modulation       |                                                                     |
| Output Channel       | CH1 or CH2                                                          | Output Channel       | CH1 or CH2                                                          |
| Carrier Wave         | Sine, square,sawtooth, pulse and arbitrary waveforms (excluding DC) | Carrier Wave         | Sine, square,sawtooth, pulse and arbitrary waveforms (excluding DC) |
| Source               | Internal/External(external is optional)                             | Source               | Internal/External                                                   |
| Modulation Wave      | Sine, square, triangle and ramp                                     | Modulation Wave      | Square wave of 50% duty ratio                                       |
| Modulation Frequency | 2mHz~20kHz                                                          | Keying Frequency     | 2mHz~1MHz                                                           |
| Phase Offset         | 0°~360°                                                             | Modulation Amplitude | 0~Carrier Amplitude                                                 |
| FSK Modulation       |                                                                     | PSK Modulation       |                                                                     |
| Output Channel       | CH1 or CH2                                                          | Output Channel       | CH1 or CH2                                                          |
| Carrier Wave         | Sine, square,sawtooth, pulse and arbitrary waveforms (excluding DC) | Carrier Wave         | Sine, square,sawtooth, pulse and arbitrary waveforms (excluding DC) |
| Source               | Internal/External                                                   | Source               | Internal/External                                                   |
| Modulation Wave      | Square wave of 50% duty ratio                                       | Modulation Wave      | Square wave of 50% duty ratio                                       |
| Keying Frequency     | 2mHz~1MHz                                                           | Keying Frequency     | 2mHz~1MHz                                                           |
| Hop Frequency        | Carrier frequency range                                             | Modulation Phase     | 0°~360°                                                             |

| Frequency Sweep      |                                                                            |
|----------------------|----------------------------------------------------------------------------|
| Output Channel       | CH1 or CH2                                                                 |
| Types                | Linearity/Logarithm                                                        |
| Sweep Frequency Time | 1ms ~ 999.999s                                                             |
| Start/Stop Frequency | Arbitrary set                                                              |
| Sweep Direction      | Forward,Reverse,Backward                                                   |
| Trigger Source       | Manual operating, internal, external                                       |
| Frequency Sweep      |                                                                            |
| Output Channel       | CH1 or CH2                                                                 |
| Carrier Wave         | Sine, square,sawtooth, pulse, noise and arbitrary waveforms (excluding DC) |
| Pulse Count          | 1~1048575 or infinite, gated                                               |
| Start/Stop Phase     | 0~360°                                                                     |
| Internal Period      | 1μs~500s                                                                   |
| Gating Source        | External                                                                   |
| Trigger Source       | Internal, external, manual operating                                       |

## General Technical Specifications

| Power Supply      |                                                                                |
|-------------------|--------------------------------------------------------------------------------|
| Supply Voltage    | AC 110~240V, 50~60Hz                                                           |
| Power Consumption | <15W                                                                           |
| Display           |                                                                                |
| Types             | 2.4-inch TFT LCD screen                                                        |
| Resolution        | 320×240                                                                        |
| Color             | 16M color                                                                      |
| Environment       |                                                                                |
| Temperature Range | Operation: 10°C~+40°C Non-operation: -10°C~+60°C                               |
| Cooling Methods   | Natural cooling                                                                |
| Humidity Range    | Below +35°C: ≤90% relative humidity, +B14035°C ~ +40°C: ≤60% relative humidity |
| Interface         | USB Device                                                                     |

3010

New Model



3021

New Model



7244

New Model



## Technical data

| Model                      | 3010                              | 3021     | 7244     |
|----------------------------|-----------------------------------|----------|----------|
| DCV                        | 2.5V/10V/25V/50V/250V/1000V       | ±3%      |          |
|                            | 0.1V/0.5V/2.5V/10V/50V/250V/1000V | ±3%      |          |
| ACV                        | 10V/50V/250V/1000V                | ±4%      |          |
|                            | 10V/50V/250V/500V                 |          | ±4%      |
| DC A                       | 50uA/0.5mA/5mA/50mA/500mA/10A     | ±3%      |          |
|                            | 50uA/2.5mA/25mA/0.25A/10A         |          | ±3%      |
|                            | 50uA/2.5mA/25mA/250mA/10A         |          | ±3%      |
| Resistanc                  | X1/X10/X100/X1k/X10kΩ             | ±3%      |          |
|                            | X1/X10/X100/X1k/X100kΩ            |          | ±3%      |
| Special functions          |                                   |          |          |
| Dry cell measurement       |                                   |          |          |
| Diode test                 |                                   | √        | √        |
| Triode test                | √                                 | √        |          |
| Audio level measurement dB | √                                 | √        | √        |
| On off test                | √                                 | √        | √        |
| line protection            | √                                 | √        | √        |
| Input impedance            | (9~20)kΩ                          | (9~20)kΩ | (9~20)kΩ |
| Basic parameters           |                                   |          |          |
| Power Supply               | AAA- 9V                           | AAA      | AAA- 9V  |
| Body color                 | Black+orange                      |          |          |
| Body weight                | About 225g (including battery)    |          |          |
| Body size                  | 160X101.5X40mm                    |          |          |
| Standard accessories       | Test probe/manual                 |          |          |
| Standard inner packaging   | Color box                         |          |          |

6243



3 1/2



## Technical data

| Inductance(L) |            | Capacitance/Resistance/Inductance |                     |
|---------------|------------|-----------------------------------|---------------------|
| Range         | Accuracy   | Resolution                        | Measuring frequency |
| 2mH           | ±(2.0%+5d) | 1uH                               | Approx:200Hz        |
| 20mH          |            | 10uH                              |                     |
| 200mH         |            | 100uH                             |                     |
| 2H            | ±(5.0%+5d) | 1mH                               | Approx:200Hz        |
| 20H           |            | 10mH                              |                     |
| 2nF           |            | 1pF                               |                     |
| 20nF          | ±(1.0%+5d) | 100pF                             | Approx:16Hz         |
| 2uF           |            | 1nF                               |                     |
| 20uF          |            | 10nF                              |                     |
| 200uF         | ±(2.0%+5d) | 100nF                             | Approx:8Hz          |
| 1000uF        |            | 1uF                               |                     |

## General Characters

|                              |                          |
|------------------------------|--------------------------|
| Product Net Weight           | 380g (including battery) |
| Product dimension            | 189×97×35mm              |
| Carton size                  | 465×317×506mm            |
| Standard Quantity Per Carton | 30PCS                    |

## Technical data

| Capacitance (C) |            | 6013 Capacitance (C)          |           |
|-----------------|------------|-------------------------------|-----------|
| Range           | Resolution | Max. displaying in the ranges | Accuracy  |
| 200pF           | 0.1pF      | 199.9pF                       | ±(0.5%+7) |
| 2nF             | 1pF        | 1.999nF                       |           |
| 20nF            | 10pF       | 19.99nF                       |           |
| 200nF           | 100pF      | 199.9nF                       |           |
| 2uF             | 1000pF     | 1.999uF                       |           |
| 20uF            | 0.01uF     | 19.99uF                       | 80Hz      |
| 200uF           | 0.1uF      | 199.9uF                       |           |
| 2000uF          | 1uF        | 1999uF                        | 8Hz       |
| 20000uF         | 10uF       | 1999(×10)uF                   |           |
|                 |            |                               | ±(2%+5)   |
|                 |            |                               | ±(3%+10)  |

## Special Function

|                               |                                |
|-------------------------------|--------------------------------|
| Low battery indication        | ✓                              |
| Function protection           | ✓                              |
| Zero manual                   | ✓                              |
| Overload protection           | ✓                              |
| Backlight                     | ✓                              |
| Max. display                  | 1999 (3 1/2LCD display)        |
| Sampling rate                 | (0-5) time/s                   |
| Environment/Relative Humidity | 0°C~40°C/Relative Humidity<80% |
| Over-range display            | Max display "1"                |
| Size                          | 189×97×35mm                    |
| Weight                        | 320g                           |
| Power                         | 9V (6F22)                      |

| Range                         | VICTOR 6013B | Accuracy   | Resolution |
|-------------------------------|--------------|------------|------------|
| 300Ω/3KΩ/30KΩ/300KΩ           |              | ±(1.0%+5d) | 0.1Ω       |
| 3MΩ/30MΩ                      |              | ±(2.0%+5d) |            |
| 3nF/30nF/300nF/3μF/30μF/300μF |              | ±(3.0%+5d) | 0.1nF      |
| 3mF/30mF                      |              | ±(5.0%+5d) |            |

|                                  |                        |
|----------------------------------|------------------------|
| General Features                 | 6013B                  |
| Low Battery Indication           | ✓                      |
| Auto Power Off                   | ✓                      |
| Data Hold                        | ✓                      |
| Max. Display                     | 2999                   |
| Sampling Rate                    | 3 times/s              |
| Operation Temperature / Humidity | 0°C~40°C; Humidity<80% |
| Over Range Indication            | LCD "OL"               |
| Product Size                     | 175×34×18.5mm          |
| Product Weight                   | 68.5g                  |

6013



3 1/2



6013B



## Technical data

| Handheld LCR meter          |  | 4080                                                                                                        | 4082                                     |
|-----------------------------|--|-------------------------------------------------------------------------------------------------------------|------------------------------------------|
| Testing frequency           |  | 100Hz, 120Hz, 1KHz, 10KHz, 40KHz, 100KHz                                                                    | 100Hz-100KHz adjustable, step from 1Hz   |
| Basic accuracy              |  | 0.3%                                                                                                        | 0.2%                                     |
| Electrolytic capacitor mode |  | ✓                                                                                                           | ✓                                        |
| DCR mode                    |  | ×                                                                                                           | ✓                                        |
| Bias Voltage                |  | ×                                                                                                           | 0-500mV can be adjustable, step from 1mV |
| Electric level              |  | 0.6Vrms                                                                                                     | 0-0.7V adjustable                        |
| Screen                      |  | 2.8 inches TFT LCD                                                                                          |                                          |
| Digits display              |  | Main parameter: 5 digits; auxiliary parameter: 5 digits                                                     |                                          |
| Measuring parameters        |  |                                                                                                             |                                          |
| Main parameter              |  | L/C/R/Z                                                                                                     |                                          |
| Auxiliary parameter         |  | X/D/Q/ESR                                                                                                   | X/D/Q/θ/ESR                              |
| Measuring Range             |  | (L) 0-2000H                                                                                                 |                                          |
| Measuring Range             |  | (C) 0-20mF                                                                                                  |                                          |
| Measuring Range             |  | (R) 0-20MΩ                                                                                                  |                                          |
| Measuring speed             |  | 1 time/s (slow), 2 times/s (moderate), 4 times/s (fast)                                                     |                                          |
| Calibration function        |  | Open circuit calibration, short circuit calibration                                                         |                                          |
| Filtering function          |  | Limit scope 1%~50% can be set; 1%, 5%, 10%, 20% are the fix points                                          |                                          |
| errors measurement          |  | is use for comparing the percent errors between components and nominal value, meanwhile display             |                                          |
| others                      |  | Backlight luminance can be adjustable; USB device and auto power off can be set                             |                                          |
| Standard Accessories        |  | Mini-USB cable; power adapter; short-circuit plate; Kelvin test fixture Lithium battery with large capacity |                                          |

4080/4082



4091A/4091B/4091C



4090A/4090B/4090C

## Technical data

| LCR meter            | 4090A                                                                                                                                    | 4090B                                                                 | 4090C                                                                                      | 4091A                                        | 4091B                                        | 4091C                                         |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|--------------------------------------------------------------------------------------------|----------------------------------------------|----------------------------------------------|-----------------------------------------------|
| Testing frequency    | 10 points<br>(100, 120, 200, 400, 800, 1K, 2K, 4K, 8K, 10K)                                                                              | 12 points<br>(100, 120, 200, 400, 800, 1K, 2K, 4K, 8K, 10K, 15K, 20K) | 16 points<br>(100, 120, 200, 400, 800, 1K, 2K, 4K, 8K, 10K, 15K, 20K, 40K, 50K, 80K, 100K) | 10~10KHz<br>continuous adjust, stepping: 1Hz | 10~20KHz<br>continuous adjust, stepping: 1Hz | 10~100KHz<br>continuous adjust, stepping: 1Hz |
| Screen               | 3.5 inches TFT LCD                                                                                                                       |                                                                       |                                                                                            |                                              |                                              |                                               |
| Digits display       | Main parameter: 5 digits; auxiliary parameter: 5 digits                                                                                  |                                                                       |                                                                                            |                                              |                                              |                                               |
| Measuring parameters | Main parameter: L/C/R/Z; auxiliary parameter: X/D/Q/θ/ESR                                                                                |                                                                       |                                                                                            |                                              |                                              |                                               |
| Measuring Range (L)  | 0.01 μH - 9999H                                                                                                                          |                                                                       |                                                                                            |                                              |                                              |                                               |
| Measuring Range (C)  | 0.01pF - 99.999mF                                                                                                                        |                                                                       |                                                                                            |                                              |                                              |                                               |
| Measuring Range (R)  | 0.0001Ω - 99.999MΩ                                                                                                                       |                                                                       |                                                                                            |                                              |                                              |                                               |
| Basic accuracy       | 0.2%                                                                                                                                     |                                                                       |                                                                                            |                                              |                                              |                                               |
| Measuring speed      | 2 times/s (slow), 4 times/s (moderate), 8 times/s (fast)                                                                                 |                                                                       |                                                                                            |                                              |                                              |                                               |
| Bias Voltage         | 0-1500mV can be adjustable, stepping: 1mV                                                                                                |                                                                       |                                                                                            |                                              |                                              |                                               |
| Calibration function | Open circuit calibration, short circuit calibration                                                                                      |                                                                       |                                                                                            |                                              |                                              |                                               |
| Filtering function   | Limit scope -50%~+50% can be set; 1%, 5%, 10%, 20% are the fix points                                                                    |                                                                       |                                                                                            |                                              |                                              |                                               |
| Interface            | Standard accessories RS232(or 485), USB Device, Handle, optional accessories GPIB, USB host                                              |                                                                       |                                                                                            |                                              |                                              |                                               |
| Others               | DCR and electrolytic capacitor measuring mode are available; Backlight luminance can be adjustable, Chinese or English mode are optional |                                                                       |                                                                                            |                                              |                                              |                                               |



4092A



4092B



4092C



4092D



4092E



## Main Features

10Hz ~ 1MHz of test frequency  
6 and a half digits of measurement resolution  
Internal  $\pm 2V$  of DC bias voltage  
0.05% basic measurement accuracy  
automatic, manual, external trigger and bus trigger measurement  
dual measurement display  
measurement in absolute form or reference value based deviation measurement  
accurate four-wire fixtures  
categories of components  
up to  $\pm 60V$  of DC external bias voltage  
internal memory  
7-inch LCD color display  
visual user interface, comprehensive test functions  
providing RS232, HANDLER, GPIB, LAN, and USB Interfaces

## Technical indicators

| Model                                  | A Type                                                                                                | B Type      | C Type      | D Type      | E Type    |
|----------------------------------------|-------------------------------------------------------------------------------------------------------|-------------|-------------|-------------|-----------|
| Frequency Range                        | 10Hz~100kHz                                                                                           | 10Hz~200kHz | 10Hz~300kHz | 10Hz~500kHz | 10Hz~1MHz |
| Frequency Resolution                   | Frequency Resolution:1mHz                                                                             |             |             |             |           |
| Accuracy                               | Frequency Accuracy:0.01%                                                                              |             |             |             |           |
| Measurable parameters                  | Cp-D/Q/G/Rp, Cs-D/Q/Rs, Lp-D/Q/G/Rp, Ls-D/Q/Rs, Rs-Xs, Z- $\theta$ , Y- $\theta$ , G-B                |             |             |             |           |
| Measurement time (Fast / medium speed) | 200ms/500ms @ 10Hz<br>100ms/500ms @ 50Hz<br>20ms/200ms @ $\geq 100$ Hz                                |             |             |             |           |
| Custom time range                      | 100ms/2000ms @ 10Hz<br>20ms/2000ms @ 50Hz<br>20ms/2000ms @ $\geq 100$ Hz<br>5ms/2000ms @ $\geq 1$ kHz |             |             |             |           |
| Test signal level (1mVrms stepping)    | 10mVrms to 2Vrms<br>100 $\mu$ Arms to 20mArms                                                         |             |             |             |           |
| Constant voltage level                 | 10mVrms-1Vrms                                                                                         |             |             |             |           |
| Constant current level                 | 100 $\mu$ Arms-10mArms                                                                                |             |             |             |           |
| DC bias capability                     | Internal -2V to +2V voltage bias External bias input (within $\pm 60V$ )                              |             |             |             |           |
| Internal resistance of signal source   | 30 Ohm, 100 Ohm are optional                                                                          |             |             |             |           |
| Basic accuracy                         | 0.05%                                                                                                 |             |             |             |           |
| Display resolution                     | 6 digits and a half                                                                                   |             |             |             |           |
| Comparator                             | 9 groups of qualification level, 1 group of unqualification level, 1 group of auxiliary level         |             |             |             |           |
| Correction                             | Self correction, open/short circuit frequency sweep, 100 sets of specified frequency points           |             |             |             |           |
| List sweep                             | List sweep test for 100 points                                                                        |             |             |             |           |
| Storing device                         | Internal/USB memory                                                                                   |             |             |             |           |
| Remote control                         | GPIB, LAN, RS232, USB, Handler                                                                        |             |             |             |           |



6019D

6019E

616A

616B

| FUNCTION    | 6019D                                                   | 6019E                                                   | Accuracy         | 616A                                                   | 616B                                                   | Accuracy         |
|-------------|---------------------------------------------------------|---------------------------------------------------------|------------------|--------------------------------------------------------|--------------------------------------------------------|------------------|
| DCV         | 600mV/6V/60V<br>/600V                                   | 600mV/6V/60V<br>/600V                                   | $\pm (0.5\%+3)$  | 600mV<br>6V/60V                                        | 600mV<br>6V/60V                                        | $\pm (0.8\%+3)$  |
|             | 1000V                                                   | 1000V                                                   | $\pm (0.8\%+10)$ | 600V                                                   | 600V                                                   | $\pm (1.0\%+5)$  |
|             | 6V/60V/<br>600V                                         | 6V/60V/<br>600V                                         | $\pm (0.8\%+3)$  | 600mV/6V<br>60V                                        | 600mV/6V<br>60V                                        | $\pm (1.2\%+10)$ |
| ACV         | 750V                                                    | 750V                                                    | $\pm (1.2\%+10)$ | 600V                                                   | 600V                                                   | $\pm (1.2\%+5)$  |
|             |                                                         |                                                         |                  |                                                        |                                                        |                  |
| DCA         | /                                                       | 6A/60A                                                  | $\pm (2.5\%+30)$ | /                                                      | 60A                                                    | $\pm (2.5\%+5)$  |
|             |                                                         |                                                         |                  |                                                        |                                                        |                  |
| ACA         | /                                                       | 600mA                                                   | $\pm (2.5\%+20)$ | 6A/60A                                                 | 60A                                                    | $\pm (2.5\%+8)$  |
|             | 6A/60A/200A                                             | 6A/60A                                                  | $\pm (2.0\%+30)$ | 600A                                                   | 600A                                                   | $\pm (2.5\%+10)$ |
| RESISTENCE  | 600 $\Omega$                                            | 600 $\Omega$                                            | $\pm (0.8\%+5)$  | 600 $\Omega$ /6k $\Omega$ /60k $\Omega$ /600k $\Omega$ | 600 $\Omega$ /6k $\Omega$ /60k $\Omega$ /600k $\Omega$ | $\pm (0.8\%+3)$  |
|             | 6k $\Omega$ /60k $\Omega$<br>600k $\Omega$ /6M $\Omega$ | 6k $\Omega$ /60k $\Omega$<br>600k $\Omega$ /6M $\Omega$ | $\pm (0.8\%+3)$  | 6M $\Omega$                                            | 6M $\Omega$                                            | $\pm (1.2\%+3)$  |
|             | 60M $\Omega$                                            | 60M $\Omega$                                            | $\pm (2.5\%+15)$ | 60M $\Omega$                                           | 60M $\Omega$                                           | $\pm (2.5\%+5)$  |
| CAPACITANCE | 6nF                                                     | 6nF                                                     | $\pm (4.0\%+50)$ | 6nF/60nF/<br>600nF/6 $\mu$ F                           | 6nF/60nF/<br>600nF/6 $\mu$ F                           | $\pm (3.0\%+10)$ |
|             | 60nF/600nF/6 $\mu$ F<br>60 $\mu$ F/600 $\mu$ F          | 60nF/600nF/6 $\mu$ F<br>60 $\mu$ F/600 $\mu$ F          | $\pm (4.0\%+20)$ | 60 $\mu$ F/600 $\mu$ F<br>6mF/60mF                     | 60 $\mu$ F/600 $\mu$ F<br>6mF/60mF                     | $\pm (5.0\%+5)$  |
|             | 6mF/60mF                                                | 6mF/60mF                                                | $\pm (5.0\%+20)$ |                                                        |                                                        |                  |
| FREQUENCY   | /                                                       | 6Hz~1MHz                                                | $\pm (0.5\%+5)$  | 10Hz/100Hz/1kHz/<br>10kHz/100kHz/<br>1MHz/10MHz        | 10Hz/100Hz/1kHz/<br>10kHz/100kHz/<br>1MHz/10MHz        | $\pm (0.3\%+3)$  |
|             |                                                         |                                                         |                  |                                                        |                                                        |                  |
| TEMPERATURE | -20°C~1000°C<br>(-4~1832)°F                             | -20°C~1000<br>(-4~1832)                                 | $\pm (2.0\%+5)$  | -20°C~1000°C<br>(-4~1832)°F                            | -20°C~1000°C<br>(-4~1832)°F                            | $\pm (1.0\%+5)$  |
|             |                                                         |                                                         |                  |                                                        |                                                        |                  |

|                     |                      |                 |
|---------------------|----------------------|-----------------|
| Display method      | LCD display          | LCD display     |
| Maximum Display     | 5999 count           | 5999 count      |
| Diode               | $\checkmark$         | $\checkmark$    |
| Data retention      | $\checkmark$         | $\checkmark$    |
| NCV/LIVE            | $\checkmark$         | $\checkmark$    |
| ZERO                | $\checkmark$         | 616B            |
| Low voltage prompt  | $\checkmark$         | $\checkmark$    |
| Type-C charging     | $\checkmark$         | $\checkmark$    |
| Flashlight lighting | $\checkmark$         | $\checkmark$    |
| On/off buzzing      | $\checkmark$         | $\checkmark$    |
| Work environment    | (0~40)°C <75%        | (0~40)°C <75%   |
| Storage environment | (-10~50)°C <80%      | (-20~60)°C <80% |
| Automatic shutdown  | $\checkmark$         | $\checkmark$    |
| Over range display  | Display OL           | Display OL      |
| Jaws open           | 32mm                 | 32mm            |
| Frequency response  | 50Hz~60Hz            | 50Hz~60Hz       |
| Batterytype         | 3.7V Lithium battery | AAA*3 battery   |
| Size                | 170*64*26mm          | 192*73*28mm     |
| Weight              | 146g                 | 225g            |





606+



606A+



606B+



606C+

| FUNCTION          | 606+                    | 606A+                                   | 606B+                                   | 606C+                                   | Accuracy    |
|-------------------|-------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|-------------|
| DCV               | 200mV/2V/20V            | 600mV/6V/60V                            | 600mV/6V/60V                            | 600mV/6V/60V                            | ± (0.5%+7)  |
|                   | 200V                    | 600V                                    | 600V                                    | 600V                                    | ± (1.0%+20) |
|                   | 600V                    | /                                       | /                                       | /                                       | ± (1.2%+20) |
| ACV               | 2V/20V                  | 6V/60V                                  | 6V/60V                                  | 6V/60V                                  | ± (0.8%+10) |
|                   | 200V                    | 600V                                    | 600V                                    | 600V                                    | ± (1.2%+25) |
|                   | 600V                    | /                                       | /                                       | /                                       | ± (1.5%+25) |
| LOW IMPEDANCE ACV | 2V/20V                  | 6V/60V                                  | 6V/60V                                  | 6V/60V                                  | ± (0.8%+10) |
|                   | 200V                    | 300V                                    | 300V                                    | /                                       | ± (1.2%+25) |
|                   | 300V                    | /                                       | /                                       | /                                       | ± (1.5%+25) |
| ACA               | /                       | /                                       | /                                       | 300V                                    | ± (1.0%+12) |
|                   | 2A                      | 6A                                      | 6A                                      | /                                       | ± (4.0%+50) |
|                   | 20A                     | 60A                                     | 60A                                     | /                                       | ± (4.0%+35) |
| DCA               | 200A/600A               | 600A                                    | 600A                                    | /                                       | ± (4.0%+15) |
|                   | /                       | /                                       | /                                       | 60A/600A                                | ± (4.0%+10) |
|                   | /                       | /                                       | /                                       | 60A/600A                                | ± (4.0%+10) |
| RESISTANCE        | 200Ω/2kΩ/20kΩ/200kΩ/2MΩ | 600Ω/6kΩ/60kΩ/600kΩ/6MΩ                 | 600Ω/6kΩ/60kΩ/600kΩ/6MΩ                 | 600Ω/6kΩ/60kΩ/600kΩ/6MΩ                 | ± (1.0%+5)  |
|                   | 20MΩ                    | 20MΩ                                    | 20MΩ                                    | 20MΩ                                    | ± (1.5%+15) |
|                   | /                       | 60MΩ                                    | 60MΩ                                    | 60MΩ                                    | ± (2.5%+20) |
| CAPACITANCE       | /                       | 6nF                                     | 6nF                                     | 6nF                                     | ± (5.0%+40) |
|                   | /                       | 60nF/600nF/6μF                          | 60nF/600nF/6μF                          | 60nF/600nF/6μF                          | ± (5.0%+10) |
|                   | /                       | 60μF/600μF/6mF                          | 60μF/600μF/6mF                          | 60μF/600μF/6mF                          | ± (5.0%+10) |
| FREQUENCY         | /                       | 10Hz/100Hz/1kHz/10kHz/100kHz/1MHz/10MHz | 10Hz/100Hz/1kHz/10kHz/100kHz/1MHz/10MHz | 10Hz/100Hz/1kHz/10kHz/100kHz/1MHz/10MHz | ± (0.3%+3)  |
|                   | /                       | /                                       | /                                       | /                                       | /           |
|                   | /                       | /                                       | /                                       | /                                       | /           |
| TEMPERATURE       | /                       | /                                       | -20°C~1000°C (-4~1832)°F                | -20°C~1000°C (-4~1832)°F                | /           |

|                      |                             |                                  |                               |
|----------------------|-----------------------------|----------------------------------|-------------------------------|
| Display method       | LCD display 5999 count      | Max/Min                          | √                             |
| Maximum display      | 5999 count (606+ 1999count) | Low Z                            | √                             |
| Diode measurement    | √                           | Working temperature and humidity | (0~40)°C <75%                 |
| Data retention       | √                           | Storage temperature and humidity | (-10~50)°C <80%               |
| NCV measurement      | √                           | Automatic shut-down              | About 15 minutes              |
| Fire detection       | √                           | Over-range display               | the highest digit displays OL |
| Low voltage warning  | √                           | Unit symbol                      | √                             |
| Flashlight lighting  | √                           | Open jaws                        | 35mm                          |
| True effective value | √                           | input resistance                 | 10MΩ                          |
| INRUSH               | 606C+ only                  | Sampling rate                    | 3 times/sec                   |
| VFC                  | 606C+ only                  | power supply                     | Two AAA batteries             |

| Model                 | 610B+                                           | 610C+                                           |
|-----------------------|-------------------------------------------------|-------------------------------------------------|
| DCV                   | 600mV/6V/60V/600V                               | 600mV/6V/60V/600V                               |
|                       | 1000V                                           | 1000V                                           |
| ACV                   | 6V/60V                                          | 6V/60V                                          |
|                       | 600V/750V                                       | 600V/750V                                       |
| Resistance            | 600Ω/6kΩ/60kΩ/600kΩ/6MΩ                         | 600Ω/6kΩ/60kΩ/600kΩ/6MΩ                         |
|                       | 20MΩ                                            | 20MΩ                                            |
| Low Impedance         | 6V/60V                                          | 6V/60V                                          |
|                       | 300V                                            | 300V                                            |
| DCA                   | 60A/600A/1000A                                  | /                                               |
| ACA                   | 60A/600A/1000A                                  | 6A/60A/600A/1000A                               |
| Frequency             | 10Hz~10MHz                                      | /                                               |
| Capacitance           | 1nF/100nF/1μF/10μF/100μF/1mF/10mF               | /                                               |
| Temperature           | -20°C~1000°C (-4~1832)°F                        | /                                               |
| Continuity alarm      | √                                               | √                                               |
| Data hold             | √                                               | √                                               |
| Low voltage display   | √                                               | √                                               |
| Auto power off        | √                                               | √                                               |
| Max/Min               | √                                               | √                                               |
| Flashlight            | √                                               | √                                               |
| Overload Protection   | √                                               | √                                               |
| Living Wire Detecting | √                                               | √                                               |
| INRUSH                | √                                               | /                                               |
| VFC                   | √                                               | /                                               |
| NCV                   | √                                               | √                                               |
| True RMS              | √                                               | √                                               |
| Auto power off        | about 15 minutes                                | about 15 minutes                                |
| Display               | LCD Display, Max. display 5999 update 3 times/s | LCD Display, Max. display 5999 update 3 times/s |
| Jaw opening           | 40mm                                            | 40mm                                            |
| Polarity indicate     | Cathode auto display                            | Cathode auto display                            |
| Overload indicate     | OL indicating on the LCD                        | OL indicating on the LCD                        |
| Low battery display   | ⚡ indicating on the LCD                         | ⚡ indicating on the LCD                         |
| Operation temperature | 0°C~40°C, less than 80%RH                       | 0°C~40°C, less than 80%RH                       |
| Storage temperature   | -10°C~50°C, less than 80%RH                     | -10°C~50°C, less than 80%RH                     |
| Battery type          | (Size AAA) 1.5V×2                               | (Size AAA) 1.5V×2                               |
| Size                  | 230*75*40mm                                     | 230*75*40mm                                     |
| Weight                | About 313g                                      | About 313g                                      |

New Model



610B+

New Model



610C+

6050



## Technical data

| Model         | 6050                               | 6052                               | Accuracy   |
|---------------|------------------------------------|------------------------------------|------------|
| DC voltage    | 600mV/6V/60V                       | 600mV/6V/60V                       | ±(0.5%+7)  |
|               | 600V/1000V                         | 600V/1000V                         | ±(1.0%+10) |
| AC voltage    | 6V/60V                             | 6V/60V                             | ±(1.0%+10) |
|               | 600V/750V                          | 600V/750V                          | ±(1.0%+12) |
| Low impedance | 6V/60V                             | 6V/60V                             | ±(1.0%+10) |
|               | 300V                               | 300V                               | ±(1.0%+12) |
| AC voltage    | 600A/2000A                         | 600A/2000A                         | ±(4.0%+10) |
|               | 600A/2000A                         | 600A/2000A                         | ±(4.0%+10) |
| DC current    | 600A/2000A                         | 600A/2000A                         | ±(4.0%+10) |
|               | 600A/2000A                         | 600A/2000A                         | ±(4.0%+10) |
| AC current    | 600A/2000A                         | 600A/2000A                         | ±(4.0%+10) |
|               | 600A/2000A                         | 600A/2000A                         | ±(4.0%+10) |
| Resistance    | 20MΩ                               | 20MΩ                               | ±(1.5%+15) |
|               | 60MΩ                               | 60MΩ                               | ±(2.5%+20) |
| Capacitance   | 1nF                                | 1nF                                | ±(5.0%+10) |
|               | 10nF/100nF/1μF/10μF/100μF/1mF/10mF | 10nF/100nF/1μF/10μF/100μF/1mF/10mF | ±(5.0%+10) |
| Frequency     | 10Hz~10MHz                         | 10Hz~10MHz                         | ±(0.3%+3)  |
|               | 10.0%~90.0%                        | 10.0%~90.0%                        | ±(0.3%+3)  |
| Duty cycle    | 10.0%~90.0%                        | 10.0%~90.0%                        | ±(0.3%+3)  |
| Temperature   | (-20~1000)°C/(-4~1832)°F           |                                    | ±(2.0%+5)  |

6052



| General functions     |             |                       |                    |
|-----------------------|-------------|-----------------------|--------------------|
| Display mode          | LCD display | DC current reset      | 6050 only          |
| Maximum display       | 5999        | Relative value        | ✓                  |
| Diode/on-off          | ✓           | Operating humidity    | (0~40)°C <75%RH    |
| NCV                   | ✓           | Storage temperature   | (-10~50)°C <80%RH  |
| Data retention        | ✓           | Over range display    | Highest display OL |
| Low voltage prompt    | ✓           | AC frequency response | 40~1kHz            |
| Line of fire judgment | ✓           | Jaw opening           | 58mm dia           |
| Flashlight lighting   | ✓           | Maximum traverse      | 52mm dia           |
| Max/Min               | 6052 only   | Input impedance       | 10MΩ               |
| Automatic shutdown    | ✓           | Power Supply          | AAA*2 batteries    |
| V.F.C                 | 6050 only   | Product size          | 273*102*47mm       |
| Surge current         | 6050 only   | Product weight        | About 420g         |

## Technical data

| FUNCTION      | 6056C+                                  | Accuracy   |
|---------------|-----------------------------------------|------------|
| DCV           | 600mV/6V/60V                            | ±(0.5%+7)  |
|               | 600V                                    | ±(1.0%+20) |
| ACV           | 6V/60V                                  | ±(0.8%+10) |
|               | 600V                                    | ±(1.2%+25) |
| LOW INPEDANCE | 6V/60V                                  | ±(0.8%+10) |
|               | 300V                                    | ±(1.0%+12) |
| ACV           | 60A/600A                                | ±(4.0%+10) |
|               | 60A/600A                                | ±(4.0%+10) |
| DCA           | 600Ω/6kΩ/60kΩ/600kΩ/6MΩ                 | ±(1.0%+5)  |
|               | 20MΩ                                    | ±(1.5%+15) |
| RESISTENCE    | 60MΩ                                    | ±(2.5%+20) |
|               | 6nF                                     | ±(5.0%+40) |
| CAPACITANCE   | 60nF/600nF/6μF                          | ±(5.0%+10) |
|               | 60μF/600μF/6mF                          |            |
| FREQUENCY     | 10Hz/100Hz/1kHz/10kHz/100kHz/1MHz/10MHz | ±(0.3%+3)  |
|               | -20 C ~ 1000 C                          | /          |
| TEMPERATURE   | (-4~1832) °F                            |            |

|                      |             |                                  |                               |
|----------------------|-------------|----------------------------------|-------------------------------|
| Display method       | LCD display | Max/Min                          | ✓                             |
| Maximum display      | 5999 count  | Low Z                            | ✓                             |
| Diode measurement    | ✓           | Working temperature and humidity | (0~40)°C <75%                 |
| Data retention       | ✓           | Storage temperature and humidity | (-10~50)°C <80%               |
| NCV measurement      | ✓           | Automatic shut-down              | About 15 minutes              |
| Fire detection       | ✓           | Over-range display               | the highest digit displays OL |
| Low voltage warning  | ✓           | Unit symbol                      | ✓                             |
| Flashlight lighting  | ✓           | Open jaws                        | 35mm                          |
| True effective value | ✓           | input resistance                 | 10MΩ                          |
| INRUSH               | ✓           | Sampling rate                    | 3 times/sec                   |
| VFC                  | ✓           | power supply                     | Two AAA batteries             |

6056C+



6056A+



## Technical data

| Basic function | Range                                     | Accuracy    |
|----------------|-------------------------------------------|-------------|
| DC Voltage     | 400mV/4V/40V/400V                         | ±(0.5%+4d)  |
|                | 1000V                                     | ±(1.0%+6d)  |
| DC Current     | 40A                                       | ±(3%+8d)    |
|                | 400A                                      | ±(2.5%+8d)  |
| AC Voltage     | 400mV                                     | ±(3%+10d)   |
|                | 4V/40V/400V                               | ±(1.6%+8d)  |
| AC Current     | 4V/40V/400V                               | ±(0.8%+10d) |
|                | 750V                                      | ±(1.0%+10d) |
| Resistance     | 40A                                       | ±(3.0%+10d) |
|                | 400A                                      | ±(2.5%+8d)  |
| Capacitance    | 1000A                                     | ±(3%+10d)   |
|                | 400Ω                                      | ±(3%+10d)   |
| Frequency      | 4kΩ/40kΩ/400kΩ/4MΩ                        | ±(0.8%+5d)  |
|                | 40MΩ                                      | ±(0.8%+4d)  |
|                | 4nF                                       | ±(1.2%+10d) |
|                | 40nF/400nF/4μF/40μF                       | ±(3.5%+30d) |
|                | 100uF                                     | ±(3.0%+10d) |
|                | 9.999Hz/99.99Hz/999.9Hz/9.999kHz/99.99kHz | ±(5.0%+10d) |
|                |                                           | ±(0.5%+4d)  |

6016B+



### Technical data

| Basic Function           | Range                        | Accuracy   |
|--------------------------|------------------------------|------------|
| Model                    | VICTOR 6016B+                |            |
| DC Voltage               | 200mV/2V/20V/200V/600V       | ±(0.5%+4)  |
| AC Voltage               | 2V/20V/200V/600V             | ±(0.8%+10) |
| AC Current               | 2A/20A/200A/600A             | ±(3.5%+5)  |
| Resistance               | 200Ω/2kΩ/20kΩ/200kΩ/2MΩ/20MΩ | ±(0.8%+5)  |
| Diode Test               | ✓                            |            |
| Continuity Buzzer        | ✓                            |            |
| Low Voltage Indication   | ✓                            |            |
| Auto Negative Indication | ✓                            |            |
| Data Hold                | ✓                            |            |
| Function Protection      | ✓                            |            |
| Input Impedance          | 10MΩ                         |            |
| Sampling Rate            | 3 times/s                    |            |
| AC Current Response      | (50-60)Hz                    |            |
| Operation Way            | Manual Range                 |            |
| Max. Display             | 1999                         |            |
| Clamp Size               | 30mm                         |            |
| Power                    | 3V(1.5V AAA *2)              |            |

### General Features

|                                  |                                         |
|----------------------------------|-----------------------------------------|
| Product Color                    | Case: black; Holster: orange            |
| Product Weight                   | Approx. 140g (including battery)        |
| Standard Accessories             | Test Leads, Battery, Instruction Manual |
| Standard Inner Packing           | Color Box                               |
| Standard Size Per Carton         | 455*365*320mm                           |
| Standard Quantity Per Carton     | 40Pcs                                   |
| Standard Gross Weight Per Carton | Approx. 18kg                            |

610L



### Technical data

| Basic Function | Range                                                     | Accuracy                                                             |
|----------------|-----------------------------------------------------------|----------------------------------------------------------------------|
| Model          | 610L                                                      |                                                                      |
| DCV            | 10V/100V ; 600V                                           | ±(0.5%+5) ; ±(1.0%+10)                                               |
| ACV            | 10V/100V ; 600V                                           | ±(0.8%+5) ; ±(1.2%+10)                                               |
| ACA            | 100A ; 1000A                                              | ±(2.5%+30) ; ±(4.0%+10)                                              |
| ACA-VFC        | 1000A                                                     | ±(5.0%+10)                                                           |
| ACA-INR        | 1000A                                                     | ±(10.0%+20)                                                          |
| Resistance     | 100Ω ; 1000Ω ;<br>10kΩ/100kΩ ; 1MΩ/10MΩ                   | ±(1.3%+ 10) ; ±(1.3%+5) ;<br>±(0.8%+3) ; ±(1.5%+5)                   |
| Capacitance    | 100nF; 1000nF<br>10uF/100uF/1000uF/10mF<br>100mF ; 2 00mF | ±(5.0%+50) ; ±(4.0%+50)<br>±(3.5%+20)<br>±(10.0%+20) ; Not specified |

### General functions

|                |             |                       |                   |
|----------------|-------------|-----------------------|-------------------|
| Display mode   | LCD display | Bluetooth             | ✓                 |
| Max display    | 9999        | Relative value        | ✓                 |
| Diode/On/Off   | ✓           | work environment      | (0~40)°C <75%RH   |
| NCV            | ✓           | Storage environment   | (-10~50)°C <80%RH |
| Data retention | ✓           | Overrange             | OL                |
| Backlight      | ✓           | AC frequency response | 40~400Hz          |
| Low pressure   | ✓           | Jaws open             | φ40mm             |
| Peak hold      | ✓           | Maximum traverse      | φ39mm             |
| Flashlight     | ✓           | Input impedance       | 10MΩ              |
| Auto shutdown  | ✓           | Power Supply          | AAA*2             |
| V.F.C          | ✓           | Product size          | 219*75*34mm       |
| Surge current  | ✓           | Product weight        | About 240g        |

### Technical data

| Model          | 615B                                                                 | Accuracy                                  |
|----------------|----------------------------------------------------------------------|-------------------------------------------|
| Basic Function |                                                                      |                                           |
| DC Voltage     | 600mV/6V/60V/600V<br>1000V/2000V                                     | ±(0.5%+7)<br>±(1.0%+10)                   |
| AC Voltage     | 6V/60V/600V<br>750V/2000V                                            | ±(1.0%+10)<br>±(1.0%+12)                  |
| Low impedance  | 6V/60V                                                               | ±(1.0%+10)                                |
| AC voltage     | 300V                                                                 | ±(1.0%+12)                                |
| DC current     | 60A/600A/1000A                                                       | ±(2.5%+10)                                |
| AC current     | 60A/600A/1000A                                                       | ±(2.5%+10)                                |
| Resistance     | 600Ω/6kΩ/60kΩ/600kΩ/6MΩ<br>20MΩ<br>60MΩ                              | ±(1.0%+5)<br>±(1.5%+15)<br>±(2.5%+20)     |
| Capacitance    | 9.999nF<br>99.99nF/999.9nF/9.999uF/99.99uF/999.9uF/9.999mF<br>> 10mF | ±(5.0%+40)<br>±(5.0%+10)<br>Not specified |
| Frequency      | 10Hz~10MHz                                                           | ±(0.3%+3)                                 |
| Duty cycle     | 10.0%~90.0%                                                          | ±(0.3%+3)                                 |
| Temperature    | (-20~ 1000)9°C/(-4~ 1832)°F (Standard 250°Cprobe)                    | ±(2.0%+5)                                 |

### General functions

|                       |      |                       |                    |
|-----------------------|------|-----------------------|--------------------|
| Display mode          | LCD  | Display mode          | ✓                  |
| Max display           | 5999 | Max display           | ✓                  |
| Diode/on-off          | ✓    | Diode/on-off          | (0~40)°C <75%RH    |
| NCV                   | ✓    | NCV                   | (-10~50)°C <80%RH  |
| Data retention        | ✓    | Data retention        | Highest display OL |
| Backlit display       | ✓    | Backlit display       | 40~1kHz            |
| Low voltage           | ✓    | Low voltage           | φ40mm              |
| Line of fire judgment | ✓    | Line of fire judgment | φ39mm              |
| Flashlight lighting   | ✓    | Flashlight lighting   | 10MΩ               |
| Automatic shutdown    | ✓    | Automatic shutdown    | Two AAA batteries  |
| V.F.C                 | ✓    | V.F.C                 | 230*75*40mm        |
| Surge current         | ✓    | Surge current         | About 313g         |

615B

DC 2000V  
AC 2000V



6015F



| Basic Function               | Range                                   | Accuracy   |
|------------------------------|-----------------------------------------|------------|
| DC Voltage                   | 2V/20V/200V/1000V                       | ±(2.0%+5)  |
| AC Voltage                   | 200V/750V                               | ± (1.2%+5) |
| AC Current                   | 20A/200A/ 1000A                         | ± (2.0%+5) |
| Resistance                   | 200Ω/2KΩ/20KΩ/200KΩ/2MΩ                 | ± (1.0%+2) |
| Frequency                    | 2KHz/20KHz                              | ±(3.0%+15) |
| Diode Test                   | ✓                                       |            |
| Continuity Buzzer            | ✓                                       |            |
| Low Battery Indication       | ✓                                       |            |
| Data Hold                    | ✓                                       |            |
| Input Impedance              | 10MΩ                                    |            |
| Sampling Rate                | 3 times/s                               |            |
| AC Frequency Response        | (50-60)Hz                               |            |
| Operation Way                | Auto range                              |            |
| Max. Display                 | 1999                                    |            |
| Clamp Size                   | 55mm                                    |            |
| Battery                      | 9V(6FF2)                                |            |
| Product Net Weight           | Approx: 270g                            |            |
| Standard Accessories         | Test leads, battery, instruction manual |            |
| Standard Inner Packing       | Color box                               |            |
| Standard Quantity Per Carton | 30pcs                                   |            |



### Technical data

| Basic Function | Range      | 6266      |
|----------------|------------|-----------|
| DC voltage     | 1000V      | ±(0.8%+2) |
| AC voltage     | 750V       | ±(1.2%+4) |
| AC Current     | 200A/1000A | ±(3.0%+5) |
| Resistance     | 200Ω/20kΩ  | ±(1.0%+1) |

|                              |                                                                 |
|------------------------------|-----------------------------------------------------------------|
| Product color                | Case: black                                                     |
| Product net weight           | Approx: 310g                                                    |
| Standard accessories         | Test leads, battery, instruction manual, TP01 temperature probe |
| Standard inner packing       | Color box                                                       |
| Standard Quantity Per Carton | 30pcs/ctn                                                       |
| Carton size                  | 465×317×506mm                                                   |
| Standard Gross Weight        | Approx: 16.8kg                                                  |

| Special Function      | 6266         |
|-----------------------|--------------|
| Continuity buzzer     | ✓            |
| Low battery buzzer    | ✓            |
| Hold                  | Data hold    |
| Input impedance       | 10MΩ         |
| Sampling rate         | 3 times/s    |
| AC Frequency response | (50~60)Hz    |
| Operation way         | Manual range |
| Max. Display          | 1999         |
| Clamp size            | 50mm         |
| Power                 | 9V(6FF2)     |

6266

3 1/2



### VICTOR 3266/3266C

### HIGH-PRECISION DIGITAL CLAMP METER

- LCD display: maximum display 4000, word height 15mm
- General characteristics: Maximum voltage between voltage input-terminal and ground CAT II 600V.
- Display method: LCD display, with a maximum reading of 4000
- Measurement principle: Double integral A/D conversion, automatic range
- Measurement rate: 3 times/second
- Unit display : with functions and display of unit symbols for electricity consumption



### Technical data

| Basic skills | Range                   | Precision  |
|--------------|-------------------------|------------|
| DC voltage   | 200mV/2V/20V/200V       | ±(0.5%+7)  |
|              | 600V                    | ±(1.0%+20) |
| AC voltage   | 2V/20V/200V             | ±(0.8%+10) |
|              | 600V                    | ±(1.2%+25) |
| DC current   | 200uA/2000uA/20mA       | ±(1.2%+3)  |
|              | 200mA                   | ±(1.5%+3)  |
| AC current   | 200uA/2000uA/20mA       | ±(1.8%+3)  |
|              | 200mA                   | ±(2.0%+3)  |
|              | 2A                      | ±(4.0%+50) |
|              | 20A                     | ±(4.0%+35) |
|              | 200A/600A               | ±(4.0%+15) |
| Resistance   | 2002/2kΩ/20kΩ/200kΩ/2MΩ | ±(1.0%+5)  |
|              | 20MΩ                    | ±(1.5%+15) |

New Model

3 1/2



3218+

3218A

| Special Function       | 3218+                   | 3218A        |
|------------------------|-------------------------|--------------|
| Continuity buzzer      | ✓                       |              |
| Diode test             | ✓                       |              |
| Low battery indication | ✓                       | ✓            |
| Hold                   | Peak value hold         | Data hold    |
| Auto power off         | ✓                       | ✓            |
| Lamp                   |                         | ✓            |
| Function protection    | ✓                       | ✓            |
| Input impedance        | 10MΩ                    | 10MΩ         |
| Sampling rate          | 3 times/s               | 3 times/s    |
| AC Frequency response  | 50Hz~60Hz               | 50Hz~60Hz    |
| Operation way          | Manual range/Auto range | Manual range |
| Max. Display           | 1999                    | 1999         |
| Clamp size             | 30mm                    | 30mm         |
| Power                  | 3V(1.5V×2)              | 3V(1.5V×2)   |

3 1/2



### Technical data

3266/3266C

| Basic Function                    | Range                         | 3266                                                                                       | 3266C                                                                  |
|-----------------------------------|-------------------------------|--------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| DCV                               | 4V/40V                        | ±(0.8% reading+2 words)                                                                    |                                                                        |
|                                   | 600V                          | ±(1.0% reading+2 words)                                                                    |                                                                        |
|                                   | 60mV/600mV/6V/60V             |                                                                                            | ±(0.8% reading+2 words)                                                |
|                                   | 600V                          |                                                                                            | ±(1.0% reading+2 words)                                                |
| ACV                               | 4V/40V                        | ±(1.0% reading+10 words)                                                                   |                                                                        |
|                                   | 600V                          | ±(1.2% reading+10 words)                                                                   |                                                                        |
|                                   | 600mV/6V/60V                  |                                                                                            | ±(1.0% reading+10 words)                                               |
|                                   | 600V                          |                                                                                            | ±(1.2% reading+10 words)                                               |
| ACA                               | 40A/400A/1000A                | ±(2.5% reading+10 words)                                                                   |                                                                        |
| Resistance                        | 60A/400A/1000A                |                                                                                            | ±(2.5% reading+10 words)                                               |
|                                   | 400Ω/4kΩ/40kΩ/400kΩ/4MΩ       | ±(1.2% reading+2 words)                                                                    |                                                                        |
|                                   | 40MΩ                          | ±(2.0% reading+5 words)                                                                    |                                                                        |
|                                   | 600Ω/6kΩ/60kΩ/600kΩ/6MΩ       |                                                                                            | ±(1.2% reading+2 words)                                                |
| Diode Test                        | →                             | Display the approximate value of forward voltage drop (open circuit voltage is about 2.3V) |                                                                        |
|                                   | · )                           | When it is about ≤ 50Ω, the buzzer will sound (open circuit voltage is about 2.1V)         |                                                                        |
| Capacitance measurement           | 1nF                           |                                                                                            | ±(5% reading+30 words)                                                 |
|                                   | 10nF/100nF/1uF/10uF/100uF/1mF |                                                                                            | ±(3% reading+30 words)                                                 |
|                                   | 60mF                          |                                                                                            | ±(5% reading+30 words)                                                 |
| Temperature measurement           | -20°C~1000°C/-4°F~1832°F      |                                                                                            | ±(1.2% reading+5 words)                                                |
| Frequency measurement             | 10Hz~1KHz                     |                                                                                            | ±(1.2% reading+3 words)                                                |
| General characteristics           |                               | Maximum voltage CAT II 600V between voltage input terminal and ground                      | Maximum voltage CAT II 1000V between voltage input terminal and ground |
| Display method                    |                               | LCD display, with a maximum reading of 4000                                                | maximum display 6000,                                                  |
| Measurement principle             |                               | Double integral A/D conversion, automatic range                                            |                                                                        |
| Measurement rate                  |                               | 3 times/second                                                                             |                                                                        |
| Unit display                      |                               | with functions and display of unit symbols for electricity consumption                     |                                                                        |
| Polarity display                  |                               | Negative polarity input displays a "-" symbol                                              |                                                                        |
| Overrange display                 |                               | "OL"                                                                                       |                                                                        |
| Data remains displayed            |                               | "H"                                                                                        |                                                                        |
| Under voltage indication          |                               | "LO"                                                                                       |                                                                        |
| Power supply                      |                               | DC1.5V × 2 SIZE AAA                                                                        |                                                                        |
| External dimensions               |                               | 222mm × 90mm × 35mm                                                                        |                                                                        |
| Maximum size of jaw opening       |                               | 45mm                                                                                       |                                                                        |
| Operating environment temperature |                               | 5°C~35°C                                                                                   |                                                                        |
| Storage temperature               |                               | -10°C~50°C                                                                                 |                                                                        |
| LCD display                       |                               | maximum display 4000, word height 15mm                                                     | maximum display 6000, word height 15mm                                 |
| NCV                               |                               | ✓                                                                                          |                                                                        |
| Flashlight                        |                               | ✓                                                                                          |                                                                        |



606D



606E

## Technical Data

| Basic Function Model   | Range                                                                             | Accuracy 606D  | 606E           |
|------------------------|-----------------------------------------------------------------------------------|----------------|----------------|
| DC Voltage             | 400mV/4V/40V/600V                                                                 | $\pm(0.5\%+5)$ | $\pm(0.5\%+5)$ |
| AC Voltage             | 4V/40V/600V                                                                       | $\pm(1.0\%+5)$ | $\pm(1.0\%+5)$ |
| DC Current             | 4A/40A/600A                                                                       | $\pm(2.5\%+5)$ | $\pm(2.5\%+5)$ |
| AC Current             | 4A/40A/600A                                                                       | $\pm(2.5\%+5)$ | $\pm(2.5\%+5)$ |
| Resistance             | 400 $\Omega$ /4k $\Omega$ /40k $\Omega$ /400k $\Omega$ /4M $\Omega$ /40M $\Omega$ | $\pm(1.0\%+3)$ | $\pm(1.0\%+3)$ |
| Capacitance            | 10nF/100nF/1 $\mu$ F/10 $\mu$ F/100 $\mu$ F/1mF                                   | $\pm(4.0\%+5)$ | $\pm(4.0\%+5)$ |
| Frequency              | 10Hz-10MHz                                                                        | $\pm(0.5\%+3)$ | $\pm(0.5\%+3)$ |
| Duty cycle             | 1%-99%                                                                            | $\pm(1.0\%+2)$ | $\pm(1.0\%+2)$ |
| Temperature            | (-2~1300) $^{\circ}$ C (-4~1832) $^{\circ}$ F                                     | $\pm(2.0\%+3)$ | $\pm(2.0\%+3)$ |
| measurement            |                                                                                   |                |                |
| Special Function       |                                                                                   |                |                |
| Diode                  |                                                                                   | $\checkmark$   | $\checkmark$   |
| Continuity Buzzer      |                                                                                   | $\checkmark$   | $\checkmark$   |
| Low battery indication |                                                                                   | $\checkmark$   | $\checkmark$   |
| Data Hold              |                                                                                   | $\checkmark$   | $\checkmark$   |
| Auto power off         |                                                                                   | $\checkmark$   | $\checkmark$   |
| Backlight/Torch        |                                                                                   | $\checkmark$   | $\checkmark$   |
| DCAZERO Function       |                                                                                   | $\checkmark$   | $\checkmark$   |
| True RMS               |                                                                                   | $\checkmark$   | $\checkmark$   |
| NCV measurement        |                                                                                   | $\checkmark$   | $\checkmark$   |
| Full range protection  |                                                                                   | $\checkmark$   | $\checkmark$   |
| Operation way          |                                                                                   | Auto range     | Auto range     |
| Max. Display           |                                                                                   | 3999           | 3999           |
| LCD Size               |                                                                                   | 32*22mm        | 32*22mm        |
| Battery                |                                                                                   | 1.5V*2         | 1.5V*2         |

## General Characters

|                              |                                     |
|------------------------------|-------------------------------------|
| Product Color                | Case: black ; Holster color: orange |
| Product Net Weight           | Approx.176g                         |
| Product dimension            | 174*66*30mm                         |
| Standard Quantity Per Carton | 30Pcs                               |
| Standard inner packing       | Color box                           |

## Technical Data

| Basic Function | Range                                                                                                        | Accuracy 606G   | 606H           |
|----------------|--------------------------------------------------------------------------------------------------------------|-----------------|----------------|
| DCV            | 6V/60V/600V/1000V                                                                                            | $\pm(0.5\%+3)$  | $\pm(0.5\%+3)$ |
| ACV            | 6V/60V/600V/750V                                                                                             | $\pm(0.5\%+5)$  | $\pm(0.5\%+5)$ |
| Resistance     | 600 $\Omega$ /6k $\Omega$ /60k $\Omega$ /600k $\Omega$ /6M $\Omega$ /60M $\Omega$ (606G)/60M $\Omega$ (606H) | $\pm(0.8\%+3)$  | $\pm(0.8\%+3)$ |
| Capacitance    | 60nF/600nF/6 $\mu$ F/600 $\mu$ F/6mF/30mF<br>10nF/100nF/1 $\mu$ F/100 $\mu$ F/1mF/10mF/60mF                  | $\pm(2.0\%+8)$  | $\pm(2.0\%+8)$ |
| Frequency      | 10Hz/100Hz/1kHz/10kHz/100kHz/1MHz/10MHz                                                                      | $\pm(0.01\%+2)$ |                |
| ACA            | 60A/600A<br>6A/60A/600A                                                                                      | $\pm(3\%+30)$   | $\pm(3\%+30)$  |
| Temperature    | (-2~1300) $^{\circ}$ C (-4~1832) $^{\circ}$ F                                                                | $\checkmark$    |                |

| Special Function    | Auto Range   | Auto Range   |
|---------------------|--------------|--------------|
| Operation Way       |              |              |
| Max. Display        | 5999         | 5999         |
| True RMS            | $\checkmark$ | $\checkmark$ |
| Diode Test          | $\checkmark$ | $\checkmark$ |
| Continuity Buzzer   | $\checkmark$ | $\checkmark$ |
| Back Light          | $\checkmark$ | $\checkmark$ |
| Square Wave Output  | $\checkmark$ |              |
| NCV Measurement     | $\checkmark$ | $\checkmark$ |
| Flashlight Lighting | $\checkmark$ | $\checkmark$ |

| General Characters           |                                                                 |                  |
|------------------------------|-----------------------------------------------------------------|------------------|
| Battery                      | 2*1.5V                                                          | 2*1.5V           |
| LCD Size                     | 32*22mm                                                         | 32*22mm          |
| Product Color                | Orange and Black                                                | Orange and Black |
| Product Net Weight           | 176g                                                            | 176g             |
| Product Size                 | 174*66*30mm                                                     | 174*66*30mm      |
| Clamp Size                   | 25mm                                                            | 25mm             |
| Standard Accessories         | Instruction Manual, Battery, Bag, Test Leads, Temperature Probe |                  |
| Standard Inner Packing       | Color Box                                                       | Color Box        |
| Carton Size                  | 45*42*27cm                                                      | 45*42*27cm       |
| Standard Quantity Per Carton | 60pcs                                                           | 60pcs            |
| Standard Gross Weight        | 23.6KG                                                          | 23.6KG           |



606H



606G



610E



610D

## Technical parameter

| Mode                 | Range                                    | Precision                                |
|----------------------|------------------------------------------|------------------------------------------|
| Basic skills         |                                          |                                          |
| DC voltage           | 610D: 600mV/6V/60V/600V                  | 610E: 600mV/6V/60V/600V                  |
|                      | 1000V                                    | 1000V                                    |
| AC voltage           | 600mV/6V/60V/600V                        | 600mV/6V/60V/600V                        |
|                      | 750V                                     | 750V                                     |
|                      | VFD(750V)                                | VFD(750V)                                |
| DC current           | 60A/600A/1000A                           | 60A/600A/1000A                           |
| AC current           | 60A/600A/1000A                           | 60A/600A/1000A                           |
| Resistance           | 600Ω/6kΩ/60kΩ/600kΩ/6MΩ/60MΩ             | 600Ω/6kΩ/60kΩ/600kΩ/6MΩ/60MΩ             |
| Capacitance          | 10nF/100nF/1000nF/10uF/100uF/1000uF/10mF | 10nF/100nF/1000nF/10uF/100uF/1000uF/10mF |
| Frequency/Duty Cycle | 10Hz/100Hz/1000Hz/10KHz/100KHz/1000KHz   | 10Hz/100Hz/1000Hz/10KHz/100KHz/1000KHz   |
| Temperature          | 10MHz 1~99%                              | 10MHz 1~99%                              |
|                      | -20°C~0°C                                | -20°C~0°C                                |
|                      | 0°C~400°C                                | 0°C~400°C                                |
|                      | 400°C~1000°C                             | 400°C~1000°C                             |
|                      | -4°F~32°F                                | -4°F~32°F                                |
|                      | 32°F~752°F                               | 32°F~752°F                               |

| Features             |                            |
|----------------------|----------------------------|
| Display              | LCD display                |
| Max display          | 6000 counts                |
| Diode                | ✓                          |
| Data retention       | ✓                          |
| NCV                  | ✓                          |
| Fire detection       | ✓                          |
| Low voltage          | ✓                          |
| Flashlight           | ✓                          |
| True effective value | ✓                          |
| INRUSH               | ✓                          |
| VFD                  | ✓                          |
| Max/Min              | ✓                          |
| LoZ                  | ✓                          |
| Working humidity     | 0~40°C <80%                |
| Storage humidity     | -10~50°C <80%RH            |
| Auto shut-down       | About 15 minutes           |
| Over-range display   | The highest digit shows OL |
| Unit symbol          | ✓                          |
| Open jaws            | 40mm                       |
| input resistance     | 10MΩ                       |
| Sampling rate        | 3 times/sec                |
| Power supply         | Three AAA batteries        |

| Specifications           | 60B+                                      |
|--------------------------|-------------------------------------------|
| Measuring Voltage        | 250V+10% 500V+10% 1000V+10%               |
| Range                    | 0.4MΩ~999 MΩ 0.6MΩ~1999 MΩ 0.8MΩ~4999 MΩ  |
| Current of Short Circuit | 1.8mA 1.8mA 1.6mA                         |
| Median Resistance        | 2MΩ 2MΩ 5MΩ                               |
| Jack Position            | L/E                                       |
| Features                 |                                           |
| Low Battery Indication   | ✓                                         |
| Backlight display        | ✓                                         |
| Alarm Function           | Red indicator light is illuminated        |
| Over Load Indication     | ✓                                         |
| Unit Symbol Display      | ✓                                         |
| Auto Power Off           | ✓                                         |
| Max. Display             | 4999                                      |
| Using Temperature        | (0~40)°C                                  |
| Relative Humidity        | 30%RH~85%RH                               |
| Input Impedance          | 1MΩ                                       |
| Frequency Response       | (50~200) Hz                               |
| Over Range Display       | "1"                                       |
| General Information      |                                           |
| Power Color              | Case: black, Holster color : orange       |
| Power Supply             | 9V (8x1.5V AA); AC adapter (not included) |

| Specifications         | 60D+                                             |
|------------------------|--------------------------------------------------|
| Measuring Voltage      | 500V 1000V 2500V                                 |
| Measurement range      | 0.6MΩ~4.99GΩ 1MΩ~9.99GΩ 3MΩ~49.9GΩ               |
| Open-circuit voltage   | DC 500V+20%~0% DC 1000V+20%~0% DC 2500V+20%~0%   |
| Rated test current     | 500kΩ Load≥1.0mA 1MΩ Load≥1.0mA 2.5MΩ Load≥1.0mA |
| Accuracy               | ±(5%+5) ±(5%+5) ≥3MΩ±(5%+5)                      |
| Features               |                                                  |
| Low Battery Indication | ✓                                                |
| Backlight display      | ✓                                                |
| Alarm Function         | Red indicator light is illuminated               |
| Over Load Indication   | ✓                                                |
| Unit Symbol Display    | ✓                                                |
| Auto Power Off         | ✓                                                |
| Max. Display           | 1999                                             |
| Using Temperature      | (0~40)°C                                         |
| Relative Humidity      | 30%RH~85%RH                                      |
| Input Impedance        | 1MΩ                                              |
| Frequency Response     | (50~200) Hz                                      |
| Over Range Display     | "1"                                              |
| General Information    |                                                  |
| Power Color            | Case: black, Holster color : orange              |
| Power Supply           | 9V (8x1.5V AA); AC adapter (not included)        |

| Gear                                             | 60E+ Range                                                   | Resolution | Accuracy |
|--------------------------------------------------|--------------------------------------------------------------|------------|----------|
| AC/DC voltage range                              | DCV: ±20~1000V<br>ACV: 20~750V(Frequency response 50Hz~1kHz) | 1V         | ± 2%+5   |
| Insulation resistance 1000V                      | 2M~4M                                                        | 0.001M     | ± 5%+5   |
| Test value<2M, buzzer alarm, test time 1 minute  | 4M~40M                                                       | 0.01M      |          |
|                                                  | 40M~400M                                                     | 0.1M       |          |
|                                                  | 0.4G~4G                                                      | 0.001G     |          |
| Insulation resistance 2500V                      | 4M~40M                                                       | 0.01M      | ± 5%+5   |
| Test value<4M, buzzer alarm, test time 1 minute  | 40M~400M                                                     | 0.1M       |          |
|                                                  | 0.4G~4G                                                      | 0.001G     |          |
|                                                  | 4G~20G                                                       | 0.01G      |          |
| Insulation resistance 5000V                      | 20G~50G                                                      | 0.1G       | ± 10%+5  |
| Test value<10M, buzzer alarm, test time 1 minute | 10M~40M                                                      | 0.01M      |          |
|                                                  | 40M~400M                                                     | 0.1M       |          |
|                                                  | 0.4G~4G                                                      | 0.001G     |          |
|                                                  | 4G~20G                                                       | 0.01G      | ± 10%+5  |
|                                                  | 20G~100G                                                     | 0.1G       |          |
|                                                  | 100G~200G                                                    | 1G         |          |

## New Model DC 1500V



60B+



60D+



60E+



New Model



4105A/B

- 1.This digital ground resistance tester is a new generation of electrical test Instruments, beautiful and practical style.
- 2.Full-featured, high accuracy, convenient and reliable operation, dustproof moisture-proof structure, better suited to field use.
- 3.It can be used to measure a variety of power systems, electrical equipment, lightning protection equipment grounding system grounding resistance value, itCan Also measure AC voltage.

## Technical data

| Basic Function |                               |       |             |       |
|----------------|-------------------------------|-------|-------------|-------|
| 4105A          | Ground resistance             | 20Ω   | ±(2%+0.1Ω)  | 0.01Ω |
|                |                               | 200Ω  | ±(2%+3d)    | 0.1Ω  |
|                |                               | 2000Ω |             | 1Ω    |
|                | Ground resistance(AC current) | 200V  | ±(2.0%+6d)  | 0.1V  |
| 4105B          | Ground resistance             | 10Ω   | ±(3%+0.1Ω)  | 0.01Ω |
|                |                               | 100Ω  | ±(3%+3d)    | 0.1Ω  |
|                |                               | 1000Ω | ±(3%+8d)    | 1Ω    |
|                | Ground resistance(AC current) | 750V  | ±(1.0%+10d) | 1V    |

| General features        |                                                                                                                              |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Display                 | 84.8×59.8mm LCD display, max display "1999"                                                                                  |
| Over range presentation | It will display "1" on the top number when it is over range                                                                  |
| Power                   | Alkaline battery LR (1.5V)×8 (can contact with power adapter)<br>When the battery is low, it will display a low battery sign |
| Power Dissipation       | Electricity cost (no-load)≤800mw                                                                                             |
| Work environment        | Temperature 0~40; relative humidity 30%~80%RH                                                                                |
| Product size            | 175(L)×110(W)×70(D)mm                                                                                                        |
| Weight                  | Approx: 680g (include battery)                                                                                               |

VICTOR 960B True RMS Digital Multimeter with 1000V Insulation Resistance Tester 2 in 1 , with Lithium Battery

## Insulation Resistance Tester

| Rated voltage | Measurement range   | Range      | Precision              | Resolution      |
|---------------|---------------------|------------|------------------------|-----------------|
| 50V           | 4M/40M/400M/1GΩ     | 0.05MΩ~1GΩ | ±(5%+5)                | 0.001MΩ~0.001GΩ |
| 100V          | 4M/40M/400M/2GΩ     | 0.1MΩ~2GΩ  |                        |                 |
| 250V          | 4M/40M/400M/4G/5GΩ  | 0.25MΩ~5GΩ | 0.25MΩ~399.9MΩ:±(3%+5) | 0.001MΩ~0.01Ω   |
| 500V          | 4M/40M/400M/4G/10GΩ | 0.5MΩ~10GΩ | 0.4GΩ~2GΩ:±(5%+5)      |                 |
| 1000V         | 4M/40M/400M/4G/20GΩ | 1MΩ~20GΩ   | 2.001GΩ~20GΩ:±(10%+5)  |                 |

## Measurement of terminal characteristics

| Rated voltage | Allowable range | Drop resistance value | Short-circuit current | Note                                            |
|---------------|-----------------|-----------------------|-----------------------|-------------------------------------------------|
| 50V           | Rated voltage   | 0.05MΩ                |                       | Alarm sounds when resistance is less than 0.3MΩ |
| 100V          | +20%~0%         | 0.1MΩ                 |                       | Alarm sounds when resistance is less than 0.6MΩ |
| 250V          |                 | 0.25MΩ                | 1mA                   | Alarm sounds when resistance is less than 1MΩ   |
| 500V          |                 | 0.5MΩ                 |                       | Alarm sounds when resistance is less than 2MΩ   |
| 1000V         |                 | 1MΩ                   |                       | Alarm sounds when resistance is less than 4MΩ   |

| Function   | Range                          | Accuracy   |
|------------|--------------------------------|------------|
| DC voltage | 6V/60V/600V                    | ±(0.5%+4)  |
|            | 1000V                          | ±(1.0%+6)  |
| AC voltage | 6V/60V/600V                    | ±(0.8%+10) |
|            | 750V                           | ±(1.0%+10) |
|            | 600Ω                           | ±(0.8%+5)  |
| Resistor   | 6kΩ/60kΩ/600kΩ/6MΩ             | ±(0.8%+4)  |
|            | 60MΩ                           | ±(2.0%+5)  |
| Capacitor  | 10nF                           | ±(3.0%+20) |
|            | 100nF/1000nF/10uF/100uF/1000uF | ±(3.0%+5)  |
|            | 10mF/100mF                     | ±(8.0%+5)  |

| Function             |                                    |
|----------------------|------------------------------------|
| Sampling rate        | About 3 times per second           |
| Overrange            | Display "OL"                       |
| Low pressure         | Yes                                |
| Diode                | Yes                                |
| Data retention       | Yes                                |
| On-off beeping       | Yes                                |
| Backlight display    | Yes                                |
| True effective value | Yes                                |
| Automatic shutdown   | About 15 minutes after powering on |
| Power supply         | 10440 2 x 3.7V Lithium batteries   |
| Size                 | 189*88*56mm                        |
| Weight               | Approximately 395g                 |

960B

New Model



## General Specification

| Model | Range            | Accuracy        | Resolution | Maximum test current |
|-------|------------------|-----------------|------------|----------------------|
| 6310B | 0.001mΩ~10.000mΩ | Within 18℃~28℃, | 0.001mΩ    | 1.2A                 |
|       | 10.01mΩ~100.00mΩ | Below 70%rh:    | 0.01mΩ     | 1.2A                 |
|       | 100.1mΩ~1000.0mΩ | ±0.1%FS±20dgt   | 0.1Ω       | 1.2A                 |
|       | 1.001Ω~10.000Ω   |                 | 0.001Ω     | 1.2A                 |
|       | 10.01Ω~100.00Ω   |                 | 0.01Ω      | 0.5A                 |
|       | 100.1Ω~1000.0Ω   |                 | 0.1Ω       | 0.05A                |
|       | 1.001KΩ~10.000KΩ |                 | 0.001KΩ    | 5mA                  |
|       | 10.01KΩ~100.00KΩ |                 | 0.01KΩ     | 0.5mA                |
|       | 100.1KΩ~300.0KΩ  |                 | 0.1KΩ      | 0.05mA               |
|       |                  |                 |            |                      |
| 6310A | 0.01mΩ~100.00mΩ  | Within 18℃~28℃, | 0.01mΩ     | 1.2A                 |
|       | 100.1mΩ~1000.0mΩ | Below 70%rh:    | 0.0001Ω    | 1.2A                 |
|       | 1.001Ω~10.000Ω   | ±0.1%FS±20dgt   | 0.001Ω     | 1.2A                 |
|       | 10.01Ω~100.00Ω   |                 | 0.01Ω      | 0.5A                 |
|       | 100.1Ω~1000.0Ω   |                 | 0.0001KΩ   | 0.05A                |
|       | 1.001KΩ~10.000KΩ |                 | 0.001KΩ    | 5mA                  |
|       | 10.01KΩ~30.00KΩ  |                 | 0.01KΩ     | 0.5mA                |
|       |                  |                 |            |                      |
|       |                  |                 |            |                      |
|       |                  |                 |            |                      |

Note: within 18℃~28℃, above 70%rh, within -10℃~50℃, below 80%rh: ±0.2%FS±20dgt.

| Model of Series          |                |                 |
|--------------------------|----------------|-----------------|
| Resistance Range         | 0.01mΩ~30.00KΩ | 0.001mΩ~300.0KΩ |
| Resolution               | 10uΩ           | 1uΩ             |
| Accuracy                 | ±0.1%FS        | ±0.1%FS         |
| Data storage             | 500 sets       | 500 sets        |
| USB Data upload function | N              | Y               |
| Charging function        | Y              | Y               |

| Model of Series                  |                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Function                         | Mainly used to measure the wire resistance of cables, the contact resistance of switches, connectors, relays, the resistance of coils, motors, transformer winding and metal riveting resistance, the connection resistance test between metal components, the low-value resistance test, and the grounding grid Resistance test of connecting conductor, contact resistance test, etc. |
| Detection method                 | Four-wire method test                                                                                                                                                                                                                                                                                                                                                                   |
| Test current                     | ≥1A                                                                                                                                                                                                                                                                                                                                                                                     |
| Open circuit voltage             | ≤4.2V                                                                                                                                                                                                                                                                                                                                                                                   |
| Overload protection              | Y                                                                                                                                                                                                                                                                                                                                                                                       |
| Power                            | Measuring powers8W                                                                                                                                                                                                                                                                                                                                                                      |
| power supply                     | DC 3.7V 2000mAh                                                                                                                                                                                                                                                                                                                                                                         |
| Backlight                        | Controllable gray and white screen backlight, suitable for dim places                                                                                                                                                                                                                                                                                                                   |
| Display Model                    | LCD                                                                                                                                                                                                                                                                                                                                                                                     |
| LCD Size                         | 72 mm×55mm                                                                                                                                                                                                                                                                                                                                                                              |
| Instrument size                  | 187 mm×119 mm×50mm                                                                                                                                                                                                                                                                                                                                                                      |
| Test line length                 | About 60cm, red, black 1pcs                                                                                                                                                                                                                                                                                                                                                             |
| measure time                     | About 2 times/sec                                                                                                                                                                                                                                                                                                                                                                       |
| USB interface                    | With micro USB interface                                                                                                                                                                                                                                                                                                                                                                |
| Communication line               | micro USB 1pcs                                                                                                                                                                                                                                                                                                                                                                          |
| Data storage                     | 500 groups, "MEM" storage indication, display "FULL" symbol to indicate storage is full                                                                                                                                                                                                                                                                                                 |
| Data review                      | Data review function: "MR" symbol display                                                                                                                                                                                                                                                                                                                                               |
| Overflow display                 | Over-range overflow function: "OL" symbol display                                                                                                                                                                                                                                                                                                                                       |
| Battery voltage                  | Real-time display of battery power, reminding timely charging when battery voltage is low                                                                                                                                                                                                                                                                                               |
| Automatic shut-down              | "APO" indicates, automatic shutdown after 15 minutes                                                                                                                                                                                                                                                                                                                                    |
| Power consumption                | Standby: about 100mA (backlight off)<br>Turn on backlight: about 105mA<br>Measure: 2A Max(backlight off)                                                                                                                                                                                                                                                                                |
| Weight                           | Instrument:480g(including battery)<br>Test line: 250g                                                                                                                                                                                                                                                                                                                                   |
| Working temperature and humidity | -10℃~50℃; below 80%rh                                                                                                                                                                                                                                                                                                                                                                   |
| Storage temperature and humidity | -20℃~60℃; below 70%rh                                                                                                                                                                                                                                                                                                                                                                   |
| Overload protection              | AC 220V/0.0001 second between C1-C2 P1-P2 ports, after overload protection, you need to restart the meter to test normally                                                                                                                                                                                                                                                              |
| Insulation resistance            | More than 10MΩ(Between circuit and case 500V)                                                                                                                                                                                                                                                                                                                                           |
| Pressure resistance              | AC 3700V/rms(Between circuit and case)                                                                                                                                                                                                                                                                                                                                                  |
| Electromagnetic properties       | IEC61010-4-3, Wireless frequency electromagnetic fields1V/m                                                                                                                                                                                                                                                                                                                             |
| Suitable for Safety Regulations  | IEC61010-1, CAT III 600V, Pollution Level 2, JG724-1991 "Determination of Direct Current Digital Ohmmeter", JG166-1993 "Dialect Resistor Verification Regulation", "DL/T967-2005 Loop Resistance Tester and DC Resistance Fast Tester Verification Procedures                                                                                                                           |



6310A/6310B



9600/9600B

## General Specification

| Model | Rated Voltage                     | Insulation Resistance Range | Short Circuit Current |
|-------|-----------------------------------|-----------------------------|-----------------------|
| 9600  | 250V, 500V, 1KV, 2.5KV, 5KV       | 0.50MΩ~2.00TΩ               | >5mA                  |
| 9600B | 250V, 500V, 1KV, 2.5KV, 5KV, 10KV | 0.50MΩ~5.00TΩ               | >5mA                  |

## Insulation Resistance Range and Accuracy

| Rated Voltage | Insulation Resistance Range | Accuracy  |
|---------------|-----------------------------|-----------|
| 250V          | 0.50MΩ ~ 10.0GΩ             | ±5%±3dgt  |
|               | 10.0GΩ ~ 50.0GΩ             | ±10%±3dgt |
| 500V          | 50.0GΩ ~ 100GΩ              | ±20%±3dgt |
|               | 1.00MΩ ~ 20.0GΩ             | ±5%±3dgt  |
| 1KV           | 20.0GΩ ~ 100GΩ              | ±10%±3dgt |
|               | 100GΩ ~ 200GΩ               | ±20%±3dgt |
| 2.5KV         | 1.00MΩ ~ 50.0GΩ             | ±5%±3dgt  |
|               | 50.0GΩ ~ 200GΩ              | ±10%±3dgt |
| 5KV           | 200GΩ ~ 500GΩ               | ±20%±3dgt |
|               | 1.00MΩ ~ 200GΩ              | ±5%±3dgt  |
| 10KV          | 200GΩ ~ 1.00TΩ              | ±10%±3dgt |
|               | 1.00TΩ ~ 2.00TΩ             | ±20%±3dgt |

1 TΩ (Tera ohm) =1000GΩ=10<sup>12</sup>Ω  
1 GΩ (Giga ohm) =1000MΩ=10<sup>9</sup>Ω  
1 MΩ (Mega ohm) =1000KΩ=10<sup>6</sup>Ω

## Technical Specification

| Model of Series                  |                                                                                                                                                                                                                               |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Function                         | Insulation resistance measurement (IR); polarization index measurement (PI); absorption ratio (DAR); filtered resistance test (four time selection 10S,20S,30S,40S). Voltage measurement(V); Leakage current measurement (nA) |
| Power Supply                     | Rechargeable lithium battery 5.2Ah                                                                                                                                                                                            |
| Rated Voltage                    | 9600: 250V, 500V, 1KV, 2.5KV, 5KV<br>9600B: 250V, 500V, 1KV, 2.5KV, 5KV, 10KV                                                                                                                                                 |
| Output Voltage Accuracy          | (5%~10%) ±10V                                                                                                                                                                                                                 |
| Insulation Resistance Test Range | 9600: 0.50MΩ~2.00TΩ<br>9600B: 0.50MΩ~5.00TΩ                                                                                                                                                                                   |
| Output Short Circuit Current     | >5mA                                                                                                                                                                                                                          |
| Polarization Index Test          | YES                                                                                                                                                                                                                           |
| Dielectric Absorption Ratio Test | YES                                                                                                                                                                                                                           |
| Ramp Test Mode                   | Step up to the preset voltage by testing with 10% stepped size of the preset voltage.                                                                                                                                         |
| Filtered Resistance Test Mode    | 10S, 20S, 30S, 40S four selections                                                                                                                                                                                            |
| Voltage Test                     | Range: AC/DC:0V~1000V; Accuracy: ±5%rdg±3V                                                                                                                                                                                    |
| Current Test                     | Range: 0.01nA~5mA; Accuracy: ±5%rdg±0.5nA                                                                                                                                                                                     |
| Voltage Monitor                  | Monitor the voltage of the measured object, and monitor discharge status after test, forbidden to test when voltage exceed 36V, protect instrument and operator.                                                              |
| Test Timer                       | Automatic record test time, time range: 0s~9999s                                                                                                                                                                              |
| Storage Function                 | Automatically store the test data with test date and time, total of 1000 groups                                                                                                                                               |
| Upload Function                  | Upload the stored data to computer via USB communication cable.                                                                                                                                                               |
| Battery Power Display            | With battery power display, when battery voltage low will remind to replace the battery                                                                                                                                       |
| Automatic Shutdown               | After 15 minutes start up will shut down automatically without any operation                                                                                                                                                  |
| Meter Dimension                  | 280mm×260mm×160mm                                                                                                                                                                                                             |
| Meter Weight                     | 4400g (include the battery)                                                                                                                                                                                                   |
| Test Wires                       | Red color high voltage test wire 1 pcs (with alligator clip 1PCS and hook 1PCS), green color test wire 1PCS, black color test wire 1PCS                                                                                       |
| Protection Level                 | Close the case IP65, open the case IP40                                                                                                                                                                                       |
| Working Environment              | -20℃~50℃; 80%rh                                                                                                                                                                                                               |
| Store Environment                | -25℃~65℃; 80%rh                                                                                                                                                                                                               |
| Insulation Resistance            | 50MΩ (1000v) (between the test circuit and shell)                                                                                                                                                                             |
| Withstand Voltage                | AC 3Kv 50Hz 1min (between the test circuit and shell)                                                                                                                                                                         |
| Suitable Safety Standard         | IEC61010-1, IEC61326-1                                                                                                                                                                                                        |

## Model Category

| Model | Rated Voltage                           | Insulation Resistance Range | Current Range |
|-------|-----------------------------------------|-----------------------------|---------------|
| 9620  | 250V, 500V, 1KV, 2.5KV, 5KV             | 0.50MΩ~10.0TΩ               | >7mA          |
| 9620B | 250V, 500V, 1KV, 2.5KV, 5KV, 10KV       | 0.50MΩ~20.0TΩ               | >7mA          |
| 9620C | 250V, 500V, 1KV, 2.5KV, 5KV, 10KV, 15KV | 0.50MΩ~30.0TΩ               |               |

## Insulation Resistance Range and Accuracy

| Rated Voltage | Insulation Resistance Range | Accuracy     |
|---------------|-----------------------------|--------------|
| 250V          | 0.50MΩ ~ 50.0GΩ             | ±5%rdg±3dgt  |
|               | 50.0GΩ ~ 500GΩ              | ±20%rdg±3dgt |
| 500V          | 1.00MΩ ~ 100GΩ              | ±5%rdg±3dgt  |
|               | 100GΩ ~ 1.00TΩ              | ±20%rdg±3dgt |
| 1000V         | 1.00MΩ ~ 200GΩ              | ±5%rdg±3dgt  |
|               | 200GΩ ~ 2.00TΩ              | ±20%rdg±3dgt |
| 2500V         | 1.00MΩ ~ 500GΩ              | ±5%rdg±3dgt  |
|               | 500GΩ ~ 3.00TΩ              | ±20%rdg±3dgt |
| 5000V         | 1.00MΩ ~ 1.00TΩ             | ±5%rdg±3dgt  |
|               | 1.00TΩ ~ 10.0TΩ             | ±20%rdg±3dgt |
| 10KV          | 1.00MΩ ~ 2.00TΩ             | ±5%rdg±3dgt  |
|               | 2.00TΩ ~ 20.0TΩ             | ±20%rdg±3dgt |
| 15KV          | 1.00MΩ ~ 3.00TΩ             | ±5%rdg±3dgt  |
|               | 3.00TΩ ~ 30.0TΩ             | ±20%rdg±3dgt |

1 TΩ (Tera ohm) =1000GΩ=10<sup>12</sup>Ω  
 1 GΩ (Giga ohm) =1000MΩ=10<sup>9</sup>Ω  
 1 MΩ (Mega ohm) =1000KΩ=10<sup>6</sup>Ω



9620/9620B/9620C

## Insulation Resistance Range and Accuracy

| Basic function        | Output voltage | Range          | Accuracy    |
|-----------------------|----------------|----------------|-------------|
| Insulation Resistance | 250V           | 0.01MΩ ~ 2.5GΩ | ±3%±5dgt    |
|                       |                | 2.5GΩ ~ 250GΩ  | ±15%±5dgt   |
|                       | 500V           | 0.01MΩ ~ 5GΩ   | ±3%±5dgt    |
|                       |                | 5GΩ ~ 500GΩ    | ±15%±5dgt   |
|                       | 1KV            | 0.01MΩ ~ 10GΩ  | ±3%±5dgt    |
|                       |                | 10GΩ ~ 1TΩ     | ±15%±5dgt   |
|                       | 2.5KV          | 0.01MΩ ~ 25GΩ  | ±3%±5dgt    |
|                       |                | 25GΩ ~ 2.5TΩ   | ±15%±5dgt   |
|                       | 5KV            | 0.01MΩ ~ 50GΩ  | ±3%±5dgt    |
|                       |                | 50GΩ ~ 5TΩ     | ±15%±5dgt   |
| AC/DC voltage         | ACV            | 0.01V~750v     | ±2%rdg±3dgt |
|                       | DCV            | 0.01V~1000v    | ±2%rdg±3dgt |



9600S

## General Specification

| Technical Specification          |                                                                                                                                                                                                                                                                             |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Function                         | Insulation resistance measurement (IR); polarization index measurement (PI); absorption ratio (DAR); ramp test mode (RAMP); filtered resistance test (four time selection 10S, 20S, 30S, 40S); Voltage measurement (V); capacity measurement (uF); current measurement (nA) |
| Power Supply                     | Rechargeable Lithium battery 6.2Ah                                                                                                                                                                                                                                          |
| Rated Voltage                    | 9620: 250V, 500V, 1KV, 2.5KV, 5KV<br>9620B: 250V, 500V, 1KV, 2.5KV, 5KV, 10KV<br>9620C: 250V, 500V, 1KV, 2.5KV, 5KV, 10KV, 15KV                                                                                                                                             |
| Output Voltage Accuracy          | (5% ~ 10%)±10V                                                                                                                                                                                                                                                              |
| Insulation Resistance Test Range | 9620: 0.50MΩ ~ 10.0TΩ<br>9620B: 0.50MΩ ~ 20.0TΩ<br>9620C: 0.50MΩ ~ 30.0TΩ                                                                                                                                                                                                   |
| Output Short Circuit Current     | ≥7mA                                                                                                                                                                                                                                                                        |
| Polarization Index Test          | YES                                                                                                                                                                                                                                                                         |
| Dielectric Absorption Ratio Test | YES                                                                                                                                                                                                                                                                         |
| Ramp Test Mode                   | Step up to the preset voltage by testing with 10% stepped size of the preset voltage.                                                                                                                                                                                       |
| Filtered Resistance Test Mode    | 10S, 20S, 30S, 40S four selections                                                                                                                                                                                                                                          |
| Voltage Test                     | Range: AC/DC: 0V ~ 1000V; Accuracy: ±5%rdg±3V                                                                                                                                                                                                                               |
| Capacitance Test                 | Range: 10nF ~ 25uF; Accuracy: ±10%rdg±10nF                                                                                                                                                                                                                                  |
| Current Test                     | Range: 0.01nA ~ 7mA; Accuracy: ±5%rdg±0.5nA                                                                                                                                                                                                                                 |
| Voltage Monitor                  | Monitor the voltage of the measured object, and monitor discharge status after test, forbidden to test when voltage exceed 36V, protect instrument and operator.                                                                                                            |
| Test Timer                       | Automatic record test time, time range: 0s~9999s                                                                                                                                                                                                                            |
| Storage Function                 | Automatically store the test data with test date and time, total of 1000 groups                                                                                                                                                                                             |
| Upload Function                  | Upload the stored data to computer via USB communication cable.                                                                                                                                                                                                             |
| Battery Power Display            | With battery power display, when battery voltage low will remind to replace the battery                                                                                                                                                                                     |
| Automatic Shutdown               | After 15 minutes start up will shut down automatically without any operation                                                                                                                                                                                                |
| Meter Dimension                  | 280mm×260mm×160mm                                                                                                                                                                                                                                                           |
| Meter Weight                     | 4900g (include the battery)                                                                                                                                                                                                                                                 |
| Test Wires                       | Red color high voltage test wire 1 pcs (with alligator clip 1PCS and hook 1PCS), green color test wire 1PCS, black color test wire 1PCS                                                                                                                                     |
| Protection Level                 | Close the case IP65, open the case IP40                                                                                                                                                                                                                                     |
| Working Environment              | -20℃ ~ 50℃; 80%rh                                                                                                                                                                                                                                                           |
| Store Environment                | -25℃ ~ 65℃; 80%rh                                                                                                                                                                                                                                                           |
| Insulation Resistance            | 50MΩ (1000V) (between the test circuit and shell)                                                                                                                                                                                                                           |
| Withstand Voltage                | AC 3Kv 50Hz 1min (between the test circuit and shell)                                                                                                                                                                                                                       |
| Suitable Safety Standard         | IEC61010-1, IEC61326-1                                                                                                                                                                                                                                                      |

| General function                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Function                         | Insulation resistance measurement (IR); polarization index measurement (PI); absorption ratio (DAR); AC and DC voltage test; automatic discharge function; ambient temperature test;                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Power Supply                     | DC 14.8V 2200mAh rechargeable Lithium battery                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Rated Voltage                    | 250V, 500V, 1000V, 2500V, 5000V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Output Short Circuit Current     | ≥10mA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Connection method                | L terminal: "L" is called the high-voltage output terminal, called the line terminal, and leads to the end of the measured object<br>G terminal: "G" is called the shield terminal, which is used for the three-electrode method to measure the insulation resistance of insulating materials or cables, and it is connected to the GRE<br>E terminal: "E" is called the ground terminal, which is connected to the ground and zero terminals of the measured object. Such as motor housing metal, transformer core, cable shielding<br>V terminal: AC and DC voltage measurement terminal (AC and DC automatic identification) |
| Resolution                       | Insulation resistance: 0.01 MΩ AC voltage: 0.01V DC voltage: 0.01V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Measure time                     | 1 minute to 30 minutes (related to the measurement method, can be set)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Backlight                        | Controllable white screen backlight, suitable for dark places                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Shift                            | Fully automatic shifting                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| LCD                              | 4-digit LCD display, white screen backlight                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| LCD size                         | 128mmX75mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| LCD display field                | 124mmX67mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Measurement instructions         | LED flashing indication during measurement, progress bar graph indication                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Size                             | 258mmX215mmX83mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Standard test lead               | 1 red high voltage test rod, 1 green and 1 black test lead.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Battery voltage                  | Real-time display of remaining battery power, please charge in time when the battery is low                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Communication Interface          | With a USB interface, the stored data can be uploaded to the computer, saved and printed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Communication line               | 1 USB communication cable, 1.5m long                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Working current                  | Standby: 25mA Max (backlight off); Backlight: 25mA Max (backlight power consumption alone);                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Weight                           | Meter: 2.19kg (including battery); Total: 3.50kg (including packaging)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Toolkit                          | Yellow and black two-color tool bag, easy to carry, good visual effect                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Working temperature and humidity | -10℃ ~ 40℃; below 80%rh                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Storage temperature and humidity | -20℃ ~ 60℃; below 70%rh                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Pressure resistance              | AC 3700V/rms (between the front and rear ends of the housing)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Insulation resistance            | Above 20MΩ (500V between bottom cover screws and top cover)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Electromagnetic properties       | IEC61326(EMC)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |





4105C

## General Specification

| Function                   | fMeasurement of 2/3/4-pole earth resistance, soil resistivity, earth voltage, AC voltage                                                                                                          |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Power Supply               | DC 9V (Zi-Mn dry battery R14S 1.5V 6 PCS, continuous standby for 300 hours )                                                                                                                      |
| Measurement Range          | Earth Resistance: 0.00Ω-30.00kΩ<br>Soil Resistivity: 0.00Ωm-9000kΩm                                                                                                                               |
| Measuring Mode             | Precise 4-pole measurement, 3-pole measurement, simple 2-pole measurement                                                                                                                         |
| Measuring Method           | Earth Resistance: rated current change-pole method, measurement current 20mA Max<br>Soil Resistivity: 4-pole measurement (Wenner method)<br>Earth Voltage: average rectification(between P(S)-ES) |
| Test Frequency             | 128Hz/111Hz/105Hz/94Hz(AFC)                                                                                                                                                                       |
| Short-circuit Test Current | AC 20mA max                                                                                                                                                                                       |
| Open-circuit Test Current  | AC 40V max                                                                                                                                                                                        |
| Test Voltage Wave          | Sine wave                                                                                                                                                                                         |
| Electrode Distance Range   | Can be set 1m-100m                                                                                                                                                                                |
| Shift                      | Earth Resistance: 0.00Ω-30.00kΩ, automatic shift<br>Soil Resistivity: 0.00Ωm-9000kΩm, automatic shift                                                                                             |
| Backlight                  | Blue screen backlight, suitable for dim places                                                                                                                                                    |
| Display Mode               | 4-digital super-large LCD display, blue screen backlight                                                                                                                                          |
| Measuring Indicator        | During measurement, LED flash indicator, LCD count down display, progress bar indicator                                                                                                           |
| LCD Frame Dimension        | 128mm×75mm                                                                                                                                                                                        |
| LCD Window Dimension       | 124mm×67mm                                                                                                                                                                                        |
| Dimension                  | L×W×H: 215mm×190mm×95mm                                                                                                                                                                           |
| Standard Test Wire         | 4 wires: each for red 20m, black 20m, yellow 10m, and green 10m                                                                                                                                   |
| Simple Test Wire           | 2 wires: each for red 1.6m and black 1.6m                                                                                                                                                         |
| Auxiliary Earthing Rod     | 4 rods: Φ10mm×150mm                                                                                                                                                                               |
| Measuring Rate             | Earth voltage: about 3 times/second<br>Earth resistance, soil resistivity: about 5 seconds/time                                                                                                   |

## Earth Resistance Soil Resistivity Tester

**Earth Resistance Soil Resistivity Tester** is specially designed and manufactured for measuring earth resistance, soil resistivity, earth voltage, AC voltage. Adopting the latest digital and micro-processing technology, precise 4-pole, 3-pole and simple 2-pole method for earth resistance measurement, importing FFT and AFC technology, with a unique function of anti-interference capability and the ability to adapt to the environment, consistency of repeat testing, to ensure high precision, high stability and reliability for prolonged measure, which is widely used in electric power, telecommunications, meteorology, oil field, construction, lightning protection, industrial electrical equipment and other earth resistance, soil resistivity, earth voltage, AC voltage measurement.

## General Specification

| Function                       |                                                                                                                                                           |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Measuring Times                | Over 5000 times (Short-circuit test, interval time should be at least 30 seconds)                                                                         |
| Line Voltage                   | below AC 600V                                                                                                                                             |
| RS232 Interface                | Possess RS232 interface, software supervision, storage data can be uploaded to computer, saved or printed.                                                |
| Communication Wire             | One piece of RS232 communication wire, with length 1.5m                                                                                                   |
| Data Storage                   | 300 sets, "MEM" icon storage indicator, flash display "FULL" icon to indicate storage is full                                                             |
| Data Hold                      | Data hold function: "HOLD" icon display                                                                                                                   |
| Data Access                    | Data read function: "READ" icon display                                                                                                                   |
| Overflow Display               | Exceeding measuring range overflow function: "OL" icon display                                                                                            |
| Interference Test              | Recognize interference signal automatically, "NOISE" icon display when interference voltage exceed 5V                                                     |
| Auxiliary Earthing Test        | Can measure auxiliary earth resistance, 0.00KΩ-30kΩ(100R+rC<50kΩ, 100R+rP<50kΩ)                                                                           |
| Alarm Function                 | When measuring value exceeds alarm setting value, there is "Too-look-too" alarm hint                                                                      |
| Battery Voltage                | When battery voltage decreases to about 7.5V, battery voltage low icon  will display, reminding to replace battery.                                       |
| Power Consumption              | Standby: about 20mA (Backlight shut off)<br>Boot and with backlight: about 45mA (25mA without backlight)<br>Measurement: about 100mA (Backlight shut off) |
| Weight                         | Total weight: 4.5kg (including package)<br>Tester: 1443g (including battery)<br>Testing wires: 1560g<br>Auxiliary earthing rods: 935g (4pcs)              |
| Working Temperature & Humidity | -10 C-40 C , below 80%rh                                                                                                                                  |
| Storage temperature & humidity | -20 C-60 C , below 70%rh                                                                                                                                  |
| Overload Protection            | Measuring earth resistance: between each interfaces of C(H)-E-P(S)-ES, AC 280V/3 seconds                                                                  |
| Insulation Resistance          | Over 20MΩ (between circuit and enclosure it is 500V)                                                                                                      |
| Withstanding Voltage           | AC 3700V/rms (Between circuit and enclosure)                                                                                                              |
| Electromagnetic Features       | IEC61326(EMC)                                                                                                                                             |
| Protection Type                | IEC61010-1 (CAT III 300V, CAT IV 150V, Pollution 2), IEC61010-031, IEC61557-1 (Earth resistance), IEC61557-5 (Soil resistivity), JIG 366-2004             |

## Intrinsic error and performance indicators under base conditions

| Category                | Measurement Range | Intrinsic Error                 | Resolution |
|-------------------------|-------------------|---------------------------------|------------|
| Earth Resistance<br>(R) | 0.00Ω-30.00Ω      | ±2%rdg±3dgt                     | 0.01Ω      |
|                         | 30.0Ω-300.0Ω      | ±2%rdg±3dgt                     | 0.1Ω       |
|                         | 300Ω-3000Ω        | ±2%rdg±3dgt                     | 1Ω         |
|                         | 3.00kΩ-30.00kΩ    | ±4%rdg±3dgt                     | 10Ω        |
| Soil Resistivity<br>(ρ) | 0.00Ωm-99.99Ωm    | According to the precision of R | 0.01Ωm     |
|                         | 100.0Ωm-999.9Ωm   | (ρ=2πaR                         | 0.1Ωm      |
|                         | 1000Ωm-9999Ωm     | a:1 m-100m,                     | 1Ωm        |
|                         | 10.00kΩm-99.99kΩm | π=3.14)                         | 10Ωm       |
|                         | 100.0kΩm-999.9kΩm |                                 | 100Ωm      |
|                         | 1000kΩm-9000kΩm   |                                 | 1kΩm       |
| Earth Voltage           | AC 0.0-600V       | ±2%rdg±3dgt                     | 0.1V       |



4106C



4106C

| Basic Function                    | Range                                                                                                                                                                                                    | Resolution | Accuracy                                                                 |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------------------------------------------------------------|
| Ground resistance                 | 0.00Ω ~ 30.00Ω                                                                                                                                                                                           | 0.01Ω      | ±2%rdg±3dgt                                                              |
|                                   | 30.0Ω ~ 300.0Ω                                                                                                                                                                                           | 0.1Ω       | ±2%rdg±3dgt                                                              |
|                                   | 300Ω ~ 3000Ω                                                                                                                                                                                             | 1Ω         | ±2%rdg±3dgt                                                              |
|                                   | 3.00kΩ ~ 30.00kΩ                                                                                                                                                                                         | 10Ω        | ±4%rdg±3dgt                                                              |
| Ground voltage                    | AC 0.0 ~ 600V                                                                                                                                                                                            | 0.1V       | ±2%rdg±3dgt                                                              |
| Soil resistivity                  | 0.00Ω m ~ 99.99Ωm                                                                                                                                                                                        | 0.01Ω m    | According to the measurement accuracy of R (ρ=2πrR; a: 1 m~100m; π=3.14) |
|                                   | 100.0Ω m ~ 999.9Ωm                                                                                                                                                                                       | 0.1Ω m     |                                                                          |
|                                   | 1000Ω m ~ 9999Ωm                                                                                                                                                                                         | 1Ω m       |                                                                          |
|                                   | 10,00kΩ m ~ 99.99kΩm                                                                                                                                                                                     | 10Ω m      |                                                                          |
|                                   | 100.0kΩm ~ 999.9kΩm                                                                                                                                                                                      | 100Ω m     |                                                                          |
|                                   | 1000kΩm ~ 9000kΩm                                                                                                                                                                                        | 1kΩ m      |                                                                          |
| Measuring method                  | Grounding resistance: rated current pole changing method, measuring current 20mA Max. Soil resistivity: quadrupole method (Wenner method), Grounding voltage : average value rectification               |            |                                                                          |
| Test frequency                    | 128Hz/111Hz/105Hz/94Hz(AFC)                                                                                                                                                                              |            |                                                                          |
| Test voltage waveform             | Sine wave                                                                                                                                                                                                |            |                                                                          |
| Short circuit test current        | AC 20mA max                                                                                                                                                                                              |            |                                                                          |
| Data storage                      | 300 groups                                                                                                                                                                                               |            |                                                                          |
| Data reference                    | "READ" symbol                                                                                                                                                                                            |            |                                                                          |
| Open circuit test voltage         | AC 40V max                                                                                                                                                                                               |            |                                                                          |
| Data hold                         | "HOLD" symbol                                                                                                                                                                                            |            |                                                                          |
| Overflow display                  | "OL" symbol                                                                                                                                                                                              |            |                                                                          |
| Test line                         | red 20m, black 20m, yellow 10m, green 10m, red 1.6m, black 1.6m each 1 (total 6)                                                                                                                         |            |                                                                          |
| Auxiliary ground rods             | 4 *φ 10mm×150mm                                                                                                                                                                                          |            |                                                                          |
| USB interface                     | With USB interface, software monitoring, stored data can be uploaded to the computer, saved and printed; one 1.5m long communication line                                                                |            |                                                                          |
| Alarm function                    | When the measured value exceeds the alarm setting value, alarm prompt "beep-beep-beep--"                                                                                                                 |            |                                                                          |
| Auto power off                    | Auto power off after 15 minutes                                                                                                                                                                          |            |                                                                          |
| Overload protection               | Measuring ground resistance: AC 280V/3 seconds between each port of C(H)-E, P(S)-ES                                                                                                                      |            |                                                                          |
| Interference test                 | Automatically identify the interference signal, and the "NOISE" symbol indicates when the interference voltage is larger than 5V                                                                         |            |                                                                          |
| Auxiliary grounding test          | With auxiliary grounding resistance value test function, 0.00kΩ ~ 30kΩ (100R+rC<50kΩ, 100R+rP<50kΩ)                                                                                                      |            |                                                                          |
| Protection level                  | IP65 (with cover closed)                                                                                                                                                                                 |            |                                                                          |
| Battery voltage                   | When the battery voltage drops to about 7.5V and show the low battery voltage symbol "  ", please replace the battery |            |                                                                          |
| Working current                   | Standby: about 20mA (backlight off); turn on the backlight: about 45mA (backlight off 25mA); measurement: about 100mA (backlight off)                                                                    |            |                                                                          |
| Accessories                       | Meter: 1; Grounding probe: 4; Test lead: 4; Simple test lead: 2; USB communication cable: 1; CD: 1; Meter bag: 1; Special charger: 1                                                                     |            |                                                                          |
| Power                             | DC 7.4V 2600mAh rechargeable lithium battery                                                                                                                                                             |            |                                                                          |
| Color                             | Black + Orange                                                                                                                                                                                           |            |                                                                          |
| LCD size                          | LCD size 128mm×75mm; LCD display area 124mm×67mm                                                                                                                                                         |            |                                                                          |
| Weight                            | 4765kg (including packaging)                                                                                                                                                                             |            |                                                                          |
| Size                              | 280mm×260mm×160mm                                                                                                                                                                                        |            |                                                                          |
| Standard packing box gross weight | about 6KG                                                                                                                                                                                                |            |                                                                          |

## Clamp Earth Resistance Tester

### Specification

| Model | Range of Resistance (Ω) | Range of Current (A) | Storage Function | Alarm Function |
|-------|-------------------------|----------------------|------------------|----------------|
| 6410  | 0.010Ω-200Ω             | —                    | 99 groups        | Yes            |
| 6411  | 0.010Ω-200Ω             | 0.00mA-30A           | 99 groups        | Yes            |
| 6412+ | 0.010Ω-1200Ω            | —                    | 99 groups        | Yes            |
| 6412  | 0.010Ω-1200Ω            | 0.00mA-30A           | 99 groups        | Yes            |

### Ranges and Accuracy

| Mode             | Range         | Resolution | Accuracy        |
|------------------|---------------|------------|-----------------|
| Resistance Range | 0.010Ω-0.099Ω | 0.001Ω     | ±(1%rdg+0.01Ω)  |
|                  | 0.10Ω-0.99Ω   | 0.01Ω      | ±(1%rdg+0.01Ω)  |
|                  | 1.0Ω-9.9Ω     | 0.1Ω       | ±(1%rdg+0.1Ω)   |
|                  | 50.0Ω-99.5Ω   | 0.5Ω       | ±(1.5%rdg+0.5Ω) |
|                  | 100Ω-199Ω     | 1Ω         | ±(2%rdg+1Ω)     |
|                  | 200Ω-395Ω     | 5Ω         | ±(5%rdg+5Ω)     |
|                  | 400Ω-590Ω     | 10Ω        | ±(10%rdg+10Ω)   |
| Current Range    | 600Ω-1200Ω    | 20Ω        | ±(20%rdg+20Ω)   |
|                  | 0.00mA-9.95mA | 0.05mA     | ±(2.5%rdg+1mA)  |
|                  | 10.0mA-99.9mA | 0.1mA      | ±(2.5%rdg+5mA)  |
|                  | 100mA-299mA   | 1mA        | ±(2.5%rdg+10mA) |
|                  | 0.30A-2.99A   | 0.01A      | ±(2.5%rdg+0.1A) |
|                  | 3.0A-9.9A     | 0.1 A      | ±(2.5%rdg+0.3A) |
|                  | 10.0A-19.9A   | 0.1 A      | ±(2.5%rdg+0.5A) |
|                  | 20.0A-30.0A   | 0.1 A      | ±(3%rdg+1A)     |



6410/6411/6412/6412+

### Technical Specifications

|                               |                                               |
|-------------------------------|-----------------------------------------------|
| Power supply                  | DC6V, No.5 alkaline dry battery (LR61.5V × 4) |
| Work environment              | -10°C-55°C                                    |
| Relative humidity             | 10%-90%                                       |
| liquid crystal display        | 4-digit LCD number, 47 × 28.5mm               |
| Clamp gauge quality           | Approximately 860g (including battery)        |
| Clamp gauge size              | 275mm×97mm×56mm                               |
| Protection level              | Double insulation                             |
| Structural                    | Jaw method                                    |
| Range shifting                | automatic                                     |
| External magnetic field       | <40A/m                                        |
| External electric field       | <1V/m                                         |
| Single measurement            | 0.5 seconds                                   |
| Resistance frequency          | >1KHz                                         |
| Resistance resolution         | 0.001Ω                                        |
| Resistance range              | 0.01Ω-1200Ω                                   |
| *Current range                | 0.00mA-30.0A                                  |
| Tested current                | 50/60Hz                                       |
| Store data                    | 99 groups                                     |
| Resistance alarm value        | 1-199Ω                                        |
| *Current alarm critical value | 1-499mA                                       |

Note: "\*" is only applicable to 6411/6412



140

## VICTOR 140 Clamp Leaker Function Measurement Of AC Leakage Current, AC Current And On-Line AC Current Four Bits LCD Display

VICTOR140 High Accuracy Clamp Leaker could be used for AC Line current measurement and on-line current measurement with voltage lower than AC600V; it also have those functions as peaking holding, data holding and data storage; with convenient use, it is an essential tool for electrician safety testing.

### Technical data

| Model               | 140                                                                    |
|---------------------|------------------------------------------------------------------------|
| Function            | AC leakage current, AC current, online AC current                      |
| Power               | AAA*2 batteries                                                        |
| Range               | 0.00mA~300.0A                                                          |
| Accuracy            | 0~60A: $\pm 1.5\%$ rdg $\pm 5$ dgt 60A~300A: $\pm 2\%$ rdg $\pm 5$ dgt |
| Resolution          | 10uA                                                                   |
| Jaw size            | 35 * 40mm                                                              |
| Instrument size     | 180 * 72 * 32mm                                                        |
| Instrument quality  | Approximately 200g (including battery)                                 |
| Testing method      | Clamp CT, integral method                                              |
| Display mode        | 4-digit LCD display                                                    |
| LCD size            | 35 * 21.5mm display field: 32 * 15mm                                   |
| Sampling rate       | About 2 times/second                                                   |
| Frequency           | 50Hz, 60Hz automatic recognition                                       |
| Shift               | Fully automatic switching                                              |
| Line voltage        | Testing of AC600V and below circuits                                   |
| Data storage        | 99 groups                                                              |
| Peak maintenance    | Long press hold to display peak value without letting go               |
| Data retention      | "DH" symbol display                                                    |
| Overflow display    | "OL" symbol display                                                    |
| Automatic shutdown  | Automatically shut down after 5 minutes of startup                     |
| Battery voltage     | When the battery voltage is below 2.8V                                 |
| Working current     | 5mA                                                                    |
| Work environment    | 0 °C~40 °C; Below 80% RH                                               |
| Storage environment | -10 °C~60 °C; Below 70% RH                                             |
| Insulation strength | AC2kV/rms (between iron core and box)                                  |
| Safety regulations  | IEC1010-1, IEC1010-2-032, Pollution level 2, CAT III (600V)            |

## VICTOR 140B AC Leakage Current Clamp Meter AC100A With 0.01mA Resolution DC/AC600V 27mm Clamp Size Clamp Rechargeable Battery

### Alternating current (ACA)

| Range   | Accuracy       | Resolution | Overload protection |
|---------|----------------|------------|---------------------|
| 60.00mA | $\pm(1.5\%+5)$ | 0.01mA     | 60A                 |
| 600.0mA | $\pm(1.5\%+5)$ | 0.1mA      | 60A                 |
| 6.000A  | $\pm(1.5\%+5)$ | 0.001A     | 60A                 |
| 60.00A  | $\pm(1.5\%+5)$ | 0.01A      | 60A                 |
| 100.0A  | $\pm(2.0\%+5)$ | 0.1A       | 100A                |

### True RMS measurement of alternating voltage (ACV)

| Range  | Accuracy       | Resolution | Input impedance | Overload protection |
|--------|----------------|------------|-----------------|---------------------|
| 6.000V | $\pm(0.8\%+3)$ | 0.001V     | 10MΩ            | 600Vmax             |
| 60.00V | $\pm(0.8\%+3)$ | 0.01V      | 10MΩ            | 600Vmax             |
| 600.0V | $\pm(0.8\%+3)$ | 0.1V       | 10MΩ            | 600Vmax             |

### Direct Current Voltage (DCV)

| Range   | Accuracy       | Resolution | Input impedance | Overload protection |
|---------|----------------|------------|-----------------|---------------------|
| 600.0mV | $\pm(0.5\%+3)$ | 0.1mV      | 10MΩ            | 600Vmax             |
| 6.000V  | $\pm(0.5\%+3)$ | 0.001V     | 10MΩ            | 600Vmax             |
| 60.00V  | $\pm(0.5\%+3)$ | 0.01V      | 10MΩ            | 600Vmax             |
| 600.0V  | $\pm(0.5\%+3)$ | 0.1V       | 10MΩ            | 600Vmax             |

### General Characteristics

| Characteristic        | Explanation            |
|-----------------------|------------------------|
| Display mode          | Liquid crystal display |
| Maximum display       | 5999 (3 5/6)           |
| Sampling rate         | Three times per second |
| Low voltage prompt    | Battery symbol display |
| Beyond range          | Display OL             |
| Operating environment | 0 to 40°C, <75%RH      |
| Storage environment   | -10 to 50°C, <80%RH    |
| Jaw size              | Diameter: 27mm         |
| Alarm indicator light | Yes                    |
| Type-c charging       | Yes                    |
| Data retention        | Yes                    |
| Max/min               | YES                    |
| Automatic shutdown    | About 15 minutes       |
| Power supply          | 3.7V lithium battery   |
| "Size"                | 166 * 67.5 * 26 mm     |
| Weight                | About 162g             |



140B



## New Product Victor 140D Digital AC/DC Clamp Leaker High Precision Anti -interference Fully Auto Gear Shift Electrical Meter

The instrument has data retention, data storage and other functions. It is equipped with USB interface, communication line and monitoring software. It can be online real-time monitoring and historical query through the computer, dynamic display, maximum, minimum, average value indication, alarm value setting and alarm indication Functions, with historical data reading, saving, printing and other functions.

### Technical data

| Model                            | 140D                                                                                                                  |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Jaw size                         | 16mm×18mm                                                                                                             |
| Instrument size                  | 215mm×61mm×32mm                                                                                                       |
| Function                         | Automobile DC dark current, leakage current, etc., other AC and DC current, leakage current measurement               |
| Power supply                     | Zinc-manganese dry battery 6F22 9V                                                                                    |
| Test method                      | Clamp CT, non-contact measurement                                                                                     |
| Measuring range                  | 0mA ~ 60.0A AC/DC                                                                                                     |
| Resolution                       | 1mA AC/DC                                                                                                             |
| Precision                        | ±2%rdg±5dgt (23℃±5℃, below 75%rh)                                                                                     |
| Display mode                     | 4-digit LCD display                                                                                                   |
| LCD size                         | 35mm×21.5mm; display area: 32mm×15mm                                                                                  |
| Sampling rate                    | 2 times/sec                                                                                                           |
| Frequency response               | AC: 45Hz ~ 400Hz                                                                                                      |
| Polarity indication              | Automatically recognize when DC current is detected, display "-"                                                      |
| Wire position                    | The detected wire is in the center of the jaws                                                                        |
| Shift                            | Fully automatic switching                                                                                             |
| Line voltage                     | 600V and below line test                                                                                              |
| USB interface                    | Stored data can be uploaded to the computer, saved and printed                                                        |
| Communication parameters         | Baud rate 9600, data bit 8, stop bit 1, parity bit NONE                                                               |
| data storage                     | 99 groups, flashing "FULL" symbol indicates that the storage is full                                                  |
| Data retention                   | Data retention function: "DH" symbol display                                                                          |
| Overflow display                 | Over-range overflow function: "OL A" symbol display                                                                   |
| Automatic shut-down              | After 5 minutes of power-on, the meter will automatically shut down to reduce battery consumption                     |
| Battery voltage                  | When the battery voltage drops to 7.2V, the battery voltage low symbol is displayed, reminding to replace the battery |
| Instrument quality               | 220g (including battery)                                                                                              |
| Working current                  | Max 20mA                                                                                                              |
| Working temperature and humidity | -10℃ ~ 50℃; below 80%rh                                                                                               |
| Limit temperature error          | -10℃ ~ 0℃ and 40℃ ~ 50℃, the error will increase by 2%rdg                                                             |
| Storage temperature and humidity | -10℃ ~ 60℃; below 70%rh                                                                                               |
| Dielectric strength              | AC 3700V/rms (between core and box)                                                                                   |

## VICTOR 140A 0–60A High Accuracy Clamp Leaker With RS232 Small Clamp Size AC Line And on-line current measurement lower than AC600V

This High Accuracy Clamp Leaker obtains one RS232 interface. With the help of the software that we provide, many functions are available. For example, on-line monitoring, historical data inquiry, active curve drawing, indication of max, min and average value, alarm setting and indication. There are also functions like saving to documents and printing when connected to PC.

This High Accuracy Clamp Leaker could be used for AC Line current measurement and on-line current measurement with voltage lower than AC600V; it also have those functions as peaking holding, data holding and data storage; with convenient use, it is an essential tool for electrician safety testing.

### Technical data

| Model                    | 140A                                                                                     |
|--------------------------|------------------------------------------------------------------------------------------|
| Measure Range            | 0.000mA–60.00A                                                                           |
| Resolution               | 1uA                                                                                      |
| Clamp Dimension          | 25X30mm                                                                                  |
| Function                 | Measurement of AC leakage current, AC current and on-line measurement                    |
| Power                    | Zn-Mn dry battery, 6F22, 9V                                                              |
| Test Mode                | Clip-on CT, integral mode                                                                |
| Display Mode             | Four digits LCD display                                                                  |
| Dimension                | Width × Height × Thickness: 175mm×70mm×38mm                                              |
| LCD Dimension            | 35mm×21.5mm; display domain: 32mm×15mm                                                   |
| Sampling Rate            | about 2 times/s                                                                          |
| Frequency                | 50/60Hz Automatically                                                                    |
| Range Shift              | Automatically                                                                            |
| Accuracy                 | 0.00 ~ 60.00A: ±1.5%±5dgt                                                                |
| Voltage Range            | AC600V                                                                                   |
| RS232 Interface          | Data stored in the memory of the meter via RS232 upload to PC, or on-line monitoring     |
| Storage                  | 99units, all used when display FULL                                                      |
| Peak Hold                | Push HOLD without release, the meter will show the peak value during the pushing period  |
| Reading Hold             | DH indicating the reading is hold                                                        |
| Out of Range             | OL indicating the current is out of range                                                |
| Auto Power-off           | 5 Minutes after power on, it will power off automatically to lower the power consumption |
| Battery Voltage          | Indicating the battery voltage is lower than 7.2V, then the battery have to be changed   |
| Weight                   | 120g (including the battery)                                                             |
| Consumption              | About 5mW                                                                                |
| Temperature and Humidity | Working: 0℃ ~ 40℃, below 80%rh<br>Storage: -10℃ ~ 60℃, below 70%rh                       |
| Insulating Strength      | AC2kV/rms (between the alloy of the clamp and the housing)                               |
| Applicable Safety Rules  | IEC1010-1, IEC1010-2-032, pollution, etc 2-CAT III (600V)                                |



140D



140A

## Technical data



6415



6415A

| Model                     | 6415                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 6415A                                                            |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|
| Features                  | Bench top                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Box top                                                          |
| Function                  | Grounding resistance, soil resistivity, DC resistance, grounding voltage, AC current, leakage current measurement                                                                                                                                                                                                                                                                                                                                                                             |                                                                  |
| Range                     | Two-three-four-wire grounding resistance measurement: 0.00Ω~30.00kΩ<br>Grounding resistance measurement by selection method: 0.00Ω ~ 3000Ω<br>Double-clamp method grounding resistance measurement: 0.01 ~ 100Ω<br>Grounding voltage: AC0.0V~100.0V<br>Soil resistivity: 0.00Ωm~9000kΩm<br>AC current: AC 0.00mA~600.0A                                                                                                                                                                       |                                                                  |
| Measurement mode          | Precision four-wire, three-wire method, simple two-wire, selection method, double-clamp method to measure grounding resistance                                                                                                                                                                                                                                                                                                                                                                |                                                                  |
| Measurement method        | Two-three-four-wire method measurement: pole-changing method, test current 20mA Max<br>Selection method measurement: pole changing method, test current 20mA Max<br>Double clamp method: non-contact mutual inductance measurement method, test current 1mA Max<br>Soil resistivity: quadrupole method (Wenner method)<br>DC resistance: pole changing method<br>AC current: average value rectification (clamp)<br>Grounding voltage average value rectification (between P(S)-ES interface) |                                                                  |
| Backlight                 | Controlable white screen backlight, suitable for use in dark places                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                  |
| Display                   | 4-digit large LCD display with backlight                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                  |
| Measurement indication    | LED flashing indication during measurement, LCD countdown display                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                  |
| Measurement time          | AC current: about 2 times/second; grounding voltage: about 2 times/second; grounding resistance: about 7 seconds/time                                                                                                                                                                                                                                                                                                                                                                         |                                                                  |
| Measurement frequency     | more than 5000 times (short circuit test, test once, stop for 30 seconds and test again)                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                  |
| Line voltage              | measurement below AC 600V                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                  |
| Communication interface   | With RS232 interface, the stored data can be uploaded to the computer through the software                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                  |
| Data storage              | 2000 groups                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                  |
| Overload protection       | Measuring ground resistance: AC 280V/3 seconds between each port of C(H)-E, P(S)-ES                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                  |
| Insulation resistance     | above 20MΩ (500V between circuit and case)                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                  |
| Withstand voltage         | AC 3700V/rms (between circuit and case)                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                  |
| Power supply              | DC 9V (6 pcs R14S 1.5V zinc-manganese dry battery , continuous standby for 300 hours)                                                                                                                                                                                                                                                                                                                                                                                                         | DC 8.4V (rechargeable battery, continuous standby for 300 hours) |
| Accessories               | Meter: 1; Grounding probe: 4; Test lead: 4; Simple test lead: 2; USB communication cable: 1; CD: 1; Meter bag: 1; Special charger: 1                                                                                                                                                                                                                                                                                                                                                          |                                                                  |
| Standard test lines       | red 20m, black 20m, yellow 10m, green 10m each                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                  |
| Auxiliary ground rods     | 4"φ 10mm×150mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                  |
| Simple test lines         | red 1.6m, black 1.6m each                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                  |
| Communication line        | RS232 communication line 1, length 1.5m                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                  |
| Current clamp             | blue and black plugs, red and black plugs each                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                  |
| Current clamp size        | 185mm×115mm×43mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                  |
| Current clamp diameter    | φ68mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                  |
| Power                     | DC 7.4V 2600mAh rechargeable lithium battery                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                  |
| Current clamp lead length | 2m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                  |
| Color                     | Black + Orange                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                  |
| LCD size                  | 128mm×75mm; display area: 124mm×67mm                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                  |
| Weight                    | 1232g                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 2560g                                                            |
| Size                      | 215mm×190mm×95mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 280mm×260mm×160mm                                                |
| Standard inner packing    | Neutral kraft carton                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                  |

## Technical data

| Basic error and function under basic condition |               |                 |                 |
|------------------------------------------------|---------------|-----------------|-----------------|
| Target                                         | Measure range | Resolving power | Basic error     |
| Voltage                                        | 20V           | 0.01V           | ±(1.2%rdg+2dgt) |
|                                                | 200V          | 0.1V            |                 |
|                                                | 500V          | 1V              |                 |
| Current                                        | 200mA         | 0.1mA           | ±(1.0%rdg+2dgt) |
|                                                | 2A            | 1mA             |                 |
|                                                | 10A           | 10mA            |                 |
| Phase                                          | 0~360°        | 1°              | ±3°             |

## Basic Condition and Work condition

| Target                                  | Basic condition                               | Work condition | Remark   |
|-----------------------------------------|-----------------------------------------------|----------------|----------|
| Environment Temperature                 | 23℃ ±1℃                                       | -10℃~40℃       |          |
| Environment Humidity                    | 40%~60%                                       | <85%           |          |
| Function wave                           | Sine wave                                     | Sine wave      | β = 0.05 |
| Function frequency                      | 50Hz ± 1Hz                                    | 45Hz~65Hz      |          |
| Work Voltage                            | 9V ± 0.1V                                     | 9V ± 1V        |          |
| External electric field, magnetic field | Must avoid                                    |                |          |
| Place of measured lead                  | At the approximate geomtric center of the jam |                |          |

## Standard accessories

|                |                                    |
|----------------|------------------------------------|
| Instrument box | 1                                  |
| Current clamp  | 2                                  |
| Test leads     | 4 (2 red and 2 black)              |
| Battery        | 6 (Alkalines dry battery: 1.5V AA) |
| Instruction    | 1                                  |

4000



385+

## Surface Resistance Tester

| Specifications       | 385+                      |
|----------------------|---------------------------|
| Resistance range     | 103~1010Ω                 |
| Resistance error     | ± one order of magnitude  |
| temperature range    | 0~50℃ (32~122°F)          |
| Temperature accuracy | ±2℃/±3.6°F                |
| Working temperature  | 0~40℃ (32~104°F)          |
| Storage temperature  | 0~60℃ (32~140°F)          |
| Relative humidity    | 0~70% RH (non condensing) |
| Backlight            | √                         |
| Power Supply         | 9V 6F22 battery           |
| Automatic shutdown   | About 5 minutes           |
| Size                 | 131*65*35mm               |
| Weight               | About 180g                |



9000



| Basic Function |              |            |
|----------------|--------------|------------|
| Function       | Range        | Accuracy   |
| AC voltage     | 0.1mA~299mA  | ±1%+3dgt   |
|                | 0.30A~49.9A  | ±1.5%+5dgt |
|                | 50.0A~199.9A | ±2%+5dgt   |
|                | 200A~600A    | ±3%+5dgt   |
|                | 601A~1000A   | ±4%+5dgt   |

| Special Function                 |                                                                                                       |
|----------------------------------|-------------------------------------------------------------------------------------------------------|
| Function                         | High and low voltage AC current test, creepage test, AC current monitoring online                     |
| Power                            | DC6V alkaline dry battery (1.5V AAA×4) Auto power off                                                 |
| Display mode                     | 4 bit LCD display, backlight function, suit for dark place                                            |
| Product size                     | 76mm×255mm×31mm                                                                                       |
| Clamp size                       | Φ 48mm                                                                                                |
| Sampling rate                    | About 2 times/s                                                                                       |
| Shift                            | 0.1mA~1000A auto shift (test rate 50/60Hz)                                                            |
| Data hold                        | 99 Data hold                                                                                          |
| Circuit voltage                  | Under 23KV can test circuit voltage (use insulating rod)                                              |
| Weight                           | Resting benc:about 335g(include battery),total weight:about 2.5Kg(include insulating rod and battery) |
| Working temperature and humidity | -10℃~40℃; under 80%RH                                                                                 |
| Store temperature and humidity   | -10℃~60℃; under 70%RH                                                                                 |
| Insulating rod size              | Φ 32mm, 1m/each batter (5battery)                                                                     |
| Insulating strength              | AC 40kV/rms (between insulating rod and the clamp)                                                    |

9000B



| Special Function       |                                                                                       |
|------------------------|---------------------------------------------------------------------------------------|
| Function               | High Voltage ACA Test Low Voltage ACA Test Leakage Current Test Online ACA Monitoring |
| Power                  | 6V Battery (1.5V AAA×4)                                                               |
| Ways of Measuring      | Clamp Shape CT, Integration                                                           |
| Transmission           | Wireless transmission Line transfer max. distance: Approx. 30m                        |
| Display Mode           | 4 digit, CD Display, Backlight Function Suitable for dusky occasions.                 |
| LCD Size               | 47mm×28.5mm                                                                           |
| Product Size           | 76mm×255mm×31mm                                                                       |
| Clamp Size             | Φ48mm                                                                                 |
| Sampling Rate          | Approx 2times                                                                         |
| Measuring Range        | 0.1mA~1000A (50/60Hz Automatically)                                                   |
| Resolution             | 0.1mA                                                                                 |
| Gear Shift             | 0.1mA~1000A Full automatic gear shift                                                 |
| Accuracy               | 0.1mA~299mA: ±1%±3dgt                                                                 |
|                        | (Below 23℃±5, 80%RH)                                                                  |
|                        | 0.30A~9.99A: ±1.5%±5dgt                                                               |
|                        | 10.0A~199.9A: ±2%±5dgt                                                                |
|                        | 200A~399A: ±2.5%±5dgt                                                                 |
|                        | 400A~600A: ±3%±5dgt                                                                   |
|                        | 601A~1000A: ±4%±5dgt                                                                  |
| Line Voltage           | Line test below 50KV                                                                  |
| Data Storage           | 99 sets of data can be stored in the process "MEM" sign indication                    |
|                        | *"FULL" twinkling sign indicates memory full                                          |
| PEAK Hold              | ✓                                                                                     |
| Data Hold              | ✓                                                                                     |
| Data Scan              | ✓                                                                                     |
| Overflow Indication    | ✓                                                                                     |
| No Sign Indication     | ✓                                                                                     |
| Auto Power Off         | ✓                                                                                     |
| Low Battery Indication | ✓                                                                                     |
| Operation Temperature  | -25℃~40℃; below 80%RH                                                                 |
| Storage Temperature    | -10℃~60℃; below 70%RH                                                                 |
| Insulating Bar Size    | Φ32mm, 1m per node (five nodes)                                                       |
| Insulating Strength    | AC 100kV/rms (Between the fifth insulating bar and high voltage current clamp chip)   |
| Structure              | LeakProof II                                                                          |

## Technical parameters(1010M Lux Meter)

| Characteristic         | Explanation                                                                                           |
|------------------------|-------------------------------------------------------------------------------------------------------|
| Liquid crystal display | 4-digit LCD display                                                                                   |
| Range                  | 0~199,999 Lux; 0~19999FC                                                                              |
| Precision              | ±4%(color temperature 2856K standard flat lamp correction);<br>±(6%+5Lux) Other visible light sources |
| Resolution             | Lux: < 200,0.1 Lux; ≥200,1Lux; FC: < 20,0.01 FC; > 200, 1 FC                                          |
| Cosine Angle           | 30°, plus or minus 2%; 60°, plus or minus 6%;                                                         |
| Deviation feature      | 80°, plus or minus 25%                                                                                |
| Max/min                | Square root                                                                                           |
| Automatic shutdown     | 15 minutes                                                                                            |
| Data retention         | Square root                                                                                           |
| Backlit display        | Square root                                                                                           |
| Data storage           | The maximum record is 50                                                                              |
| Working environment    | 0~40℃                                                                                                 |
| Storage environment    | -20~60℃                                                                                               |
| Power supply           | One 9V battery                                                                                        |
| Sampling rate          | Two times per second                                                                                  |
| Spectral range         | 320~730nm                                                                                             |
| Types of sensors       | Silicon photovoltaic cell                                                                             |
| Size                   | 165*54*32mm                                                                                           |
| Weight                 | About 133g                                                                                            |

## Technical parameters(824M Sound Level Meter)

| Characteristic          | Explanation                         |
|-------------------------|-------------------------------------|
| Measurement range       | 30~130dBA                           |
| Accuracy                | ±1.5 dB                             |
| Frequency response      | 31.5 Hz ~ 8.5 kHz                   |
| Dynamic range           | 50dB                                |
| Weighted characteristic | Characteristic A                    |
| Digital display         | Five-digit number, resolution 0.1dB |
| Dynamic characteristics | Fast/Slow                           |
| Microphone              | 1/2-inch condenser microphone       |
| Maximum value           | MAX                                 |
| Power supply            | 9V battery                          |
| Fuselage weight         | About 110g                          |
| Body size               | 162*52*44mm                         |

## Technical parameters(816M Anemometer)

| Unit    | Range  | Resolution | Start testing | Accuracy    |
|---------|--------|------------|---------------|-------------|
| m/s     | 0~45   | 0.1        | 0.3           | ±3% ±0.1dgt |
| ft/min  | 0~8800 | 19         | 60            | ±3% ±10dgt  |
| knots/h | 0~88   | 0.2        | 0.6           | ±3% ±0.1dgt |
| km/h    | 0~140  | 0.3        | 1             | ±3% ±0.1dgt |
| mph/h   | 0~100  | 0.2        | 0.7           | ±3% ±0.1dgt |

## Wind temperature measurement

| Unit | Range    | Start testing | Accuracy |
|------|----------|---------------|----------|
| ℃    | 0℃~45℃   | 0.2           | ±2℃      |
| ℉    | 32℉~113℉ | 0.36          | ±3.6℉    |



1010M



824M



816M





6234P



6235P



6236P

## Technical data

| Model           | 6234P                                                 | 6235P                                                           | 6236P                                                           |
|-----------------|-------------------------------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------|
| Size            | 5 digits large LCD display                            | 5 digits large LCD display                                      | 5 digits large LCD display                                      |
| Measuring range | /                                                     | Contact rev:1.0~19999RPM<br>Surface Speed (m/min):1.0~1999.9RPM | Contact rev:1.0~19999RPM<br>Surface Speed (m/min):1.0~1999.9RPM |
| Resolution      | Contact rev:0.1RPM<br>Surface Speed (m/min):0.01m/min | Contact rev:0.1RPM<br>Surface Speed (m/min):0.01m/min           | Contact rev:0.1RPM<br>Surface Speed (m/min):0.01m/min           |
| Accuracy        | ±0.05%+1                                              | ±0.05%+1                                                        | ±0.05%+1                                                        |
| Max. Display    | 40000                                                 | 40000                                                           | 40000                                                           |
| Time Base       | 4MHz quartz crystal                                   | 4MHz quartz crystal                                             | 4MHz quartz crystal                                             |
| Power           | 4×1.5VAA(UM-3)                                        | 4×1.5VAA(UM-3)                                                  | 4×1.5VAA(UM-3)                                                  |
| Dimension       | Approx: 157×64×31mm                                   | Approx: 174×64×31mm                                             | Approx: 195×64×31mm                                             |
| Weight          | Approx: 125g                                          | Approx: 110g                                                    | Approx: 200g                                                    |



6237P  
6238P

| Model                         | 6237P                                                                         | 6238P                                                                         |
|-------------------------------|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| Measuring Range               | 60~19999RPM/FPM                                                               | 60~39999RPM/FPM                                                               |
| RPM: Round Per Minute         | FPM: Flash Per Minute                                                         |                                                                               |
| Coarse/Fine Adjust Knob Range | <1000RPM hours<br>Coarse Adjust Knob:10RPM/FPM<br>Fine Adjust Knob:0.1RPM/FPM | <1000RPM hours<br>Coarse Adjust Knob: 100RPM/FPM<br>Fine Adjust Knob:1RPM/FPM |
|                               | ≥1000RPM hours<br>Coarse Adjust Knob:100RPM/FPM<br>Fine Adjust Knob:1RPM/FPM  |                                                                               |
| Accuracy                      | 0.05%                                                                         |                                                                               |
| Resolution                    | <1000RPM : 0.1RPM/FPM<br>≥1000RPM:1RPM/FPM                                    |                                                                               |
| Time Base                     | 10MHz                                                                         |                                                                               |
| Display                       | 5 Digits LCD Backlight                                                        |                                                                               |
| Max. Display                  | 19999                                                                         |                                                                               |
| Power Supply                  | 4×1.5V AA(UM-3) battery                                                       |                                                                               |
| Product Size                  | 195×73×38mm                                                                   |                                                                               |
| Weight                        | Approx. 200g                                                                  |                                                                               |

New Model



824



824C

## Sound level meter

| Basic function                     | 824                                          | 824C                                         |
|------------------------------------|----------------------------------------------|----------------------------------------------|
| Measuring range                    | 30~130dBA; 35~130dBC                         | 30~130dBA                                    |
| Accuracy                           | ±1.5dB                                       | ±1.5dB                                       |
| Digit&Resolution                   | 5 digits & 0.1dB                             | 4 digits & 0.1dB                             |
| Frequency response                 | 31.5Hz~8.5kHz                                | 31.5Hz~8.5kHz                                |
| Measuring level                    | 30~130, 40~90, 50~100, 60~110, 80~130        |                                              |
| Frequency weighting characteristic | A & C                                        |                                              |
| Time weighting                     | FAST/ SLOW                                   |                                              |
| Sampling rate                      | 2 times/second                               | 2 times/second                               |
| Microphone                         | 1/2 inch polarization capacitance microphone | 1/2 inch polarization capacitance microphone |
| AC/DC output                       | ✓                                            |                                              |
| Max reading                        | ✓                                            | ✓                                            |
| Barcode indicate the value         | ✓                                            |                                              |
| Overload indication                | OVER/UNDER                                   |                                              |
| Low battery indication             | ✓                                            |                                              |
| Power                              | 1.5V AA 4pcs or DC 6V 100mA adapter          | 9V battery 1pcs or DC 6V 100mA adapter       |
| Dimension                          | 256×70×35mm                                  | 52.5×133.5×35.5mm                            |
| Weight                             | 308g (including battery)                     | 144g (including battery)                     |



834BW

VICTOR 834BW Digital Sound Level Meter with Bluetooth /WiFi wall mounting type

## Technical data

| Basic Function      | 834BW                                                                                    |
|---------------------|------------------------------------------------------------------------------------------|
| Measuring range     | 30dB~130dB                                                                               |
| Accuracy            | ±1.5dB                                                                                   |
| Frequency response  | 31.5Hz~8.5KHz                                                                            |
| Frequency weighting | A Rights                                                                                 |
| Response time       | FAST(fast), about 1 second, 2times                                                       |
| Sensor Type         | 6mm capacitor microphone sensor                                                          |
| Resolving power     | 0.1dB(< 100dB); 1dB(>100dB)                                                              |
| Alarm prompt        | Voice+Display                                                                            |
| Refresh rate        | 2 times per second                                                                       |
| Power supply method | DC5V/2A                                                                                  |
| Work environment    | 0~40°C; 10%~80% RH                                                                       |
| Storage environment | -10~60°C; 10%~70% RH                                                                     |
| Display method      | 3 digit digital tube display                                                             |
| Display size        | 4-inch single word                                                                       |
| Product size        | 323*173*40mm                                                                             |
| Product weight      | Approximately 1038g                                                                      |
| Attachment          | Instructions, certificate of conformity, adapter, adapter, suspension, suspension screws |



1010D+



1010DL

## Technical data

| Model                     | 1010D+ (General)                                                                                                      | 1010DL (Bluetooth) |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------|--------------------|
| Lcd                       | 4-bit LCD                                                                                                             |                    |
| Illumination range        | 0~199999LUX; 0~19999FC                                                                                                |                    |
| Illumination accuracy     | ± 4% (corrected by standard flat lamp with color temperature of 2856K);                                               |                    |
| Resolution                | ± (6%~5Lux) other visible light sources<br>Lux: <200, 0.1Lux; ≥200, 1Lux;<br>FC: <20, 0.01FC; ≥200, 0.1FC; > 200, 1FC |                    |
| Cosine angle              | 30°, ±2%; 60°, ±6%; 80°, ±25%                                                                                         |                    |
| Deviation characteristics |                                                                                                                       |                    |
| Max/Min                   | √                                                                                                                     |                    |
| Automatic shutdown        | 10 minutes (cancelable)                                                                                               |                    |
| Relative value            | √                                                                                                                     |                    |
| Data retention            | √                                                                                                                     |                    |
| Work environment          | 0~40 °C (<90% RH non condensing)                                                                                      |                    |
| Storage environment       | -20~60 °C (<75%RH)                                                                                                    |                    |
| Power Supply              | 9V battery                                                                                                            |                    |
| Sampling rate             | 2 times/second                                                                                                        |                    |
| Spectral range            | 320~730nm                                                                                                             |                    |
| Sensor type               | silicon photocell                                                                                                     |                    |
| Size                      | 154*60*31mm                                                                                                           |                    |
| Weight                    | About 185g (including battery)                                                                                        |                    |



816



816B



816BL

## Anemometer

| Basic function                           | 816                                                 | 816B/816BL                                             |
|------------------------------------------|-----------------------------------------------------|--------------------------------------------------------|
| Measurement items                        | Air velocity, Air temperature                       | Air velocity, Air temperature                          |
| Range of air velocity                    | 0~30m/s, 0~90km/h, 0~5860ft/min, 0~55knots, 0~65mph | 0~45m/s, 0~140km/hr, 0~8800ft/min, 0~88knots, 0~100mph |
| Accuracy of air velocity                 | ±5%                                                 | ±3%                                                    |
| Range of air temperature                 | -10~45℃, -14~113℉                                   | 0~45℃, 32~113℉                                         |
| Accuracy of air temperature              | ±2℃                                                 | ±2℃                                                    |
| Resolution                               | 0.2℃; 0.2m/s                                        | 0.2℃; 0.2m/s                                           |
| Max/Average/Current air velocity reading | ✓                                                   | ✓                                                      |
| ℃/℉ Selection                            | ✓                                                   | ✓                                                      |
| Wind chill indication                    | ✓                                                   | ✓                                                      |
| Beauford Scale                           | ✓                                                   | ✓                                                      |
| Auto/Manual power off                    | 14 minutes without any operation                    | ✓                                                      |
| Low battery indication                   | ✓                                                   | ✓                                                      |
| LCD Backlight                            | 12 seconds active by press any key                  | LCD Backlight ON/OFF selection                         |
| Power                                    | CR2032 3.0V                                         | 3 1.5V batteries 7 # (LR03)                            |
| Dimension                                | 105×40×18.5mm                                       | 816B/BL: Host:149*59*30mm Fan blade: 176*59*30mm       |
| Net weight                               | 52g (including battery)                             | 251g(816B) 270g(816BL)                                 |



230DW

| Model                   | 230DW                                                                 |
|-------------------------|-----------------------------------------------------------------------|
| Power supply            | DC5V / 2A                                                             |
| Sensor type             | High precision digital sensor                                         |
| Sampling rate           | One times/2s                                                          |
| Ambient temperature     | Temperature -20℃~60℃<br>Accuracy ±1.0℃<br>Resolution 0.1℃             |
| Relative humidity       | Range 0~100%RH<br>Accuracy ±4%RH<br>Resolution 0~99(0.1)%RH 100(1)%RH |
| Temperature alarm range | Hi -19℃~60℃<br>Low -20℃~59℃                                           |
| Humidity alarm range    | Hi 2~99%RH<br>Low 1~98%RH                                             |
| WiFi                    | Yes                                                                   |
| Alarm function          | Voice+display alarm, alarm value can be set                           |
| Display                 | Nixie tube display; Display size: 1.8-inch single word                |
| Max Display             | Temperature 60.0; Humidity 99% RH                                     |
| Over range              | Display "Hi" or "Lo" at the highest position                          |
| Size                    | 323* 173*40mm                                                         |
| Weight                  | About 700g                                                            |



230



230A



330



6801

| Basic Function                                    |                                             | 230         | 230A        | 330         |
|---------------------------------------------------|---------------------------------------------|-------------|-------------|-------------|
| Function                                          | Sensor Inside<br>External Temperature Probe | ✓           | ✓           | ✓           |
| Temperature Measuring Range                       | (0~50) °C / (32~120) °F                     | ✓           | ✓           |             |
| Temperature Range of External Probe               | (-2~70) °C / (-4~158) °F                    |             | ✓           |             |
| Humidity Range                                    | (20%~90% RH<br>(30%~90% RH)                 | ✓           | ✓           | ✓           |
| Temperature Accuracy                              | ±1.0°C (1.8°F)                              | ✓           | ✓           | ✓           |
| Humidity Accuracy                                 | ±5% (40%~80% Others ±8%                     | ✓           | ✓           | ✓           |
| Temperature Resolution Display                    | 0.1°C (0.1°F)                               | ✓           | ✓           | ✓           |
| Special Function                                  |                                             |             |             |             |
| Temperature/Humidity Display                      |                                             | ✓           | ✓           | ✓           |
| Temperature / °C/°F switch                        |                                             | ✓           | ✓           | ✓           |
| Alarm Clock                                       |                                             | ✓           | ✓           | ✓           |
| 12/24 hours system clock                          |                                             | ✓           | ✓           | ✓           |
| Alarm On Schedule                                 |                                             | ✓           | ✓           | ✓           |
| Calendar Display                                  |                                             | ✓           | ✓           | ✓           |
| Maximum / Minimum Temperature And Humidity Memory |                                             | ✓           | ✓           | ✓           |
| Battery                                           |                                             | AAA 1.5V    | AAA 1.5V    | AAA 1.5V    |
| Product Size                                      |                                             | 95x105x17mm | 95x105x17mm | 110x59x16mm |

Note: 230 and 230A can't be tested for industry use. The test results are just for reference.

| Basic function                          | 6801                                                   |
|-----------------------------------------|--------------------------------------------------------|
| Function                                | Resolution Range Basic accuracy                        |
| 1℃                                      | 1℃ -50~1000℃ ±(0.3%+2℃)                                |
| 1℃                                      | 1℃ 1000~1300℃ ±(0.5%+2℃)                               |
| 1℉                                      | 1℉ -238~1000℉ ±(0.3%+2℉)                               |
| 1℉                                      | 1℉ 1000~2372℉ ±(0.5%+3℉)                               |
| Special function                        |                                                        |
| Unit symbol display                     | ✓                                                      |
| Max. display                            | 10000 (3 1/2 digital LCD with max. reading of 1999)    |
| Sample rate                             | 2.5 times/s                                            |
| Storage environment / relative humidity | Temperature 0℃~50℃ (32℉~122℉), relative humidity < 80% |
| Over range indication                   | The MSD "1" or "1" displays                            |
| Measuring method                        | TP01 K-type temperature probe                          |
| Measuring range                         | -50~1300℃ / -58~1999℉                                  |
| Dimension                               | 149*71*35mm                                            |
| Weight                                  | 200g                                                   |
| Power                                   | 2*1.5V AAA                                             |

## New Model



231/231A

| Model                     | 231 (Normal model)                               | 231A (Bluetooth model) |
|---------------------------|--------------------------------------------------|------------------------|
| LCD                       | 4-digit LCD display                              |                        |
| Temperature range         | -25℃~75℃(-13℉~167℉)                              |                        |
| Humidity range            | 0~99.9%RH                                        |                        |
| Temperature accuracy      | ±0.3℃(15~40℃)Other ±1℃                           |                        |
| Humidity Accuracy         | ±3%RH(30~80%RH)Other ±4%RH                       |                        |
| Temperature resolution    | 0.1℃                                             |                        |
| Humidity resolution       | 0.1%RH                                           |                        |
| Temperature max/Min/Alarm | ✓                                                |                        |
| Humidity max/Min/Alarm    | ✓                                                |                        |
| Data retention            | ✓                                                |                        |
| Working environment       | 0~40℃(<90%RH non-condensing)                     |                        |
| Storage environment       | -20~60℃(<75%RH)                                  |                        |
| Power supply              | 3 1.5V batteries (7#) or USB Type-C power supply |                        |
| Sampling rate             | 1 time/second                                    |                        |
| Shell material            | ABS                                              |                        |
| Size                      | 169*56*32mm                                      |                        |
| Weight                    | About 150g (including battery)                   |                        |



320/320M



320B



Multilingual



USB transfer/  
charging



Unit  
conversion



Photo/Video



Automatic  
shut-down



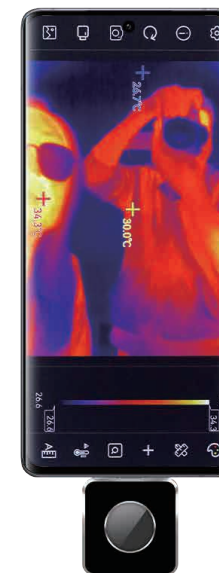
Temperature  
alarm



8 pseudo-  
colors



Emissivity  
adjustable



328A/328B

## Technical indicators

| Basic skills             |                                   | 320M                                                                                                           | 320     | 320B      |
|--------------------------|-----------------------------------|----------------------------------------------------------------------------------------------------------------|---------|-----------|
| IR thermal imaging       | Resolution                        | 120x90                                                                                                         | 120x90  | 256x192   |
|                          | Resolution after super-resolution | 240x180                                                                                                        | 240x180 | 120x90    |
|                          | Working band                      | 8~14um                                                                                                         |         |           |
|                          | Frame rate                        | 25Hz                                                                                                           |         |           |
|                          | NETD                              | 60mK@25°C                                                                                                      |         |           |
|                          | Field of view                     | 38°x50°                                                                                                        |         | 55.6°x42° |
|                          | Lens                              | 2.3mm F1.1                                                                                                     |         |           |
|                          | Scope                             | -20~400°C                                                                                                      |         |           |
|                          | Precision                         | ±3°C or ±3% of reading                                                                                         |         |           |
|                          | Emissivity                        | 0.01 to 1.00 adjustable                                                                                        |         |           |
| Visible light            | Support point                     | Full screen maximum/minimum/center/area temperature measurement                                                |         |           |
|                          | Switches                          | Iron Red, White Hot, Black Hot, Rainbow, Red Hot, High Contrast, Green Hot, Lava                               |         |           |
| Image display            | Resolution                        | 720P                                                                                                           |         |           |
|                          | Field of view                     | 55°X83°                                                                                                        |         |           |
| Storage                  | Image mode                        | Edge blending, overlay blending, picture-in-picture, single IR, single visible light                           |         |           |
|                          | Capacity                          | 8G built-in memory, can store more than 20,000 pictures                                                        |         |           |
|                          | Image storage format              | JPG                                                                                                            |         |           |
|                          | Video format                      | MP4                                                                                                            |         |           |
| Basic parameters         |                                   |                                                                                                                |         |           |
| Language                 |                                   | Chinese (Simplified), Chinese (Traditional), English, French, German, Spanish, Dutch, Japanese, Korean, Arabic |         |           |
| Power supply             |                                   | Built-in 2600mAh large capacity rechargeable battery                                                           |         |           |
| Display size             |                                   | 2.8 inches                                                                                                     |         |           |
| Body color               |                                   | Black                                                                                                          |         |           |
| Body weight              |                                   | About 310g                                                                                                     |         |           |
| Dimensions               |                                   | 70*80*200mm                                                                                                    |         |           |
| Standard accessories     |                                   | USB Type-C data cable, GB charging head, lanyard, manual                                                       |         |           |
| Standard inner packaging |                                   | Color box                                                                                                      |         |           |
| Package size             |                                   | 50*45*34cm                                                                                                     |         |           |

## Mobile thermal image camera

| Parameter               | 328A                                                                                                                   | 328B    |
|-------------------------|------------------------------------------------------------------------------------------------------------------------|---------|
| Resolution              | 160*120                                                                                                                | 256*192 |
| Working wavelength      | 8~14μm                                                                                                                 |         |
| Frame rate              | 25Hz                                                                                                                   |         |
| NETD                    | < 50mK @26℃                                                                                                            |         |
| Field of view           | 35°*27°                                                                                                                | 56°*42° |
| Lens                    | 3.2mm                                                                                                                  |         |
| Measuring range         | -15℃~600℃                                                                                                              |         |
| Precision               | ±2℃or ±2%                                                                                                              |         |
| Temperature measurement | The highest point, the lowest point, the center point temperature measurement and the regional temperature measurement |         |
| Swatches                | 6                                                                                                                      |         |
| Universal               |                                                                                                                        |         |
| Language                | Chinese /English                                                                                                       |         |
| Operating temperature   | -10℃~ 75℃                                                                                                              |         |
| Storage temperature     | -45℃~ 85℃                                                                                                              |         |
| Water proof             | IP54                                                                                                                   |         |
| Product Size            | 34mm X 26.5mm X 15mm                                                                                                   |         |
| Product weight          | 19g                                                                                                                    |         |





**Mobile phone thermal imager**  
**Type-c USB interface**  
**Range:-20°C ~550°C**  
**Resolution: (96×96)**



**328M**

## Mobile thermal image camera

| Parameter           | 328M                                                                                                   |
|---------------------|--------------------------------------------------------------------------------------------------------|
| Detector type       | 1Vanadium oxide micro-radiometer                                                                       |
| Infrared resolution | 96x96                                                                                                  |
| Pixel size          | 12μm                                                                                                   |
| Focal length        | 1.35mm                                                                                                 |
| Focusing method     | No focusing required                                                                                   |
| Field of view       | 50° x 50°                                                                                              |
| Spatial resolution  | 8.89mrad                                                                                               |
| Working band        | 8~14 μm                                                                                                |
| NETD                | ≤60mK @25°C                                                                                            |
| Frame rate          | 25Hz                                                                                                   |
| Range               | Room temperature:-20°C~150°C;<br>Automatic identification:-20°C~550°C;<br>High temperature:100°C~550°C |
| Precision           | ±2°C or ±2% of reading                                                                                 |
| Distance            | 0.3~3m                                                                                                 |
| Mode                | Industrial temperature measurement                                                                     |
| <b>Universal</b>    |                                                                                                        |
| Working temperature | -10°C ~ 50°C                                                                                           |
| Storage temperature | -20°C ~ 60°C                                                                                           |
| Data interface      | Type-c                                                                                                 |
| Fuselage weight     | 20g                                                                                                    |
| Body size           | 44*26*12mm                                                                                             |



**328C**

**New Model**

USB Type-c

## VICTOR 328C Mobile TELEPHOTO INFRARED THERMAL IMAGER 10mm lens focus 256\*192 resolution with GPS positioning

Widely used in fields such as underfloor heating leak detection, electrical maintenance, and more suitable for outdoor long-distance plain use (such as camping exploration, wilderness survival/rescue, night running and hiking, animal observation).

## Technical data

| Basic Function           | 328C                                                           |
|--------------------------|----------------------------------------------------------------|
| Resolving power          | 256x192                                                        |
| Working wavelength       | 8~14μm                                                         |
| Frame rate               | 25Hz                                                           |
| NETD                     | <50mK@25°C                                                     |
| FOV                      | 17.5°x 13.2°                                                   |
| Focal length             | 10mm                                                           |
| Focus Mode               | Fixed focus                                                    |
| Electronic amplification | 1x-4x stepless amplification (through screen gestures)         |
| Color palette            | Iron Red, Rainbow, White Heat, Black Heat, Cold Blue, Red Heat |
| Hotspot tracking         | √                                                              |
| GPS                      | Can be displayed in the app                                    |
| Electronic compass       | Can be displayed in the app                                    |
| Screen rotation          | √                                                              |
| Photograph               | √                                                              |
| Videotape                | √                                                              |
| Language                 | Chinese, English                                               |
| Working temperature      | -20°C~60°C                                                     |
| Storage temperature      | -40°C~85°C                                                     |
| Waterproof and dustproof | IP54                                                           |
| Source                   | Used in conjunction with mobile phones, plug and play          |
| Display Size             | No display screen, used in conjunction with mobile apps        |
| Body size                | 36x29.5x27.5mm                                                 |
| Parts                    | Storage bag, bracket, data extension cable, manual             |

## 328D/328E



### VICTOR 328D/328E infrared thermal imager visible light digital camera with 640x480 auxiliary imaging,excellent imaging effect

- LCD display:maximum display 4000, word height 15mm
- General characteristics: Maximum voltage between voltage inputterminal and ground CAT II 600V.
- Display method:LCD display, with a maximum reading of 4000
- Measurement principle: Double integral A/D conversion, automatic range
- Measurement rate:3 times/second
- Unit display : with functions and display of unit symbols for electricity consumption

## Technical data

| Basic Function           | 328D                                                                                                                      | 328E    |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------|---------|
| Resolving power          | 160×120                                                                                                                   | 256×192 |
| Working wavelength       | 8~14μm                                                                                                                    |         |
| Frame rate               | 25Hz                                                                                                                      |         |
| NETD                     | <50mK @25°C                                                                                                               |         |
| Lens                     | 3.2mm                                                                                                                     |         |
| Field of view angle      | 56°×42°                                                                                                                   | 35°×27° |
| Range                    | -15°C ~ 600°C                                                                                                             |         |
| Accuracy                 | ±2°C or ±2% of reading                                                                                                    |         |
| Visible light            |                                                                                                                           |         |
| Resolving power          | 640×480                                                                                                                   |         |
| Frame rate               | 25Hz                                                                                                                      |         |
| Software functions [APP] |                                                                                                                           |         |
| Temperature measurement  | High and low temperature tracking, center point, point, area, and line temperature measurement, temperature range viewing |         |
| Image display mode       | Visible light mode, multiple visible light and infrared fusion modes, single infrared mode display.                       |         |
| Temperature quick check  | Supports one click quick access to high temperature areas.                                                                |         |
| Interval display         | √                                                                                                                         |         |
| Real time flipping       | √                                                                                                                         |         |
| Image color palette      | Iron Red, White Heat, Black Heat, Rainbow, Red Heat, Cold Blue                                                            |         |
| Photograph               | √                                                                                                                         |         |
| Videotape                | √                                                                                                                         |         |
| Image editing            | Supports image graffiti and text notes                                                                                    |         |
| Set up                   | Parameter configuration, temperature units, language, and high temperature alarm settings.                                |         |
| Software functions [APP] |                                                                                                                           |         |
| Working temperature      | -10°C ~ 75°C                                                                                                              |         |
| Storage temperature      | -45°C ~ 85°C                                                                                                              |         |
| Protect                  | IP54                                                                                                                      |         |
| Body weight              | 22g                                                                                                                       |         |
| Body size                | 51.6mm×34mm×13.2mm                                                                                                        |         |



350



350A

## Technical indicators

| Basic skills             | 350                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 350A    |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Infrared Thermal Imaging | Resolution 384x288<br>Work 8~14um<br>Frame rate 25Hz<br>NETD <40mK@25°C (77°C)<br>Field of view 17.46°×13.14°<br>Camera shot 15mm (standard) 19mm (optional) 25mm (optional)<br>Scope -20°C ~ 1200°C<br>Precision ±2°C or ±2%<br>Measurement Highest, lowest, center and point, line, frame<br>Palette Cinnabar, rainbow, high contrast rainbow, white heat, black heat, Arctic, lava                                                                                                                                                                                                                                           | 640x512 |
| Visible light            | Resolution 8 million pixels<br>Field of view D=90°                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |         |
| Image display            | Screen size 4.3-inch touch screen<br>Image mode Thermal imaging, visible light, edge fusion, overlay fusion, picture-in-picture<br>Image optimization TISO VIEW Image Enhancement Set                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |
| General                  | Language English, French, Spanish, Portuguese, German, Russian, Arabic, Japanese, Korean, Chinese (Simplified), Chinese (Traditional)<br>Digital amplification Infinite zooming<br>Correction Target distance, environmental temperature, relative humidity, reflection temperature<br>WIFI Support and provide an APP for real-time image transmission<br>Bluetooth Yes<br>Interface USB Type-C, HDMI Support<br>Analysis software Yes<br>APP Yes<br>Laser indication Yes<br>Laser ranging 40m<br>LED Yes<br>Buzzer Yes<br>Battery Removable 5000mAh lithium battery<br>Working hours Available for 5 hours when fully charged |         |
| Storage                  | Capacity Built-in 32G EMMC storage, which can be expanded to 256G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |         |
| Record                   | Take a photo Yes<br>Screen capture Yes<br>Video recording Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |         |
| Physical properties      | Working temperature -10°C ~ +60°C<br>Storage temperature -40°C ~ +85°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |         |

New Model



321/321Pro

| Model                  | 321                                                     | 321Pro                                              |
|------------------------|---------------------------------------------------------|-----------------------------------------------------|
| Sensor type            | Vanadium oxide (VOx) micrometer radiometer              |                                                     |
| Infrared resolution    | 96 * 96                                                 |                                                     |
| Response band          | 8 ~ 14 microns                                          |                                                     |
| Pixel size             | 12 microns                                              |                                                     |
| Focal length           | The 1.35 mm                                             |                                                     |
| Spatial resolution     | 8.89 mrad                                               |                                                     |
| Frame rate             | 25Hz                                                    |                                                     |
| Thermal sensitivity    | ≤60 mK(@25 °C,F#1.0)                                    |                                                     |
| Focusing method        | No focusing required                                    |                                                     |
| Field of view          | 50°× 50°                                                |                                                     |
| Temperature range      | - 20 °C ~ 550°C                                         |                                                     |
| Temperature accuracy   | ±2°C or ±2% of the reading is taken as the larger value |                                                     |
| Temperature resolution | 0.1 °C                                                  |                                                     |
| Temperature unit       | °C/°F/K                                                 |                                                     |
| Temperature display    | Center point, highest point, lowest point               |                                                     |
| Pseudo-color           | White-hot/black-hot/Rainbow/iron-red/red-hot/fusion     |                                                     |
| Image mode             | NO                                                      | Infrared, visible light, fusion, picture-in-picture |
| Visible light          | NO                                                      | Two million                                         |
| LED lighting lamp      | NO                                                      | Yes                                                 |
| Image/video format     | JPEG/MP4                                                |                                                     |
| Temperature analysis   | PC analysis tool                                        |                                                     |
| TISR                   | Yes, resolution: 240*240                                |                                                     |
| WLAN                   | NO                                                      | Optional                                            |
| Language               | Supports 10 languages                                   |                                                     |
| Storage                | External SD card                                        |                                                     |
| Data interface         | Type-C                                                  |                                                     |
| Power supply           | Non-detachable 2000mAh                                  | Non-detachable 3200mAh                              |
| Charging time          | ≤4h                                                     |                                                     |
| Overall machine power  | ≤0.9W                                                   | ≤1.4W                                               |
| Working hours          | ≥9h                                                     |                                                     |
| Working environment    | -10 to 50 °C , 10% to 90%RH, non-condensing             |                                                     |
| IP rating              | IP54                                                    |                                                     |
| Fall                   | 1.5 m                                                   |                                                     |
| Certification          | CE, FCC, ROHS                                           |                                                     |
| Fuselage weight        | 310g                                                    |                                                     |
| Body size              | 225 mm * 70 mm * 86.44 mm                               |                                                     |

New Model



302R

## Technical parameters

| Non-metallic       |                  | Metal              |                  |
|--------------------|------------------|--------------------|------------------|
| Material           | Emissivity value | Material           | Emissivity value |
| Asbestos           | 0.95             | aluminum           | 0.02-0.40        |
| Asphalt            | 0.95             | Brass              | 0.01-0.50        |
| Carborundum        | 0.90             | chromium           | 0.02             |
| Ceramic            | 0.95             | copper             | 0.03-0.10        |
| Concrete           | 0.95             | gold               | 0.01-0.10        |
| cloth              | 0.95             | iron               | 0.05-0.95        |
| "Glass"            | 0.85             | lead               | 0.05-0.6         |
| "Pebble"           | 0.95             | magnesium          | 0.02-0.10        |
| ice                | 0.95             | mercury            | 0.05-0.15        |
| Paint              | 0.92             | Nickel-copper-gold | 0.10-0.14        |
| Rubber             | 0.95             | nickel             | 0.05-0.15        |
| Lime               | 0.98             | silver             | 0.02             |
| Plastic is opaque. | 0.95             | tin                | 0.05             |
| snow               | 0.90             | tungsten           | 0.03-0.10        |
| Soil               | 0.92             | steel              | 0.10-0.90        |
| water              | 0.93             | titanium           | 0.05-0.20        |
| sand               | 0.90             | zinc               | 0.10             |
| Wood               | 0.93             | Alumina            | 0.02-0.30        |

| Main Function       | 302R                     |                      |                     |
|---------------------|--------------------------|----------------------|---------------------|
| Temperature range   | -32~380 C (-25.6~716 F ) | Working temperature  | 10~30 C             |
| Measurement error   | ±2 °C or ±2%             | Size                 | 143*93*37mm         |
| Accuracy            | 0.1 °C / °F              | Power supply         | AA*2                |
| Power consumption   | ≤50mw                    | Net weight           | 105g                |
| Test time           | 500ms                    | Backlight lamp       | Yes                 |
| Automatic shutdown  | 15s                      | Emissivity           | 0.1~1.00 Adjustable |
| Storage environment | -10~40 °C/≤90%RH         | Measurement distance | D:S=12:1            |



303B



302B

## Technical data

| Main function       | 303B                           | 302B                             |
|---------------------|--------------------------------|----------------------------------|
| Temperature Range   | --20°C ~ 550°C (-4°F ~ 1022°F) | --32°C ~ 380°C (-25.6°F ~ 716°F) |
| Resolution          | 0.1°C/0.1°F                    | 0.1°C/0.1°F                      |
| Accuracy            | ±2.0°C or ±2%                  | ±2.0°C or ±2%                    |
| Display unit        | °C/°F                          | °C/°F                            |
| Auto power off      | ✓                              | ✓                                |
| Back light          | ✓                              | ✓                                |
| Data Hold           | ✓                              | ✓                                |
| Distance Spot Ratio | 12:1                           | 12:1                             |
| Emissivity          | 0.1~1.0 adjustable             | 0.1~1.0 adjustable               |
| Size                | 97*43*160 mm                   | 93*37*143mm                      |
| Weight              | 130g                           | 105g                             |
| Power               | 9V battery                     | 1.5V*2 battery                   |

| Model                      | 306B                                                         | 307C                                                         |
|----------------------------|--------------------------------------------------------------|--------------------------------------------------------------|
| Range                      | (-50~700) °C (-58~1292) °F                                   | (-20~800) °C (-4~1472) °F                                    |
| Precision                  | (-50~0) °C ±3 °C<br>(0~100) °C ±1.5 °C<br>(100~700) °C ±1.5% | (-20~0) °C ±3 °C<br>(0~100) °C ±1.5 °C<br>(100~800) °C ±1.5% |
| Emissivity adjustable      | 0.10~1.00 adjustable (preset 0.95)                           |                                                              |
| LCD display resolution     | 0.1 °C/1 °F                                                  |                                                              |
| Dual range display         | ✓                                                            |                                                              |
| max/min                    | ✓                                                            |                                                              |
| Difference/Average         | ✓                                                            |                                                              |
| High/low temperature alarm | ✓                                                            |                                                              |
| °C/°F selection            | ✓                                                            |                                                              |
| Laser can be turned off    | ✓                                                            |                                                              |
| display hold               | ✓                                                            |                                                              |
| Backlit display            | ✓                                                            |                                                              |
| Automatic shut-down        | ✓                                                            |                                                              |
| low battery indicator      | ✓                                                            |                                                              |
| Spectral response          | 8um~14um                                                     |                                                              |
| Laser power                | Output < 1mw, wavelength 630~670nm, class2(I)                |                                                              |
| Power supply               | 9V battery (NEDA1604/6F22 or equivalent)                     |                                                              |
| Basic size                 | 97mmx43mmx 160mm                                             |                                                              |
| Weight                     | 125g (without battery)                                       |                                                              |



306B/307C

| Model                  | 308D                        | 310C                 |
|------------------------|-----------------------------|----------------------|
| Temperature Range      | -30°C~1150°C (-22°F~2102°F) | -20°C~1650°C         |
| Max. Display           | 4 digits LCD Display        | 4 digits LCD Display |
| Resolution             | 0.1°C/0.1°F                 | 0.1°C/0.1°F          |
| Accuracy               | ±1.5% or ±1.5°C             | ±1.5% or ±1.5°C      |
| Display Unit           | °C/°F                       | °C/°F                |
| Auto Power Off         | ✓                           | ✓                    |
| Backlight              | ✓                           | ✓                    |
| Response Time(90%)     | 0.5s                        | 0.5s                 |
| D:S                    | 50:1                        | 50:1                 |
| Emissivity             | 0.1~1.00 Adjustable         | 0.1~1.00 Adjustable  |
| Operation Temperature  | 0°C~50°C                    | 0°C~50°C             |
| Size                   | 141*60*200mm                | 141*60*200mm         |
| Weight                 | 270g                        | 270g                 |
| Standard Inner Package | Color Box                   | Color Box            |
| Power                  | 9V Battery                  | 9V Battery           |



308D/310C





304D



304F



304E

## Technical parameter

| Main Function                         | 304D                                                                                                 | 304E                          | 304F                          |
|---------------------------------------|------------------------------------------------------------------------------------------------------|-------------------------------|-------------------------------|
| Measuring temperature range           | -50°C~400°C<br>(-58°F~752°F)                                                                         | -50°C~600°C<br>(-58°F~1112°F) | -50°C~900°C<br>(-58°F~1652°F) |
| Measurement accuracy                  | -50°C~0°C (-58°F~32°F): ±3°C (±5°F)<br>0°C~900°C (32°F~1652°F): ±1.5%rdg (1.5%) whichever is greater |                               |                               |
| Repeatability                         | 1%rdg or 1°C whichever is greater                                                                    |                               |                               |
| Reaction time                         | About 0.5s, 95% response                                                                             |                               |                               |
| Infrared wavelength                   | 5-14 μm                                                                                              |                               |                               |
| Object distance ratio                 | 12:1                                                                                                 |                               |                               |
| No operation shutdown time            | About 7s                                                                                             |                               |                               |
| Low battery prompt                    | <2.4V battery symbol display                                                                         |                               |                               |
| Overload indication                   | LCD display "Hi"/"Lo"                                                                                |                               |                               |
| Working environment upper/lower limit | LCD display "AH"/"AL"                                                                                |                               |                               |
| Ambient working temperature           | 0~40°C (32~104°F)                                                                                    |                               |                               |
| Ambient storage temperature           | -10~60°C (14~140°F)                                                                                  |                               |                               |
| Power supply                          | 1.5V AAA*2 battery                                                                                   |                               |                               |



63/63A/63B

## Technical data

| Model                        | 63                                                                                                                                                                    | 63A                                                                                                                                                                                                                                             | 63B                                                                                                                                                                                                                                           |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Characteristic               | Simple structure: convenient operation: integrated design. Just need to align the instrument probe with the measured object and press the measurement key to measure. | The front end of the sensor is equipped with a long probe; It is convenient to measure the equipment vibration in a narrow space. The sensor and display adopt separate structure to facilitate the measurement of different angles and spaces. | The sensor uses a high-strength magnet to adsorb on the measured object, which can collect the vibration signal more accurately. The sensor and display adopt separate structure to facilitate the measurement of different angles and spaces |
| Measuring range              |                                                                                                                                                                       |                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                               |
| Vibration displacement (P-P) | 0~1999μm                                                                                                                                                              | 0~1000μm                                                                                                                                                                                                                                        | 0~1999μm                                                                                                                                                                                                                                      |
| Vibration velocity (RMS)     | 0~199.9mm/s                                                                                                                                                           | 0~71 mm/s                                                                                                                                                                                                                                       | 0~199.9mm/s                                                                                                                                                                                                                                   |
| Vibration acceleration (O-P) | 0~199.9m/s²                                                                                                                                                           |                                                                                                                                                                                                                                                 | 0~199.9m/s²                                                                                                                                                                                                                                   |
| Frequency response           |                                                                                                                                                                       |                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                               |
| Acceleration                 | 10Hz~1kHz                                                                                                                                                             |                                                                                                                                                                                                                                                 | 10Hz~1kHz                                                                                                                                                                                                                                     |
| Speed                        | 10Hz~500Hz                                                                                                                                                            | 12Hz~500Hz                                                                                                                                                                                                                                      | 10Hz~500Hz                                                                                                                                                                                                                                    |
| Displacement                 | 10Hz~200Hz                                                                                                                                                            | 12Hz~200Hz                                                                                                                                                                                                                                      | 10Hz~200Hz                                                                                                                                                                                                                                    |
| Basic Function               |                                                                                                                                                                       |                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                               |
| Measurement Accuracy         | ±10%                                                                                                                                                                  |                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                               |
| Ambient Temperature          | 0~40°C                                                                                                                                                                |                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                               |
| Relative Humidity            | ≤80%                                                                                                                                                                  |                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                               |
| Atmospheric Pressure         | 75~106Kpa                                                                                                                                                             |                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                               |
| Other Function               |                                                                                                                                                                       |                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                               |
| Low Voltage Indication       | If the battery voltage is lower than 5.5V, the low voltage prompt is displayed                                                                                        |                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                               |
| Data Retention Time          | After releasing the measurement key, the data is held for 1 minute                                                                                                    |                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                               |
| Indication Fluctuation       | The indication fluctuation shall not be greater than one resolution                                                                                                   |                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                               |
| Basic parameters             |                                                                                                                                                                       |                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                               |
| Power Supply                 | 9V                                                                                                                                                                    |                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                               |
| Display Size                 | 50*13mm                                                                                                                                                               |                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                               |
| Fuselage Size                | 185*68*30mm                                                                                                                                                           |                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                               |
| Fuselage Weight              | 160g(including battery)                                                                                                                                               |                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                               |



65

65B

66B

## Technical data

| Model                                         | 65                                                                        | 65B                                                                       | 66B                                                                       |
|-----------------------------------------------|---------------------------------------------------------------------------|---------------------------------------------------------------------------|---------------------------------------------------------------------------|
| Measuring range Vibration shift (P-P)         | 1~1999 $\mu$ mP-P (RMSX2.828)                                             | 1~1999 $\mu$ mP-P (RMSX2.828)                                             | 0.01~19.99mmP-P (RMSX2.828)                                               |
| Measurement range Vibration speed (RMS)       | 0.1~199.9mm/s RMS                                                         | 0.1~199.9 mm/s RMS                                                        | 0.1~199.9mm/s RMS                                                         |
| Measurement range Vibration accelerated speed | 0.1~199.9m/s <sup>2</sup> Peak(RMS*1.414)                                 | 0.1~199.9m/s <sup>2</sup> Peak(RMS*1.414)                                 | 0.01~19.99m/s <sup>2</sup> Peak(RMS*1.414)                                |
| Frequency response accelerated speed          | 10Hz~1kHz(LO), 1kHz~15kHz(HI)                                             | 10Hz~1kHz(LO), 1kHz~15kHz(HI)                                             | 0.5Hz~200Hz                                                               |
| Frequency response range speed                | 10Hz~1kHz(LO)                                                             | 10Hz~1kHz(LO)                                                             | 0.5Hz~200Hz                                                               |
| Frequency response range shift                | 10Hz~1kHz(LO)                                                             | 10Hz~1kHz(LO)                                                             | 0.5Hz~100Hz                                                               |
| Measurement accuracy                          | 5% $\pm$ 2 characters                                                     | 5% $\pm$ 2 characters                                                     | 5% $\pm$ 2 characters                                                     |
| Low voltage indication                        | battery voltage lower than 5.5V, display low voltage                      | battery voltage lower than 5.5V, display low voltage                      | battery voltage lower than 5.5V, display low voltage                      |
| Data hold time                                | After releasing the measurement key, the data will be held for one minute | After releasing the measurement key, the data will be held for one minute | After releasing the measurement key, the data will be held for one minute |
| Indication value fluctuation                  | Indication value fluctuation is not greater than one resolution           | Indication value fluctuation is not greater than one resolution           | Indication value fluctuation is not greater than one resolution           |
| Ambient temperature                           | 0~40°C                                                                    | 0~40°C                                                                    | 0~40°C                                                                    |
| Relative humidity                             | $\leq$ 80%                                                                | $\leq$ 80%                                                                | $\leq$ 80%                                                                |
| Atmospheric pressure                          | 75~106Kpa                                                                 | 75~106Kpa                                                                 | 75~106Kpa                                                                 |
| Power supply                                  | 9V battery                                                                |                                                                           |                                                                           |
| Display size                                  | 50*13mm                                                                   |                                                                           |                                                                           |
| Weight                                        | 160g(Including battery)                                                   |                                                                           |                                                                           |
| Size                                          | 185(H) X68(W) X30(D) mm                                                   |                                                                           |                                                                           |



850/850A



850C/850D

## Technical data

| Basic Function / Feature  | 850                                              | 850A         |
|---------------------------|--------------------------------------------------|--------------|
| Product feature           | Contact way by LED and buzzer                    |              |
| Function                  | Check the state of open phase and phase sequence |              |
| Voltage range             | 200~480V                                         | 200~600V     |
| Time limit                | 480V AC:4min<br><200V AC: 30min                  | 600V AC:2min |
| Measuring frequency range | 20~400Hz                                         |              |
| Withstand voltage         | 2000V/min                                        | 4000V/min    |
| Test cable length         | 1m                                               |              |
| Product dimension         | 100*64*23mm                                      |              |
| Weight                    | 129g                                             |              |
| Batteries                 | Without the use of batteries                     |              |

## Technical data

| Basic function              | 850C                                                                                                                   | 850D               |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------|--------------------|
| Vised wire size             | Outer diameter $\phi$ 1.6mm- $\phi$ 16mm                                                                               |                    |
| Power supply                | DC 3V (AA/LR6*2 alkaline dry batteries, continuously working for 70 hours)                                             |                    |
| Performance-guarantee range | AC70~1000V, 45~65Hz (sine wave continuously input)                                                                     |                    |
| LED display                 | 【Positive Phase Sequence】 The four phase-sequence lamps blink in order (clockwise)                                     |                    |
|                             | 【Negative Phase Sequence】 The four phase-sequence lamps blink in order (counterclockwise).                             |                    |
|                             | 【Line-voltage Indication】 L1、L2、L3 lamp light up                                                                       |                    |
|                             | 【Default Phase】 L1/L2/L3 lamp is off                                                                                   |                    |
| Buzzer                      | 【Open Circuit】 L1/L2/L3 lamp is off                                                                                    |                    |
|                             | 【Positive Phase Sequence】 The buzzer sounds intermittently                                                             |                    |
| Power indication            | 【Negative Phase Sequence】 The buzzer sounds continuously                                                               |                    |
|                             | POWER indicator light up after turn on; LOW BATTERY lamp light up if the battery needs to be replaced                  |                    |
| Magnetic force              | Instrument base plate is provided with four magnets, suction hanging in the electrical box, can withstand 800g quality |                    |
| Auto Power off              | The power will be turned off automatically if the instrument remains idle for 5 minutes after the power is turned on   |                    |
| Clamp lead wire length      | 0.6m                                                                                                                   |                    |
| Dimension                   | 70W*75H*30D (mm)                                                                                                       |                    |
| Weight                      | About 200g (including batteries)                                                                                       |                    |
| Max. rated voltage          | AC 1000V                                                                                                               |                    |
| Dielectric strength         | 5.4kVrms                                                                                                               |                    |
| Max. rated power            | 300mVA                                                                                                                 |                    |
| Accessories                 | Batteries LR6: 2pcs                                                                                                    | bag: 1pc rope: 1pc |



668A

## Technical data

|                                     |                                                                                                                                                                |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Line search (SCAN)                  | Find out the desired cable from a large number of cables.                                                                                                      |
| Cable proofreading (TEST)           | Fast measurement of open circuit, short circuit, sequence.                                                                                                     |
| Line voltage test (VOLT)            | Measuring the working voltage and positive or negative of phone line.                                                                                          |
| Continuity test (OHM)               | Checking the phone which is under open circuit or short circuit.<br>( Phone line isn't connected to any live equipment)                                        |
| Torch function                      | Super bright and white light torch function                                                                                                                    |
| Adjustable sensitivity              | The volume can be adjusted according to your need when using it.                                                                                               |
| Headset function                    | In noisy occasions, headphones can be worn to work.                                                                                                            |
| Frequency conversion of line signal | You can set different frequencies to find lines.                                                                                                               |
| Weak current-turn on test           | Can be connected to the Phone line / Ethernet switch/ Router/<br>Line hunting when the PC terminal is power on.<br>The measured voltage should not exceed 48V. |

## ELECTRIC STATIC CHARACTERSTIC

|                                       |                                                                     |
|---------------------------------------|---------------------------------------------------------------------|
| Current                               | transmit currents≤45mA, receive currents≤100mA                      |
| Battery                               | receiver 9V battery; transmitter AA 1.5V battery *3                 |
| Transmission distance of hunting line | ≥3km                                                                |
| Safety                                | safe to use (the probe can directly contact the exposed metal wire) |

## Technical indicators

|                                  |                                                                                           |
|----------------------------------|-------------------------------------------------------------------------------------------|
| Hunting line function            | √                                                                                         |
| Paired function                  | √                                                                                         |
| Continuity test of short circuit | √                                                                                         |
| Line voltage                     | √                                                                                         |
| Sensitivity adjustable           | √                                                                                         |
| Torch                            | √                                                                                         |
| Display                          | LED light                                                                                 |
| Distance of hunting line         | 3 km                                                                                      |
| Output signal level              | Approx 23Vp-p (frequency adjustable)                                                      |
| Other function                   | Energy saving design, sensitivity adjustable,<br>low voltage detection, headset function. |
| Packing                          | Color box ; tool bag                                                                      |

## Wood Moisture Tester Specification 2GA

**Sensor:** Resistance(conductivity measurement)moisture humidity sensor, temperature sensor  
**Parameter:** % humidity(wood or building material) °C/°F temperature  
**Measuring range:** See section "Instrument operation"  
**resolution:** 0.1%, 1°C. Max. error(at 25°C, ±1digit)  
**moisture test %:** ±2%; temperature test: ±2 °C  
**Measurement rate:** 0.5 seconds  
**Protection class:** IP 20  
**Ambient temperature:** (- 10 - 50) °C 20-50%RH  
**Storage temperature:** (- 40 -70) °C 20-50%RH  
**Power supply:** 1 section 6F22 9V battery  
**Weight:** About 150g (including battery and protective cover)  
**EC Directive:** 2004/108/EEC

## Adjustable material Measurement range (weight ratio)

| Adjustable paper type                                           | Characteristic curve |
|-----------------------------------------------------------------|----------------------|
| beech, spruce, larch, birch, cherry, walnut                     | 8.8-54.8%            |
| Oak, pine, maple, gray trees, Douglas fir, Eucalyptus urophylla | 7.0-47.9%            |
| Cement mortar layer, Concrete                                   | 0.9-22.1%            |
| Anhydrous gypsum mortar layer                                   | 0.0-11.0%            |
| Cement mortar                                                   | 0.7-8.6%             |
| Lime mortar, gypsum                                             | 0.6-8.6%             |
| Brick                                                           | 0.1-16.5%            |



2GA

## Paper Moisture Tester Specification 2GB

**Products Feature**  
Double Injection Case, stylish and solid.  
3 species of trees intelligent selection to avoid self-calculation of users.  
Wide Range: 5%~40%.  
Self-calibrating makes the operation simple.  
LCD digital display makes the reading clear and straight.

| General Characters | 2GB                                        |
|--------------------|--------------------------------------------|
| Display            | 2 digits LCD Display with 15mm-high figure |
| Resolution         | 1%                                         |
| Range              | 5%~40%;Accuracy:±1%rdg+1d                  |
| Power              | 9V(6F22)                                   |



2GB



NGM-10

## Mini Digital Torque Wrench

The mini digital wrench is designed in a miniaturized shape and is more suitable for the operation in a narrow space. Meanwhile, it has complete operating functions including torque setting function, unit setting function, numerical value storage function, numerical value eliminating function, numerical value output function and user correction function. It is easy to operate. The mini digital torque wrench is provided with the digital display screen, so that the requirement on operators is reduced. The mini digital torque wrench is suitable for fastening and controlling bolts in automobile industry, machinery industry, etc.

## Function features

1. It has a large screen and has the backlight function.
2. The clockwise accuracy is  $\pm 2\%$ , and the counterclockwise accuracy is 2.5% (20% to 100% of the full measuring range).
3. It can be operated both in the clockwise direction and the counterclockwise direction.
4. The buzzer and the LED indicator are triggered when reaching a preset torque value (peak-limited mode).
5. It has four engineering units (N.m, kgf.cm, lbf.ft, lbf.in).
6. It has three measuring modes, i.e. real-time mode, peak mode and preset mode.
7. It has 999 sets of storable record values.
8. It can be automatically powered off in 5 minutes.

## Technical data

| Model                        | NGM-10                                             | NGM-30                                     | NGM-60                                      | NGM-100                                    |
|------------------------------|----------------------------------------------------|--------------------------------------------|---------------------------------------------|--------------------------------------------|
| Minimum division value       | 0.01                                               |                                            |                                             |                                            |
| Maximum operating range(N.m) | 10N.m/7.37lbf.ft/68.50lbf.in/101.97kgf.cm          | 30N.m/22.12lbf.ft/265.5lbf.in/305.91kgf.cm | 60N.m/44.25lbf.ft/531.04lbf.in/611.82kgf.cm | 100N.m/73.7lbf.ft/885.0lbf.in/1019.7kgf.cm |
| Connector(inches)            | 1/4                                                |                                            | 3/8                                         | 1/2                                        |
| Setting range of buzzer(N.m) | 0.3~10                                             | 0.9~30                                     | 1.8~60                                      | 3~100                                      |
| Length (mm)                  | 230                                                |                                            | 240                                         | 285                                        |
| Accuracy*1                   | Clockwise: $\pm 2\%$ Counterclockwise: $\pm 2.5\%$ |                                            |                                             |                                            |
| Data storage capacity        | 999                                                |                                            |                                             |                                            |
| Operating mode               | Peak mode(P)/ Real-time mode(T)/ Preset mode(Pre)  |                                            |                                             |                                            |
| Unit                         | N.m, kgf.cm, lbf.ft, lbf.in                        |                                            |                                             |                                            |
| Form of ratchet head         | Bidirectional ratchet head                         |                                            |                                             |                                            |
| Number of ratchet teeth      | 72 teeth                                           |                                            |                                             |                                            |
| Number of keys               | 5                                                  |                                            |                                             |                                            |
| Battery                      | Two AAA batteries                                  |                                            |                                             |                                            |
| Operating temperature        | -10 °C to 60 °C                                    |                                            |                                             |                                            |
| Storage temperature          | -20 °C to 70 °C                                    |                                            |                                             |                                            |
| Test falling height          | one meter                                          |                                            |                                             |                                            |
| Vibration test condition*2   | 10G                                                |                                            |                                             |                                            |
| Service life test*3          | 10000 times                                        |                                            |                                             |                                            |

## Technical parameter

| Model                                      | 842A Pro<br>843A Pro                                                            | 842B Pro<br>843B Pro | 842C Pro<br>843C Pro |
|--------------------------------------------|---------------------------------------------------------------------------------|----------------------|----------------------|
| Scope                                      | 0.05~50m                                                                        | 0.05~70m             | 0.05~100m            |
| Precision                                  | ±(2mm+d*1/10000)                                                                |                      |                      |
| Incline range                              | + 90 °                                                                          |                      |                      |
| Angular accuracy                           | Plus or minus 1 °                                                               |                      |                      |
| Continuous measurement                     | Yes                                                                             |                      |                      |
| Area/Volume/Wall area                      | Yes                                                                             |                      |                      |
| Hook stock measurement                     | Yes                                                                             |                      |                      |
| Angle measurement and height measurement   | Yes                                                                             |                      |                      |
| Addition and subtraction measurement       | Yes                                                                             |                      |                      |
| Area/volume addition/subtraction           | Yes                                                                             |                      |                      |
| Maximum/minimum value                      | Yes                                                                             |                      |                      |
| Self-service calibration                   | Yes                                                                             |                      |                      |
| Voice broadcast                            | Yes                                                                             |                      |                      |
| Laser grade                                | Class II                                                                        |                      |                      |
| Laser type                                 | 630-670nm, <1mW                                                                 |                      |                      |
| Measure the working time of the battery    | ≥5500 times (single measurement)                                                |                      |                      |
| The number of stored record entries        | 100 strokes                                                                     |                      |                      |
| Automatically cut off the laser            | 20 seconds (single measurement)                                                 |                      |                      |
| Automatic shutdown                         | No operation for 150 seconds                                                    |                      |                      |
| Tape measure range                         | 2m                                                                              |                      |                      |
| The minimum scale of the tape measure      | 1mm                                                                             |                      |                      |
| Tape measure unit                          | Single-sided metric and imperial system                                         |                      |                      |
| Tape width                                 | The 9.0 mm                                                                      |                      |                      |
| Thickness of the tape                      | The 0.1 mm                                                                      |                      |                      |
| Material of ruler tape                     | 65 manganese steel                                                              |                      |                      |
| Precision of ruler tape                    | ±1mm                                                                            |                      |                      |
| Power supply                               | 3.7V 600mAh built-in lithium battery                                            |                      |                      |
| Display screen size                        | 2.2-inch black-and-white screen                                                 |                      |                      |
| Body color                                 | Black + orange                                                                  |                      |                      |
| Body size                                  | 118x54x26mm                                                                     |                      |                      |
| Standard accessories                       | Cloth bag, Type-C cable, lanyard, instruction manual, certificate of conformity |                      |                      |
| Laser Distance Parameters                  | 843A Pro                                                                        | 843B Pro             | 843C Pro             |
| Laser wavelength for line projection       | 630-670nm                                                                       |                      |                      |
| Laser grade for line projection            | II                                                                              |                      |                      |
| Line power                                 | <1mW @10cm                                                                      |                      |                      |
| The working distance of the wire casting   | 5m (<300Lux)                                                                    |                      |                      |
| Line width                                 | ≤3mm (5m)                                                                       |                      |                      |
| The battery working time of the input line | 5 hours (continuous)                                                            |                      |                      |
| Automatic shutdown                         | 30 minutes                                                                      |                      |                      |

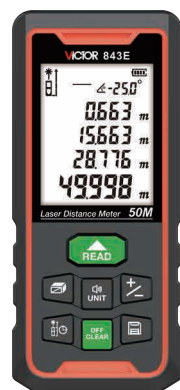


842A



843C Pro





843E/F/G



843E Pro

843F Pro

843G Pro

## Technical parameter

| Model                                      | 843F                                                          | 843G | 843E Pro | 843F Pro              | 843G Pro |      |
|--------------------------------------------|---------------------------------------------------------------|------|----------|-----------------------|----------|------|
| Measurement range                          | 50m                                                           | 70m  | 100m     | 50m                   | 70m      | 100m |
| Measurement accuracy                       | ±(3mm+d* one ten-thousandth)                                  |      |          | ±(2mm+dx1/10000)      |          |      |
| Continuous measurement                     | Yes                                                           |      |          |                       |          |      |
| Area volume                                | Yes                                                           |      |          |                       |          |      |
| Hook stock measurement                     | Yes                                                           |      |          |                       |          |      |
| Addition and subtraction measurement       | Yes                                                           |      |          |                       |          |      |
| Addition or subtraction of area and volume | Yes                                                           |      |          |                       |          |      |
| Maximum/minimum value                      | Yes                                                           |      |          |                       |          |      |
| Self-calibration function                  | Yes                                                           |      |          |                       |          |      |
| Voice broadcast                            | Yes                                                           |      |          |                       |          |      |
| Delay measurement setting                  | Yes                                                           |      |          |                       |          |      |
| Backlight                                  | Yes                                                           |      |          |                       |          |      |
| Laser grade                                | II                                                            |      |          |                       |          |      |
| Laser type                                 | 500-535 Nm, < 1mW                                             |      |          | 500-800nm,<1mW        |          |      |
| Measurement reference setting              | Front-end benchmark, mid-end benchmark, and end-end benchmark |      |          |                       |          |      |
| Store record data                          | 99 transactions                                               |      |          | 100units              |          |      |
| Automatically cut off the laser            | 20 seconds                                                    |      |          | 20s(Changeable)       |          |      |
| Automatic shutdown                         | 150 seconds                                                   |      |          | 120s(Changeable)      |          |      |
| Inclinometer measurement range             | ±90 °                                                         |      |          |                       |          |      |
| Power supply                               | 1.5V 3*AAA battery or 3.7V 850mAh lithium battery             |      |          |                       |          |      |
| Display screen size                        | 43*35mm                                                       |      |          | 2.0" IPS color screen |          |      |
| Body color                                 | Black + orange                                                |      |          |                       |          |      |
| Fuselage weight                            | Approximately 132g                                            |      |          |                       |          |      |
| Body size                                  | 118*52*27mm                                                   |      |          | 118*54*26mm           |          |      |
| Laser Distance Parameters                  | 843E Pro                                                      |      | 843F Pro |                       | 843G Pro |      |
| Wavelength                                 | 500-535nm                                                     |      |          |                       |          |      |
| Laser Class                                | II                                                            |      |          |                       |          |      |
| Laser Line Power                           | <1mW @10cm                                                    |      |          |                       |          |      |
| Working Distance                           | 10m (<300Lux)                                                 |      |          |                       |          |      |
| Line Width                                 | ≤3mm (5m)                                                     |      |          |                       |          |      |
| Battery Working Time                       | 3.5 hours (continuous use)                                    |      |          |                       |          |      |
| Auto-off                                   | 30 minutes<br>(laser level working time, Unselectable)        |      |          |                       |          |      |
| Tape Parameters                            | 843E Pro                                                      |      | 843F Pro |                       | 843G Pro |      |
| Measuring Range                            | 2m                                                            |      |          |                       |          |      |
| Minimum Scale                              | 1mm                                                           |      |          |                       |          |      |
| Unit                                       | Single-sided Metric & Imperial System                         |      |          |                       |          |      |
| Tape Width                                 | 9.0mm                                                         |      |          |                       |          |      |
| Tape Thickness                             | 0.1mm                                                         |      |          |                       |          |      |
| Tape Material                              | 65 manganese steel<br>(black characters on yellow background) |      |          |                       |          |      |



2GHS

## Product specifications

| Project          | 2GHS                     |
|------------------|--------------------------|
| Measuring range  | 0.0-55% Brix             |
| Graduation value | 0.5Brix/0.1°C            |
| Precision        | ±0.5Brix/1°C             |
| Use environment  | 10-80°C                  |
| Sample volume    | ≥0.2ml(3-5) drop         |
| Measure time     | ≈3S                      |
| Power supply     | 2 AAA alkaline batteries |
| Battery Life     | ≈2000 times              |

## Accessories

| NO. | Product description                          | Quantity       |
|-----|----------------------------------------------|----------------|
| 1   | Digital refractometer                        | 1              |
| 2   | AAA alkaline battery                         | 2              |
| 3   | Instruction manual                           | 1              |
| 4   | Glasses cloth                                | 2              |
| 5   | Waterproof rubber mat                        | 1              |
| 6   | Phillips screwdriver                         | 1              |
| 7   | dropper                                      | 2              |
| 8   | Cross recessed pan head tapping screw M1.9*5 | 4              |
| 9   | Carton Size                                  | 52.5*27.2*25cm |
| 10  | QTY/Carton                                   | 16             |
| 11  | G.W/Carton                                   | 6.3kg          |

152S

New Model 50MHz



## VICTOR 152S Handle Digital Oscilloscope

Victor 152S Manufactory New Designed 50mhz Handle Digital Oscilloscope

### Oscilloscope parameters

| Characteristic          | Describe                           |                                                                                                                 |
|-------------------------|------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| Bandwidth               | 50MHz                              | Dual channel                                                                                                    |
| Sampling                | Way                                | Real-time sampling                                                                                              |
|                         | Sampling rate                      | 280MSa/s                                                                                                        |
| Number of channels      | 2                                  | Dual channel                                                                                                    |
| Input                   | Input Coupling                     | DC, AC                                                                                                          |
|                         | Input impedance                    | 1MΩ, @ 16pf                                                                                                     |
|                         | Probe Attenuation                  | x1, x10, x100                                                                                                   |
|                         | Maximum input voltage              | X1 gear<150V, x10 gear<300V                                                                                     |
| Level                   | Sampling rate range                | 1.5MSa/s                                                                                                        |
|                         | Waveform interpolation             | (sinc)x                                                                                                         |
|                         | Scanning speed range               | 10ns/div~20s/div                                                                                                |
|                         | Time base accuracy                 | 20ppm                                                                                                           |
|                         | Record length                      | Up to 128Kbyte                                                                                                  |
| Vertical                | Sensitivity                        | 20mV/div~10V/div                                                                                                |
|                         | Displacement range                 | 4 grids (positive and negative)                                                                                 |
|                         | Analog bandwidth                   | 50MHz                                                                                                           |
|                         | low-frequency response             | Greater than 10Hz                                                                                               |
|                         | Rise time                          | Less than 10ns                                                                                                  |
|                         | DC gain accuracy                   | ±3%                                                                                                             |
| Measure                 | Automatic measurement              | Cycle, frequency, peak to peak value, maximum value, minimum value, root mean square, duty cycle, average value |
| Trigger                 | Trigger Mode                       | Automatic, normal, single time                                                                                  |
|                         | Trigger Edge                       | Rising edge, falling edge                                                                                       |
| Signal generator output |                                    | Sine wave, square wave, triangular wave, half wave, full wave, sawtooth wave                                    |
| Display mode            | YT, XY                             |                                                                                                                 |
| Afterglow mode          | Minimum, 500ms, 1S, 10S, Unlimited |                                                                                                                 |

### Output of probe compensator

| Characteristic           | Describe                |
|--------------------------|-------------------------|
| Output voltage (typical) | 3Vpp, high impedance    |
| Frequency (typical)      | Square wave 1kHz (± 1%) |

### Outline specification

| Characteristic    | Describe                                  | Accuracy |
|-------------------|-------------------------------------------|----------|
| Display type      | 3.2-inch color LCD display                |          |
| Resolution        | 320*240                                   |          |
| Power supply      | 3.7V 2200mAh rechargeable lithium battery |          |
| Work environment  | 0~40℃                                     |          |
| Relative humidity | <80%                                      |          |
| Product size      | 181*89*40mm                               |          |
| Product weight    | About 380g (excluding battery)            |          |

### Multimeter parameters

| Features        | Range                                                           | Accuracy   |
|-----------------|-----------------------------------------------------------------|------------|
| DC voltage (mV) | 25.000mV/250.00mV                                               | ±(0.05%+5) |
| DC voltage (V)  | 2.5000V/25.000V/250.00V/1000.0V                                 | ±(0.1%+10) |
| DC current      | 25.000mA/250.00mA/2.5000A/10.000A                               | ±(0.5%+10) |
| AC voltage (mV) | 25.000mV/250.00mV                                               | ±(0.1%+8)  |
| AC voltage (V)  | 2.5000V/25.000V/250.00V/750.0V                                  | ±(0.5%+10) |
| AC current (mA) | 25.000mA/250.00mA                                               | ±(0.5%+10) |
| AC current (A)  | 2.5000A/10.000A                                                 | ±(0.8%+10) |
| Resistance      | 250.00Ω/2.5000kΩ/25.000kΩ/250.00kΩ/2.5000MΩ/25.000MΩ/250.0MΩ    | ±(1.0%+10) |
| Capacitance     | 9.999nF/99.99nF/999.9nF/9.999μF/99.99μF/999.9μF/9.999mF/99.99mF | ±(2.0%+10) |
| Frequency       | 99.99Hz/999.9Hz/9.999kHz/99.99kHz/999.9kHz                      | ±(0.1%+2)  |
| On-off          | The buzzer sounds for a long time                               |            |
| Diode tube      | Open circuit voltage is about 3.2V                              |            |
| Digital display | 25000 readings/capacitance (9999 readings)                      |            |

### Signal generator parameters

| Function             | Describe        |                 |
|----------------------|-----------------|-----------------|
| Frequency            | Sine wave       | 1Hz~5MHz        |
|                      | Square wave     | 1Hz~2MHz        |
|                      | Triangular wave | 1Hz~2MHz        |
|                      | Half-wave       | 1Hz~2MHz        |
|                      | Full wave       | 1Hz~2MHz        |
|                      | Sawtooth wave   | 1Hz~500kHz      |
| Sampling rate        | 200MSa/s        |                 |
| Amplitude (50 Ω)     |                 | 0.3Vpp~3Vpp     |
|                      | Sine wave       | 1Hz~3.999999MHz |
|                      | Square wave     | 1Hz~2MHz        |
|                      | Triangular wave | 1Hz~1.7MHz      |
|                      | Half-wave       | 1Hz~2MHz        |
|                      | Full wave       | 1Hz~1.7MHz      |
|                      | Sawtooth wave   | 1Hz~300kHz      |
| DC offset range      | 0               |                 |
| Frequency resolution | 1Hz             |                 |
| Thoroughfare         | 1               |                 |
| Waveform length      | 256Byte         |                 |
| Vertical Resolution  | 8bit            |                 |
| Output Impedance     | 50Ω             |                 |

## 1122S

New Model 120MHz



### VICTOR 1122S 120MHz Dual Channel 6000 Counts Display Handheld Oscilloscope and Multimeter Signal Generator 3 in 1

#### Oscilloscope parameters

| Characteristic       | Describe                    |                                                                                                                                                                                                                      |
|----------------------|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Bandwidth            | 120MHz                      | Dual-channel                                                                                                                                                                                                         |
| Sampling             | Sampling method             | Real-time sampling                                                                                                                                                                                                   |
|                      | Sampling rate               | 250MSa/s                                                                                                                                                                                                             |
| Passage              | 2                           | Dual-channel                                                                                                                                                                                                         |
| Input                | Input coupling              | Direct current, alternating current                                                                                                                                                                                  |
|                      | Input impedance             | 1 m $\Omega$                                                                                                                                                                                                         |
|                      | Probe attenuation           | x1, x10, x100                                                                                                                                                                                                        |
|                      | Maximum input voltage       | x1 gear <40V, x10 gear <400V(DC+AC peak)                                                                                                                                                                             |
| "Level"              | Sampling rate range         | 1KSa/s~250MSa/s                                                                                                                                                                                                      |
|                      | Scanning speed range        | 5ns/div~10s/div                                                                                                                                                                                                      |
|                      | Record length               | Up to 128K                                                                                                                                                                                                           |
| Vertical             | Sensitivity                 | X1:10mV/div~10V/div; X10:100mV/div~100V/div                                                                                                                                                                          |
|                      | Displacement range          | Six squares (positive or negative)                                                                                                                                                                                   |
|                      | Analog bandwidth            | 120MHz(single CH1) 60MHz(CH1+CH2)                                                                                                                                                                                    |
|                      | Rising time                 | <3ns                                                                                                                                                                                                                 |
|                      | Dc gain accuracy            | $\pm 2\%$                                                                                                                                                                                                            |
| Measurement          | Automatic measurement       | Frequency, peak-to-peak value, average value, effective value, amplitude, duty cycle, positive pulse width, negative pulse width, period, maximum value, minimum value, top value, bottom value, negative duty cycle |
|                      | Trigger method              | Automatic, normal, single time                                                                                                                                                                                       |
|                      | Trigger edge                | Rising edge, falling edge                                                                                                                                                                                            |
| Bandwidth limitation | 20MHz/ Full bandwidth       |                                                                                                                                                                                                                      |
| Display mode         | YT, XY, scroll              |                                                                                                                                                                                                                      |
| Afterglow mode       | Nothing, 1 second, infinity |                                                                                                                                                                                                                      |
| One-click automatic  | Only CH1 is supported       |                                                                                                                                                                                                                      |

#### Output of probe compensator

| Characteristic           | Describe               |
|--------------------------|------------------------|
| Output voltage (typical) | 3V Vpp, ( $\pm 0.1V$ ) |
| Frequency (typical)      | Square wave 1kHz       |

#### Outline specification

| Characteristic | Explanation                               |
|----------------|-------------------------------------------|
| Display type   | 3.2-inch color LCD display                |
| Resolution     | 320*240 65,536 colors                     |
| Language       | Chinese/English                           |
| Power supply   | Type-c (5V/2A)                            |
| Battery        | 3.7V 2000mAh rechargeable lithium battery |
| Working        | 0 °C to 40 °C                             |
| Storage        | -20°C ~60°C; < 80%                        |
| Product size   | 181*89*40mm                               |
| Product weight | About 380g                                |

#### Multimeter parameters

| Features        | Range                                             | Accuracy       |
|-----------------|---------------------------------------------------|----------------|
| DCV             | 600.0mV/6.000V/60.00V/600.0V                      | $\pm(0.5\%+3)$ |
| ACV             | 600.0mV/6.000V/60.00V/600.0V                      | $\pm(1.0\%+3)$ |
| DCA             | 600.0mA/10.00A                                    | $\pm(2\%+5)$   |
| ACA             | 600.0mA/10.00A                                    | $\pm(3\%+5)$   |
| Resistance      | 600.0 $\Omega$                                    | $\pm(1.5\%+3)$ |
|                 | 6.000k $\Omega$ /60.00k $\Omega$ /600.0k $\Omega$ | $\pm(1\%+3)$   |
|                 | 6.000M $\Omega$                                   | $\pm(1.5\%+5)$ |
|                 | 60.00M $\Omega$                                   | $\pm(3\%+3)$   |
| Capacitor       | 60.00nF/600.0nF/6.000 $\mu$ F                     | $\pm(5\%+5)$   |
|                 | 60.00 $\mu$ F/600.0 $\mu$ F/6000 $\mu$ F          | $\pm(10\%+5)$  |
| On/off          | The buzzer makes a long sound                     |                |
| Diode           | 0.0 V to 3.3 V                                    |                |
| Digital display | 6000 reading                                      |                |

#### Signal generator parameters

| Characteristics          | Explanation         |          |
|--------------------------|---------------------|----------|
| Frequency characteristic | Sine wave           | 1Hz~5MHz |
|                          | Fang Bo             | 1Hz~1MHz |
|                          | Triangle/sawtooth   | 1Hz~1MHz |
|                          | Noise wave          | 1Hz~1MHz |
|                          | Half-wave/full-wave | 1Hz~1MHz |
|                          | Sinc waveform       | 1Hz~1MHz |
| Sampling rate            | 150MSa/s            |          |
| Output amplitude         | 3V( $\pm 0.1V$ )    |          |
| Passage                  | 1                   |          |
| Waveform length          | 256Byte             |          |
| Output impedance         | 100 $\Omega$        |          |



240/240S

270/270S

2102/2102S

2202/2202S

## Technical data

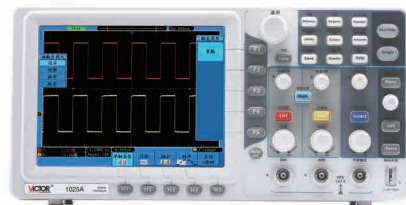
| Basic skills            | 240/240S                                                      | 270/270S                   | 2102/2102S                 | 2202/2202S |
|-------------------------|---------------------------------------------------------------|----------------------------|----------------------------|------------|
| Bandwidth               | 40 MHz                                                        | 70 MHz                     | 100 MHz                    | 200 MHz    |
| Real-time sampling rate | 125 MSa/s (Dual channel)                                      | 250 MSa/s (Single channel) | 250 MSa/s (Dual channel)   | 1 GSa/s    |
|                         |                                                               |                            | 500 MSa/s (Single channel) |            |
| Aisle                   | 2                                                             |                            |                            |            |
| Sampling method         | Normal, peak sampling                                         |                            |                            |            |
| Sampling Rate           | 125 MSa/s (dual channel), 250 MSa/s (single channel)          |                            |                            |            |
| Record length           | When single channel: 8K maximum, when dual channel: 4K        |                            |                            |            |
| Wave refresh            | 10,000 wfms/s                                                 |                            |                            |            |
| Input coupling          | DC, AC, ground                                                |                            |                            |            |
| Input impedance         | 1 MΩ±2%, in parallel with 16pF±10 pF                          |                            |                            |            |
| Probe coefficient       | 1X- 10X- 100X- 1000X                                          |                            |                            |            |
| Max input voltage       | 400V (DC+AC peak value)                                       |                            |                            |            |
| Time base range         | 5ns/div-1000s/div, step by 1-2-5                              |                            |                            |            |
| Vertical sensitivity    | 10mV/div~10V/div                                              |                            |                            |            |
| Vertical resolution     | 8bit                                                          |                            |                            |            |
| Cursor                  | Voltage difference (ΔV), time difference (ΔT)                 |                            |                            |            |
| Auto measurement        | Period, frequency, amplitude, peak-to-peak, max, min, average |                            |                            |            |
| Trigger type            | Edge trigger                                                  |                            |                            |            |
| Trigger method          | Automatic, normal, single                                     |                            |                            |            |

| Basic skills         | Range                                                 | Accuracy      |
|----------------------|-------------------------------------------------------|---------------|
| DC voltage           | 200.00mV                                              | ±(0.05%+5dig) |
|                      | 2.0000V/20.000V/200.00V                               | ±(0.3%+3dig)  |
|                      | 1000.0V                                               | ±(0.5%+2dig)  |
| AC voltage           | 200.00mV/2.0000V/20.000V/200.00V                      | ±(0.8%+5dig)  |
|                      | 750.0V                                                | ±(1%+5dig)    |
| DC current           | 200.00mA                                              | ±(0.8%+2dig)  |
|                      | 10.000A                                               | ±(2.5%+2dig)  |
| AC current           | 200.00mA                                              | ±(1%+5dig)    |
|                      | 10.000A                                               | ±(2.8%+5dig)  |
| Resistance           | 200.00Ω/2.0000kΩ/20.000kΩ/200.00kΩ/2.0000MΩ           | ±(0.8%+3dig)  |
|                      | 20.000MΩ                                              | ±(1%+3dig)    |
|                      | 100.00MΩ                                              | ±(3%+3dig)    |
| Capacitance          | 20.000nF/200.00nF/2.0000μF/20.000μF/200.00μF/2.0000mF | ±(3.0%+10dig) |
| Continuity test      | √ (<50Ω)                                              |               |
| Diode test           | √ (<0-2V)                                             |               |
| Auto range           | √                                                     |               |
| True effective value | √                                                     |               |

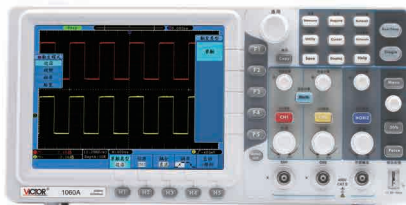
| Signal generator function | 240S/270S/2102S  |             |
|---------------------------|------------------|-------------|
| Frequency characteristics | Sine wave        | 0.1Hz~25MHz |
|                           | Rectangular wave | 0.1Hz~5MHz  |
|                           | Sawtooth wave    | 0.1Hz~1MHz  |
|                           | Pulse wave       | 0.1Hz~5MHz  |
|                           | Arbitrary wave   | 0.1Hz~      |
| Sampling Rate             | 125MSa/s         |             |
| Amplitude (50Ω)           | 0.01Vpp ~ 2.5Vpp |             |
| Aisle                     | 1                |             |
| Wave length               | 8k               |             |
| Vertical resolution       | 14 bit           |             |
| Output impedance          | 50 Ω             |             |

| Basic parameters |                                                                                                      |
|------------------|------------------------------------------------------------------------------------------------------|
| Power            | 2200mAh*2 (3.7V, 18650)                                                                              |
| Display size     | 3.5-inch color LCD display                                                                           |
| Body color       | Black+orange                                                                                         |
| Body weight      | About 0.6KG (without battery)                                                                        |
| Dimensions       | 198 mm × 96mm ×38 mm                                                                                 |
| Accessories      | Power adapter, USB cable, alligator clip cable (2 S type), test lead, probe calibration tool, manual |

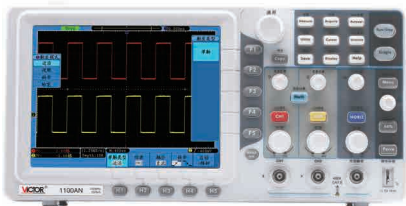




1025A



1060A



1100AN

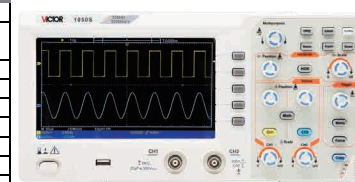
| Basic function          | 1025A                                                                                                                               |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Bandwidth               | 30MHz                                                                                                                               |
| Real-time sampling rate | 500MS/s                                                                                                                             |
| Rise time               | ≤11ns                                                                                                                               |
| Record Length           | 10K pts                                                                                                                             |
| Channel                 | 2 channels + external trigger                                                                                                       |
| Display                 | 8 inches TFT 65535 color LCD, 800*600 pixels                                                                                        |
| Interval time           | Single: ±(1 sample interval time + 100ppm × reading + 0.6ns),<br>× 16 average: ±(1 sample interval time + 100ppm × reading + 0.4ns) |
| Input coupling          | DC, AC and GND                                                                                                                      |
| Input impedance         | 1 MΩ ± 2%, is in parallel with 10pF ± 5pF                                                                                           |
| Time base range         | 4ns/div ~ 100s/div, step from Unary numeral system to binary system and then quaternary                                             |
| Vertical sensitivity    | 5mV/div ~ 10V/div (at the position which input BNC)                                                                                 |
| Vertical resolution     | 8 bits (simultaneous sampling of two channels)                                                                                      |
| Max. input voltage      | 400V (DC + AC peak value, input impedance of 1MΩ) (10:1 probe attenuation)                                                          |
| Power                   | 100~240V AC RMS, CAT II                                                                                                             |
| Dimension               | 348mm(length)*170mm(high)*78mm(Width)                                                                                               |
| Weight                  | 1.5kg (without package)                                                                                                             |

| Basic function          | 1060A                                                                                                                               |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Bandwidth               | 60MHz                                                                                                                               |
| Real-time sampling rate | 500MS/s                                                                                                                             |
| Rise time               | ≤5.8ns                                                                                                                              |
| Record Length           | 100K pts (10M is optional to update)                                                                                                |
| Channel                 | 2 channels + external trigger                                                                                                       |
| Display                 | 8 inches TFT 65535 color LCD, 800*600 pixels                                                                                        |
| Interval time           | Single: ±(1 sample interval time + 100ppm × reading + 0.6ns),<br>× 16 average: ±(1 sample interval time + 100ppm × reading + 0.4ns) |
| Input coupling          | DC, AC and GND                                                                                                                      |
| Input impedance         | 1 MΩ ± 2%, is in parallel with 15pF ± 5pF                                                                                           |
| Time base range         | 5ns/div ~ 100s/div, step from Unary numeral system to binary system and then quinary                                                |
| Vertical sensitivity    | 2mV/div ~ 10V/div (at the position which input BNC)                                                                                 |
| Vertical resolution     | 8 bits (simultaneous sampling of two channels)                                                                                      |
| Max. input voltage      | 400V (DC + AC peak value, input impedance of 1MΩ) (10:1 probe attenuation)                                                          |
| Power                   | 100~240V AC RMS, CAT II                                                                                                             |
| Dimension               | 348mm(length)*170mm(high)*78mm(Width)                                                                                               |
| Weight                  | 1.5kg (without package)                                                                                                             |

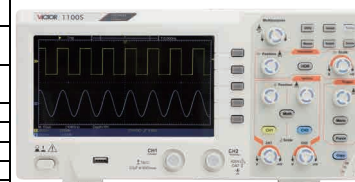
| Basic function          | 1100AN                                                                                                                              |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Bandwidth               | 100MHz                                                                                                                              |
| Real-time sampling rate | 1GS/s                                                                                                                               |
| Rise time               | ≤3.5ns                                                                                                                              |
| Record Length           | 100K pts (10M is optional to update)                                                                                                |
| Channel                 | 2 channels + external trigger                                                                                                       |
| Display                 | 8 inches TFT 65535 color LCD, 800*600 pixels                                                                                        |
| Interval time           | Single: ±(1 sample interval time + 100ppm × reading + 0.6ns),<br>× 16 average: ±(1 sample interval time + 100ppm × reading + 0.4ns) |
| Input coupling          | DC, AC and GND                                                                                                                      |
| Input impedance         | 1 MΩ ± 2%, is in parallel with 15pF ± 5pF                                                                                           |
| Time base range         | 2ns/div ~ 100s/div, step from Unary numeral system to binary system and then quinary                                                |
| Vertical sensitivity    | 2mV/div ~ 10V/div (at the position which input BNC)                                                                                 |
| Vertical resolution     | 8 bits (simultaneous sampling of two channels)                                                                                      |
| Max. input voltage      | 400V (DC + AC peak value, input impedance of 1MΩ) (10:1 probe attenuation)                                                          |
| Power                   | 100~240V AC RMS, CAT II                                                                                                             |
| Dimension               | 348mm(length)*170mm(high)*78mm(Width)                                                                                               |
| Weight                  | 1.5kg (without package)                                                                                                             |

## Performance Characteristics

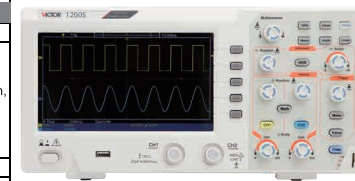
| Mode                                   | 1200S                                                                                                                                                                                                                                                                                                                                                | 1050S                                       | 1100S                  |
|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|------------------------|
| Bandwidth                              | 200 MHz                                                                                                                                                                                                                                                                                                                                              | 50 MHz                                      | 100 MHz                |
| Sample Rate(real time)                 | 1single channel: 500MS/s;<br>double channel: 1GS/s                                                                                                                                                                                                                                                                                                   | 500MS/s                                     | 1 GS/s                 |
| Channel                                | 2                                                                                                                                                                                                                                                                                                                                                    |                                             |                        |
| Input coupling                         | DC, AC, Ground                                                                                                                                                                                                                                                                                                                                       |                                             |                        |
| Input impedance                        | 1 MΩ±2%, in parallel with 20 pF±5 pF                                                                                                                                                                                                                                                                                                                 |                                             |                        |
| Input coupling                         | 1X, 10X, 100X, 1000X                                                                                                                                                                                                                                                                                                                                 |                                             |                        |
| Max. input voltage                     | 400V (DC+AC, PK - PK)                                                                                                                                                                                                                                                                                                                                |                                             |                        |
| Channel-channel isolation              | 50Hz: 100 : 1; 10MHz: 40 : 1                                                                                                                                                                                                                                                                                                                         |                                             |                        |
| Time delay between channel(typical)    | 150ps                                                                                                                                                                                                                                                                                                                                                |                                             |                        |
| Bandwidth limit                        | Not support                                                                                                                                                                                                                                                                                                                                          |                                             | 20 MHz, full bandwidth |
| Sampling rate range                    | 0.5 S/s~200 MS/s                                                                                                                                                                                                                                                                                                                                     | 0.5 S/s~500 MS/s                            | 0.5 S/s~1 GS/s         |
| Interpolation                          | (Sinx)/x                                                                                                                                                                                                                                                                                                                                             |                                             |                        |
| Max Record length                      | 10K                                                                                                                                                                                                                                                                                                                                                  |                                             |                        |
| Scanning speed (S/div)                 | 5ns/div~1000s/div,step<br>by 1~2~5~3.5ns                                                                                                                                                                                                                                                                                                             | 2 ns/div ~ 1000 s/div,<br>step by 1 - 2 - 5 |                        |
| Sampling rate /<br>relay time accuracy | ±100 ppm                                                                                                                                                                                                                                                                                                                                             |                                             |                        |
| Interval(ΔT) accuracy<br>(DC ~ 100MHz) | Single: ±(1 interval time+100 ppm×reading+0.6 ns);<br>Average>16: ±(1 interval time + 100 ppm×reading+0.4 ns)                                                                                                                                                                                                                                        |                                             |                        |
| Vertical Resolution (A/D)              | 8 bits (2 channels simultaneously)                                                                                                                                                                                                                                                                                                                   |                                             |                        |
| Sensitivity                            | 5 mV/div ~ 5 V/div                                                                                                                                                                                                                                                                                                                                   |                                             |                        |
| Displacement                           | ±2 V (5 mV/div ~ 100 mV/div)±50 V (200 mV/div ~ 5 V/div)                                                                                                                                                                                                                                                                                             |                                             |                        |
| Analog bandwidth                       | 200MHz                                                                                                                                                                                                                                                                                                                                               | 50 MHz                                      | 100 MHz                |
| Single bandwidth                       | Full bandwidth                                                                                                                                                                                                                                                                                                                                       |                                             |                        |
| Low Frequency                          | ≥10 Hz (at input, AC coupling, -3 dB)                                                                                                                                                                                                                                                                                                                |                                             |                        |
| Rise time (at input, Typical)          | ≤ 17.5 ns                                                                                                                                                                                                                                                                                                                                            | ≤ 7.0 ns                                    | ≤ 3.5 ns               |
| DC gain accuracy                       | ±3%                                                                                                                                                                                                                                                                                                                                                  |                                             |                        |
| DC accuracy (average)                  | Delta Volts between any two averages of ≥16 waveforms acquired<br>with the same scope setup and ambient conditions (ΔV):<br>(±3% reading + 0.05 div)                                                                                                                                                                                                 |                                             |                        |
| Waveform inverted ON/OFF               |                                                                                                                                                                                                                                                                                                                                                      |                                             |                        |
| Cursor                                 | ΔV, ΔT, ΔT&ΔV between cursors,                                                                                                                                                                                                                                                                                                                       |                                             |                        |
| Automatic                              | auto cursor<br>Period, Frequency, Mean, PK-PK, RMS, Max, Min, Top, Base, Amplitude,<br>Overshoot, Preshoot, Rise Time, Fall Time, +Pulse Width,-Pulse Width,<br>+Duty Cycle, -Duty Cycle, Delay A→B, Delay A→B, Cycle RMS,<br>Cursor RMS, Screen Duty, Phase, +Pulse Count, -Pulse Count, Rise<br>Edge Count, Fall Edge Count, Area, and Cycle Area. |                                             |                        |
| Waveform Math                          | +, -, *, / ,FFT                                                                                                                                                                                                                                                                                                                                      |                                             |                        |
| Waveform storage                       | 16 waveforms                                                                                                                                                                                                                                                                                                                                         |                                             |                        |
| Lissajous figure                       | Bandwidth                                                                                                                                                                                                                                                                                                                                            | Full bandwidth                              |                        |
|                                        | Phase difference                                                                                                                                                                                                                                                                                                                                     | ±3 degrees                                  |                        |
| Communication port                     | USB 2.0 (USB storage)                                                                                                                                                                                                                                                                                                                                |                                             |                        |
| Counter                                | Support                                                                                                                                                                                                                                                                                                                                              |                                             |                        |



1050S



1100S



1200S

| Trigger                          | Instruction                              |                                                        |
|----------------------------------|------------------------------------------|--------------------------------------------------------|
| Trigger level range              | Internal                                 | ±5 div from the screen center                          |
| Trigger level Accuracy (typical) | Internal                                 | ±0.3 div                                               |
| Trigger displacement             | According to Record length and time base |                                                        |
| Trigger Holdoff range            | 100 ns ~ 10 s                            |                                                        |
| 50% level setting(typical)       | Input signal frequency ≥ 50 Hz           |                                                        |
| Edge trigger                     | slope                                    | Rising, Falling                                        |
| Video Trigger                    | Modulation                               | Support standard NTSC, PAL and SECAM broadcast systems |
|                                  | Line number range                        | 1-525 (NTSC) and 1-625 (PAL/SECAM)                     |

## NEW BATTERY TESTERS



3025A

3025B

3025C

| Function                     | Range           | 3012     | 3013 |
|------------------------------|-----------------|----------|------|
| Cold Cranking Amps           | CCA             | 100~1700 | ✓    |
|                              | IEC             | 100~1000 | ✓    |
|                              | EN              | 100~1700 | ✓    |
|                              | DIN             | 100~1000 | ✓    |
| Internal resistance          | 0.00mΩ~99.99 mΩ | ✓        | ✓    |
| Working voltage              | 9V~18V          | ✓        | ✓    |
| Battery status hint          |                 | ✓        | ✓    |
| 12V Battery test             |                 | ✓        | ✓    |
| Starting load test           |                 | ✓        | ✓    |
| Charging system test         |                 | ✓        | ✓    |
| Overvoltage input protection |                 | ✓        | ✓    |
| Polarity reverse Protection  |                 | ✓        | ✓    |
| LCD                          |                 | ✓        | ✓    |
| LED                          |                 |          | ✓    |
| Cable length                 |                 | 850mm    |      |
| Weight                       |                 | 320g     | 300g |



3012



3013

## Technical indicators

| Basic skills                  | 3025A                                            | 3025B | 3025C |
|-------------------------------|--------------------------------------------------|-------|-------|
| Applicable batteries          | 12 volt and 24 volt lead-acid batteries          |       |       |
| Optional battery standards    | CCA: 100-2000                                    |       |       |
|                               | IEC: 100-1000                                    |       |       |
|                               | EN: 100-1700                                     |       |       |
|                               | DIN: 100-1000                                    |       |       |
|                               | JIS: To check the table and compare with CCA     |       |       |
| working temperature           | (-18~50)°C                                       |       |       |
| Voltage range                 | (DC) 9V~35V                                      |       |       |
| Language                      | Switching between Chinese and English            |       |       |
| Test method                   | Four line Kelvin testing method                  |       |       |
| Battery voltage display       | ✓                                                |       |       |
| Battery level ratio display   | ✓                                                |       |       |
| CCA measurement               | ✓                                                |       |       |
| Battery life display          | ✓                                                |       |       |
| Internal resistance detection | ✓                                                |       |       |
| Input protection              | ✓                                                |       |       |
| Source                        | (DC) 9V~35V                                      |       |       |
| Display Size                  | 60 x 45mm                                        |       |       |
| Body color                    | Black                                            |       |       |
| Body weight                   | 291g                                             |       |       |
| Body size                     | 150*85*30mm ; Line length 750mm                  |       |       |
| Parts                         | Instruction manual and certificate of conformity |       |       |

| Product name               | 3015                                                                                                                                                                                                                                                                                       | 3025                    | 3026                |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|---------------------|
| Applicable battery         | 12V Storage battery                                                                                                                                                                                                                                                                        | 12V/24V Storage battery | 12V Storage battery |
| Print or not               | No                                                                                                                                                                                                                                                                                         | No                      | Yes                 |
| CCA range                  | 100~1700                                                                                                                                                                                                                                                                                   | 100~1700                | 100~1700            |
| Operating temperature      | -18~50℃                                                                                                                                                                                                                                                                                    | -18~50℃                 | -18~50℃             |
| Voltage range              | 9~18V                                                                                                                                                                                                                                                                                      | 9~35V                   | 9~18V               |
| Battery range              | 30AH-200AH                                                                                                                                                                                                                                                                                 | 30AH-200AH              | 30AH-200AH          |
| Testing method             | Kelvin four-terminal sensing                                                                                                                                                                                                                                                               |                         |                     |
| Battery selection criteria | CCA: 100~1700 IEC: 100~1000 EN: 100~1700 DIN: 100~1000                                                                                                                                                                                                                                     |                         |                     |
| Main function              | Battery starting test, engine system start load test, huge load system test, charging system test etc.                                                                                                                                                                                     |                         |                     |
| Notes                      | This battery tester is only used for car battery testing<br>measuring voltage range is 12V (12V~24V)<br>Measuring CCA range is 100~1700<br>Battery range is 30AH-200AH<br>Warning: the below cars of batteries are not allowed to test: electric vehicle, UPS batteries, electric tricycle |                         |                     |



3015/3025



3026



3015A



3015B



3015C

| 3015A                                                                                                                                                   | 3015B                                                                                                                                                   | 3015C                                                                                                                                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6/12V batteries≤20A discharge, 5~80AH test range                                                                                                        | 6/12V batteries≤80A discharge, 40~200AH test range                                                                                                      | 6/12V batteries≤80A discharge, 40~200AH test range                                                                                                                                                            |
| The internal resistance of battery will be tested synchronously                                                                                         | The internal resistance of battery will be tested synchronously                                                                                         | The internal resistance of battery will be tested synchronously                                                                                                                                               |
| Micro-computer strictly control the discharge time, to reduce the battery damage                                                                        | Micro-computer strictly control the discharge time, to reduce the battery damage                                                                        | Micro-computer strictly control the discharge time, to reduce the battery damage                                                                                                                              |
| Over-temperature, anti-burning and reverse polarity protection                                                                                          | Over-temperature, anti-burning and reverse polarity protection                                                                                          | Over-temperature, anti-burning and reverse polarity protection                                                                                                                                                |
| The meter will make a judgement automatically since the test finished; sound and light indicate                                                         | The meter will make a judgement automatically since the test finished; sound and light indicate                                                         | The meter will make a judgement automatically since the test finished; sound and light indicate                                                                                                               |
| Tested reading hold automatically                                                                                                                       | Tested reading hold automatically                                                                                                                       | Tested reading hold automatically                                                                                                                                                                             |
| Clear and direct-viewing display with four digits                                                                                                       | Clear and direct-viewing display with four digits                                                                                                       | Clear and direct-viewing display with four digits                                                                                                                                                             |
| Discharge time: less than 10s                                                                                                                           | Discharge time: less than 10s                                                                                                                           | Discharge time: less than 10s (for dynamic batteries measuring)                                                                                                                                               |
| Battery amp hour rating testing range: 5~80AH                                                                                                           | Battery amp hour rating testing range: 40~200AH                                                                                                         | Battery amp hour rating testing range: 40~200AH                                                                                                                                                               |
| Internal resistance range of battery: 0~99mΩ                                                                                                            | Internal resistance range of battery: 0~99mΩ                                                                                                            | Internal resistance range of battery: 0~99mΩ                                                                                                                                                                  |
| Usable scope: applicable to the dynamical type battery such as the batteries supply for electric bicycle, UPS batteries, solar storage energy batteries | Usable scope: applicable to the dynamical type battery such as the batteries supply for electric bicycle, UPS batteries, solar storage energy batteries | Usable scope: starter battery (car battery)<br>Dynamic accumulator: applicable to the dynamical type battery such as the batteries supply for electric bicycle, UPS batteries, solar storage energy batteries |
|                                                                                                                                                         |                                                                                                                                                         | Starter battery range:<br>CCA: 100~1700 IEC: 100~1000 EN:100~1700 DIN: 100~1000                                                                                                                               |
|                                                                                                                                                         |                                                                                                                                                         | This is a battery tester which contains both testing method of dynamical battery and starter battery                                                                                                          |



3003



3005



3005C

## MAIN FEATURES

- The LED digital display simultaneously shows the voltage, current and power output by the power supply, and the decimal point is automatically rounded up
- Automatic switching between voltage stabilization and current stabilization
- It is equipped with an output control switch, making the control more flexible
- Overvoltage, overcurrent, overpower, over-temperature and short-circuit protection
- 6 groups of quick parameter storage functions
- With hardware List programmable sequence output
- Four types of power supply in one: ordinary power supply, numerical control power supply, programmable power supply and programmable power supply
- The temperature-controlled fan speed enables the instrument to have low noise and a longer fan lifespan
- The voltage and current values can be pre-designed in the output off state, which is convenient for operation
- One-click keyboard lock to prevent misoperation

Note: The red "•" is only available on 3005C

## Technical data

| Model                 | 3003                    | 3005           | 3005C          |
|-----------------------|-------------------------|----------------|----------------|
| Output voltage        | 0~30V                   | 0~30V          | 0~30V          |
| Output current        | 0~3A                    | 0~5A           | 0~5A           |
| Output power          | 90W                     | 150W           | 150W           |
| Voltage               | Set the resolution      | 10mV           |                |
|                       | Set accuracy            | ±0.1%+5digits  | ±0.01%+3digits |
|                       | Readback resolution     | 10mV           |                |
|                       | Readback accuracy       | ±0.1%+5digits  | ±0.01%+3digits |
|                       | Temperature coefficient | ±0.02%+3mV     |                |
|                       | Power supply effect     | ±0.01%+3mV     |                |
|                       | Load effect             | ±0.01%+2mV     |                |
| Current               | Ripple noise            | ≤8mVrms        |                |
|                       | Set the resolution      | 1mA            |                |
|                       | Set accuracy            | ±0.2%+10digits | ±0.1%+3digits  |
|                       | Readback resolution     | 1mA            |                |
|                       | Readback accuracy       | ±0.2%+10digits | ±0.1%+3digits  |
|                       | Temperature coefficient | ±0.02%+3mA     |                |
|                       | Power supply effect     | ±0.1%+3mA      |                |
| Load regulation rate  | Load effect             | ±0.02%+10mA    |                |
|                       | Ripple noise            | ≤10mAms        |                |
| Load regulation rate  | ±0.1%Umax+5mV           |                | ±0.01%Umax+2mV |
| Power regulation rate | ±0.1%Umax+5mV           |                | ±0.01%Umax+2mV |
| OVP                   | /                       |                | 0~31V          |
| OCV                   | /                       |                | 0~5.5A         |
| Working voltage       | AC220V±10% 50Hz         |                |                |
| Heat dissipation      | Air-cooled              |                |                |
| Body size             | 280(D)×130(W)×165(H)mm  |                |                |
| Weight                | 4.5KG                   |                |                |



3010A



3005AC



3010AC

## MAIN FEATURES

- The LED digital display simultaneously shows the voltage, current and power output by the power supply, and the decimal point is automatically rounded up
- Automatic switching between voltage stabilization and current stabilization
- It is equipped with an output control switch, making the control more flexible
- Overvoltage, overcurrent, overpower, over-temperature and short-circuit protection
- 6 groups of quick parameter storage functions
- With hardware List programmable sequence output
- Four types of power supply in one: ordinary power supply, numerical control power supply, programmable power supply and programmable power supply
- The temperature-controlled fan speed enables the instrument to have low noise and a longer fan lifespan
- The voltage and current values can be pre-designed in the output off state, which is convenient for operation
- One-click keyboard lock to prevent misoperation

Note: The red "•" is only available on 3005AC and 3010AC

## Technical data

| Model                 |                         | 3003A                  | 3005A | 3010A | 3005AC         | 3010AC  |
|-----------------------|-------------------------|------------------------|-------|-------|----------------|---------|
| Output voltage        |                         | 0~30V                  | 0~30V | 0~30V | 0~30V          | 0~30V   |
| Output current        |                         | 0~3A                   | 0~5A  | 0~10A | 0~5A           | 0~10A   |
| Output power          |                         | 90W                    | 150W  | 300W  | 150W           | 300W    |
| Voltage               | Set the resolution      | 10mV                   |       |       |                |         |
|                       | Set accuracy            | ±0.1%+5digits          |       |       |                |         |
|                       | Readback resolution     | 10mV                   |       |       |                |         |
|                       | Readback accuracy       | ±0.1%+5digits          |       |       |                |         |
|                       | Temperature coefficient | ±0.02%+3mV             |       |       |                |         |
|                       | Power supply effect     | ±0.2%+1mV              |       |       | ±0.2%+5mV      |         |
|                       | Load effect             | ±0.2%+5mV              |       |       |                |         |
|                       | Ripple noise            | ≤20mVrms               |       |       | ≤10mVrms       |         |
| Current               | Set the resolution      | 1mA                    |       |       |                |         |
|                       | Set accuracy            | ±0.2%+10digits         |       |       |                |         |
|                       | Readback resolution     | 1mA                    |       |       |                |         |
|                       | Readback accuracy       | ±0.2%+10digits         |       |       |                |         |
|                       | Temperature coefficient | ±0.02%+3mA             |       |       |                |         |
|                       | Power supply effect     | ±0.1%+5mA              |       |       |                |         |
|                       | Load effect             | ±0.1%+5mA              |       |       |                |         |
|                       | Ripple noise            | ≤15mArms               |       |       | ≤10mArms       |         |
| Load regulation rate  |                         | ±0.1%Umax+5mV          |       |       | ±0.01%Umax+2mV |         |
| Power regulation rate |                         | ±0.1%Umax+5mV          |       |       | ±0.01%Umax+2mV |         |
| OVP                   |                         | /                      |       |       | 0~33V          | 0~33V   |
| OCP                   |                         | /                      |       |       | 0~5.5A         | 0~10.5A |
| Working voltage       |                         | AC220V±10% 50Hz        |       |       |                |         |
| Heat dissipation      |                         | Air-cooled             |       |       |                |         |
| Body size             |                         | 280(D)×130(W)×165(H)mm |       |       |                |         |
| Weight                |                         | 2.2KG                  |       |       |                |         |



3303



3305

## MAIN FEATURES

- LED display, capable of simultaneously showing the output voltage values and current values of each channel
- It has a set of fixed outputs, and three fixed voltage outputs can be switched (5V-3A or 3.3V-3A or 2.5V-3A).
- The two adjustable power supplies can be used in series or parallel, and the voltage or current is tracked by one main power supply
- Automatic switching between voltage stabilization and current stabilization
- It has an output control switch, making the control more flexible
- Overvoltage, overcurrent, over-temperature, short-circuit protection and reverse polarity protection
- Each channel has 3 sets of quick parameter storage functions
- The temperature-controlled fan speed makes the instrument have low noise and the fan has a longer service life

## Technical data

| Model                                                         | 3303                                                                                                                                                                                                                       | 3305                    |
|---------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| Output voltage                                                | 2×0~30V                                                                                                                                                                                                                    | 2×0~30V                 |
| Output current                                                | 2×0~3A                                                                                                                                                                                                                     | 2×0~5A                  |
| Fixed output (switchable)                                     | 5V-3A /3.3V-3A/ 2.5V-3A                                                                                                                                                                                                    | 5V-3A /3.3V-3A/ 2.5V-3A |
| Input voltage                                                 | 220VAC±10% switchable                                                                                                                                                                                                      |                         |
| Test conditions                                               | Temperature: 10 to +35℃      Relative humidity ≤75%                                                                                                                                                                        |                         |
| Usage environment                                             | 0~+40℃    RH≤80%                                                                                                                                                                                                           |                         |
| Storage conditions                                            | -10℃~70℃    RH≤70%                                                                                                                                                                                                         |                         |
| Size                                                          | 330(D)×250(W)×155(H)mm                                                                                                                                                                                                     |                         |
| Weight                                                        | The net weight is approximately 9 kilograms                                                                                                                                                                                |                         |
| The output range and indicators of the master and slave paths |                                                                                                                                                                                                                            |                         |
| Power supply effect                                           | CV≤0.01%+3mV    CC≤0.2%+3mA                                                                                                                                                                                                |                         |
| Load effect                                                   | CV≤0.01%+3mV(   ≤3A)    CC≤0.2%+3mA(   ≤3A)<br>CV≤0.02%+5mV(   >3A )    CC≤0.2%+5mA(   >3A)                                                                                                                                |                         |
| Ripple and noise                                              | CV≤1mVrms(   ≤3A, 5Hz~1MHz)    CC≤3mArms (   ≤3A)<br>CV≤2mVrms(   >3A, 5Hz~1MHz)    CC≤10mArms (   >3A)                                                                                                                    |                         |
| Display accuracy                                              | Voltage and current display accuracy: ±(1% reading + 2 characters)                                                                                                                                                         |                         |
| Tracking operation                                            |                                                                                                                                                                                                                            |                         |
| Parallel mode                                                 | Power supply effect: CV≤0.01%+3mV<br>Loading effect: CV≤0.01%+3mV (   ≤3A) CV≤0.02%+5mV (   >3A)<br>The tracking current error of the driven circuit is ≤ 2% of the output of the active circuit +50mA                     |                         |
| Series mode                                                   | Power supply effect: CV≤0.01%+5mV; Load effect: CV≤300mV<br>When the positive and negative power supplies are output, the voltage tracking error of the driven circuit is ≤ 0.5% of the output of the active circuit +10mV |                         |
| Fixed output power supply                                     |                                                                                                                                                                                                                            |                         |
| Rated output voltage                                          | 2.5V/3.3V/5V Three groups can be switched                                                                                                                                                                                  |                         |
| Max output current                                            | 3A                                                                                                                                                                                                                         |                         |
| Power supply effect                                           | ≤25mV                                                                                                                                                                                                                      |                         |
| Load effect                                                   | ≤25mV                                                                                                                                                                                                                      |                         |
| Ripple and noise                                              | ≤2mVrms (5Hz~1MHz)                                                                                                                                                                                                         |                         |





31560AC



33030AC

## MAIN FEATURES

- LED digital display, simply and intuitively showing the voltage, current, power and time output by the power supply
- Automatic switching between voltage stabilization and current stabilization
- It has an output control switch, making the control more flexible
- Overvoltage, overcurrent, overpower, over-temperature and short-circuit protection
- 6 groups of quick parameter callbacks and storage functions
- With hardware List programmable sequence output
- Standard equipped with RS-485 serial port, supporting Modbus programming instruction set
- Standard equipped with SENSE compensation interface
- Switchable selection of output timing off and output timing function
- The temperature-controlled fan speed makes the instrument have low noise and the fan has a longer service life
- The voltage and current values can be pre-designed in the output off state for convenient operation
- One-key lock of the keyboard to prevent misoperation

## Technical data

| Model                   | 31560AC                                                                                                                                    | 33030AC | 36020AC | 31005AC | 32005AC |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|---------|---------|---------|---------|
| Output voltage          | 0~15V                                                                                                                                      | 0~30V   | 0~60V   | 0~100V  | 0~200V  |
| Output current          | 0~60A                                                                                                                                      | 0~30A   | 0~20A   | 0~5A    | 0~5A    |
| Output power            | 900W                                                                                                                                       | 900W    | 1200W   | 500W    | 1000W   |
| Voltage resolution      | < 100V: 10mV; ≥100V: 100mV                                                                                                                 |         |         |         |         |
| Current resolution      | < 100A: 10mA ≥100A: 100mA                                                                                                                  |         |         |         |         |
| Power resolution        | < 10W: 1mW ≥10W: 10mW ≥100W: 0.1W ≥1000W: 1W                                                                                               |         |         |         |         |
| Time resolution         | S                                                                                                                                          |         |         |         |         |
| Output parameters       | Voltage stability: ≤± (0.2%+5digits) Current stability: ≤± (0.5%+5digits)<br>Load stability: ≤0.5% Ripple and noise: ≤1% (effective value) |         |         |         |         |
| Preset accuracy         | Output voltage preset accuracy: ± 0.1V output constant current preset accuracy: ± 0.1A                                                     |         |         |         |         |
| Operating environment   | Altitude: ≤2000m Ambient temperature: 5℃ to 40℃ Relative Humidity: < 80%                                                                   |         |         |         |         |
| Storage environment     | Ambient temperature: 0~70℃ Relative humidity: < 70%                                                                                        |         |         |         |         |
| Power input             | AC220V±10%, 50Hz                                                                                                                           |         |         |         |         |
| "Size"                  | 330(D)×250(W)×155(H)mm                                                                                                                     |         |         |         |         |
| Weight                  | About 5 kilograms                                                                                                                          |         |         |         |         |
| Communication interface | Standard configuration: RS485; Optional RS232/USB                                                                                          |         |         |         |         |



31560AC



33030AC

## MAIN FEATURES

- The LED digital display simultaneously shows the voltage and current output by the power supply, and the decimal point is automatically rounded up
- Automatic switching between voltage stabilization and current stabilization
- Output Independent on-off switch
- Overvoltage, overcurrent, overpower, over-temperature and short-circuit protection
- Each channel has 3 sets of quick parameter storage functions
- The voltage and current values can be preset in the output off state for convenient operation
- It is standardly equipped with three communication interfaces: USB, RS232 and RS485, and supports the MODBUS RTU protocol
- The temperature-controlled fan speed makes the instrument have low noise and the fan has a longer service life

## Technical data

| Model                            | 33010AC                                                   | 30605AC        |
|----------------------------------|-----------------------------------------------------------|----------------|
| Output voltage                   | 0~30V                                                     | 0~60V          |
| Output current                   | 0~10A                                                     | 0~5A           |
| Output power                     | 300W                                                      | 300W           |
| Voltage setting resolution       | 10mV                                                      | 10mV           |
| Current setting resolution       | < 10A: 1mA ≥10A: 10mA                                     | 1mA            |
| Voltage setting accuracy         | ≤0.1%+5digits                                             | ≤0.1%+5digits  |
| Current setting accuracy         | ≤0.2%+10digits                                            | ≤0.2%+10digits |
| Voltage ripple                   | ≤10mVrms                                                  | ≤15mVrms       |
| Current ripple                   | ≤10mArms                                                  | ≤15mArms       |
| Power regulation rate            | ≤0.2%Umax+5mV                                             | ≤0.1%Umax+5mV  |
| Load regulation rate             | ≤0.2%Umax+5mV                                             | ≤0.1%Umax+5mV  |
| Overvoltage protection threshold | 0V~33V                                                    | 0V~65V         |
| Overcurrent protection threshold | 0A~10.5A                                                  | 0A~5.5A        |
| Operating environment            | Ambient temperature: 0℃ to 40℃, relative humidity: ≤80%   |                |
| Storage environment              | Ambient temperature: -20℃ to 80℃, relative humidity: ≤80% |                |
| Power input                      | AC220V±10%, 50Hz                                          |                |
| Size                             | 330(D)×250(W)×155(H)mm                                    |                |
| Weight                           | About 5.5Kg                                               |                |
| Communication interface          | Standard configuration includes USB/RS232 / RS485         |                |



F33030A



F336020A

## MAIN FEATURES

- LED digital display, simply and intuitively showing the voltage, current, power and output equivalent resistance of the power supply output.
- Automatic switching between voltage stabilization and current stabilization
- It has an output control switch, making the control more flexible
- Overvoltage, overcurrent, overpower, over-temperature and short-circuit protection
- Convenient and fast operation interface
- The temperature-controlled fan speed makes the instrument have low noise and the fan has a longer service life
- The voltage and current values can be pre-designed in the output off state for convenient operation

## Technical data

| Model                      | F31560A                                                                                                                                    | F33030A | F36020A | F31005A | F32005A |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|---------|---------|---------|---------|
| Output voltage             | 0~15V                                                                                                                                      | 0~30V   | 0~60V   | 0~100V  | 0~200V  |
| Output current             | 0~60A                                                                                                                                      | 0~30A   | 0~20A   | 0~5A    | 0~5A    |
| Output power               | 900W                                                                                                                                       | 900W    | 1200W   | 500W    | 1000W   |
| Voltage resolution         | < 100V: 10mV; ≥100V: 100mV                                                                                                                 |         |         |         |         |
| Current resolution         | < 100A: 10mA ≥100A: 100mA                                                                                                                  |         |         |         |         |
| Power resolution           | < 10W: 1mW ≥10W: 10mW ≥100W: 0.1W ≥1000W: 1W                                                                                               |         |         |         |         |
| Load equivalent resistance | < 10R: 1mR ≥10R: 10mR                                                                                                                      |         |         |         |         |
| Display resolution         | ≥100R: 0.1R ≥1000R: 1R                                                                                                                     |         |         |         |         |
| Output parameters          | Voltage stability: ≤± (0.2%+5digits) Current stability: ≤± (0.5%+5digits)<br>Load stability: ≤0.5% Ripple and noise: ≤1% (effective value) |         |         |         |         |
| Preset accuracy            | Output voltage preset accuracy: ± 0.1V output constant current preset accuracy: ± 0.1A                                                     |         |         |         |         |
| Operating environment      | Altitude: ≤2000m Ambient temperature: 5℃ to 40℃ Relative Humidity: < 80%                                                                   |         |         |         |         |
| Storage environment        | Ambient temperature: 0-70℃ Relative humidity: < 70%                                                                                        |         |         |         |         |
| Power input                | AC220V±10%, 50Hz                                                                                                                           |         |         |         |         |
| Size                       | 330(D)×250(W)×155(H)mm                                                                                                                     |         |         |         |         |
| Weight                     | About 5 kilograms                                                                                                                          |         |         |         |         |
| Communication interface    | RS232/RS485/USB                                                                                                                            |         |         |         |         |



M1502A



M3010A



M6005A

## MAIN FEATURES

High-quality and highly stable economical DC regulated power supply, with LED four-digit voltage and current display, extremely high stability and strong reliability, is an ideal tool for colleges and universities, enterprise production lines, home appliance repair units, etc.

## Technical data

| Model                   |                         | M1502A                                      | M1505A | M1520A | M3010A | M6005A   | M10003A  |
|-------------------------|-------------------------|---------------------------------------------|--------|--------|--------|----------|----------|
| Output voltage          |                         | 0~15V                                       | 0~15V  | 0~15V  | 0~30V  | 0~60V    | 0~100V   |
| Output current          |                         | 0~2A                                        | 0~5A   | 0~20A  | 0~10A  | 0~5A     | 0~3A     |
| Output power            |                         | 0~30W                                       | 0~75W  | 0~300W | 0~300W | 0~300W   | 0~300W   |
| Voltage                 | Set the resolution      | <100V: 10mV;    ≥100V: 0.1V                 |        |        |        |          |          |
|                         | Set accuracy            | ≤0.1%+5digits                               |        |        |        |          |          |
|                         | Readback resolution     | <100V: 10mV;    ≥100V: 0.1V                 |        |        |        |          |          |
|                         | Readback accuracy       | ≤0.1%+5digits                               |        |        |        |          |          |
|                         | Temperature coefficient | ≤0.02%+3mV                                  |        |        |        |          |          |
| Ripple noise            |                         | ≤10mVrms                                    |        |        |        | ≤15mVrms | ≤18mVrms |
| Current                 | Set the resolution      | <10A: 1mA;    ≥10A: 10mA                    |        |        |        |          |          |
|                         | Set accuracy            | ≤0.2%+10digits                              |        |        |        |          |          |
|                         | Readback resolution     | <10A: 1mA;    ≥10A: 10mA                    |        |        |        |          |          |
|                         | Readback accuracy       | ≤0.2%+10digits                              |        |        |        |          |          |
|                         | Temperature coefficient | ≤0.02%+3mA                                  |        |        |        |          |          |
| Ripple noise            |                         | ≤10mAms                                     |        |        |        | ≤15mAms  | ≤18mAms  |
| Load regulation rate    |                         | <10A: ≤0.1%Umax+5mV;    ≥10A: ≤0.2%Umax+5mV |        |        |        |          |          |
| Power regulation rate   |                         | <10A: ≤0.1%Umax+5mV;    ≥10A: ≤0.2%Umax+5mV |        |        |        |          |          |
| Maximum voltage         |                         | 15.5V                                       | 15.5V  | 15.5V  | 32V    | 64V      | 102V     |
| Maximum current         |                         | 2.1A                                        | 5.1A   | 20.1A  | 10.1A  | 5.1A     | 3.1A     |
| Heat dissipation method |                         | Air-cooled                                  |        |        |        |          |          |
| Weight                  |                         | 2.0KG                                       |        |        |        |          |          |
| Size                    |                         | 230×80×150 (mm)                             |        |        |        |          |          |
| Working voltage         |                         | AC220V±10% 50Hz                             |        |        |        |          |          |
| Working conditions      |                         | 0 ~ 40 ℃    ≤80%RH                          |        |        |        |          |          |
| Storage conditions      |                         | -20 ~ 60 ℃    ≤80%RH                        |        |        |        |          |          |



M1502AC



M3010AC



M16005AC

## MAIN FEATURES

High-quality and highly stable economical DC regulated power supply, LED four-digit voltage and current display, and optional programming interface to achieve remote control or automatic control.

## Technical data

| Model                   | M1502AC                 | M1505AC        | M1520AC                                  | M3010AC | M6005AC  | M10003AC | M4020AC  | M8010AC | M16005AC            |
|-------------------------|-------------------------|----------------|------------------------------------------|---------|----------|----------|----------|---------|---------------------|
| Output voltage          | 0~15V                   | 0~15V          | 0~15V                                    | 0~30V   | 0~60V    | 0~100V   | 0~40V    | 0~80V   | 0~160V              |
| Output current          | 0~2A                    | 0~5A           | 0~20A                                    | 0~10A   | 0~5A     | 0~3A     | 0~20A    | 0~10A   | 0~5A                |
| Output power            | 0~30W                   | 0~75W          | 0~300W                                   | 0~300W  | 0~300W   | 0~300W   | 0~300W   | 0~300W  | 0~300W              |
| Voltage                 | Set the resolution      |                | <100V: 10mV; ≥100V: 0.1V                 |         |          |          | 10mV     |         | 100mV               |
|                         | Set accuracy            |                | ≤0.1%+5digits                            |         |          |          |          |         |                     |
|                         | Readback resolution     |                | <100V: 10mV; ≥100V: 0.1V                 |         |          |          | 10mV     |         | 100mV               |
|                         | Readback accuracy       |                | ≤0.1%+5digits                            |         |          |          |          |         |                     |
|                         | Temperature coefficient |                | ≤0.02%+3mV                               |         |          |          |          |         |                     |
| Current                 | Ripple noise            |                | ≤10mVrms                                 |         | ≤15mVrms | ≤18mVrms | ≤12mVrms |         |                     |
|                         | Set the resolution      |                | <10A: 1mA; ≥10A: 10mA                    |         |          |          | 10mV     |         | <10A:1mA; ≥10A:10mA |
|                         | Set accuracy            |                | ≤0.2%+10digits                           |         |          |          |          |         |                     |
|                         | Readback resolution     |                | <10A: 1mA; ≥10A: 10mA                    |         |          |          | 10mV     |         | <10A:1mA; ≥10A:10mA |
|                         | Readback accuracy       |                | ≤0.2%+10digits                           |         |          |          |          |         |                     |
| Load regulation rate    | Temperature coefficient |                | ≤0.02%+3mA                               |         |          |          |          |         |                     |
|                         | Ripple noise            |                | ≤10mArms                                 |         | ≤15mArms | ≤18mArms | ≤26mArms |         |                     |
|                         | Power regulation rate   |                | <10A: ≤0.1%Umax+5mV; ≥10A: ≤0.2%Umax+5mV |         |          |          |          |         |                     |
|                         | OVP                     |                | 0~16V                                    | 0~16V   | 0~16V    | 0~33V    | 0~65V    | 0~103V  | 0~611V              |
|                         | OCP                     |                | 0~2.5A                                   | 0~5.5A  | 0~20.5A  | 0~10.5A  | 0~5.5A   | 0~3.5A  | 0~20.5A             |
| Maximum voltage         |                         | 15.5V          | 15.5V                                    | 15.5V   | 32V      | 64V      | 102V     | 40.5V   | 80.5V               |
| Maximum current         |                         | 2.1A           | 5.1A                                     | 20.1A   | 10.1A    | 5.1A     | 3.1A     | 20.1A   | 10.1A               |
| Heat dissipation method |                         | Air-cooled     |                                          |         |          |          |          |         |                     |
| Weight                  |                         | ≤2.0KG         |                                          |         |          |          |          | ≤2.2KG  |                     |
| Size                    |                         | 230×80×150(mm) |                                          |         |          |          |          |         |                     |



P80205A

## MAIN FEATURES

- Ultra-thin body, portable and easy to use
- High resolution and high resolution 10mV / 1mA
- list waveform editing output, capable of editing up to 10 groups of timed output functions
- Low ripple noise
- Overvoltage/overcurrent protection function
- Output voltage and current curve monitoring function
- Intelligent temperature-controlled fan for cooling
- 2.8-inch TFT LCD display
- USB communication interface, supporting SCPI communication protocol

## Technical data

| Model                          | P30051A | P30102A                                                                          | P60102A    | P30103A    | P60103A    | P60053A    | P80104A     | P80205A     |
|--------------------------------|---------|----------------------------------------------------------------------------------|------------|------------|------------|------------|-------------|-------------|
| Rated output                   | Voltage | 0~30V                                                                            | 0~30V      | 0~60V      | 0~30V      | 0~60V      | 0~60V       | 0~80V       |
|                                | Current | 0~5A                                                                             | 0~10A      | 0~10A      | 0~10A      | 0~10A      | 0~5A        | 0~10A       |
|                                | Power   | 150W                                                                             | 200W       | 200W       | 300W       | 300W       | 300W        | 500W        |
| Load regulation rate           | Voltage | ≤30mV                                                                            |            |            |            |            |             | ≤20mV       |
|                                | Current | ≤30mA                                                                            |            |            |            |            |             | ≤10mA       |
| Power regulation rate          | Voltage | ≤20mV                                                                            |            |            |            |            |             | ≤20mV       |
|                                | Current | ≤20mA                                                                            |            |            |            |            |             | ≤10mA       |
| Set the resolution             | Voltage | 10mV                                                                             |            |            |            |            |             | 10mV        |
|                                | Current | 1mA                                                                              |            |            |            |            |             | 1mA         |
| Readback resolution            | Voltage | 10mV                                                                             |            |            |            |            |             | 10mV        |
|                                | Current | 1mA                                                                              |            |            |            |            |             | 1mA         |
| Set the accuracy               | Voltage | ≤0.1%±20mV                                                                       | ≤0.1%±30mV | ≤0.1%±20mV | ≤0.1%±30mV | ≤0.1%±30mV | ≤0.05%±20mV | ≤0.05%±20mV |
|                                | Current | ≤0.1%±10mA                                                                       | ≤0.1%±10mA | ≤0.1%±10mA | ≤0.1%±10mA | ≤0.1%±10mA | ≤0.05%±10mA | ≤0.05%±20mA |
| Readback accuracy              | Voltage | ≤0.1%±20mV                                                                       | ≤0.1%±30mV | ≤0.1%±20mV | ≤0.1%±30mV | ≤0.1%±30mV | ≤0.05%±20mV | ≤0.05%±20mA |
|                                | Current | ≤0.1%±10mA                                                                       | ≤0.1%±10mA | ≤0.1%±10mA | ≤0.1%±10mA | ≤0.1%±10mA | ≤0.05%±10mA | ≤0.05%±20mA |
| Ripple & Noise                 | Voltage | ≤30mV                                                                            | ≤50mV      | ≤30mV      | ≤50mV      | ≤50mV      | ≤50mV       | ≤50mV       |
|                                | Voltage | ≤3mV                                                                             | ≤5mV       | ≤3mV       | ≤5mV       | ≤5mV       | ≤15mV       |             |
|                                | Current | ≤30mA                                                                            |            |            |            |            |             |             |
| Output temperature coefficient | Voltage | 100ppm/°C                                                                        |            |            |            |            |             |             |
|                                | Current | 200ppm/°C                                                                        |            |            |            |            |             |             |
| Readback value                 | Voltage | 100ppm/°C                                                                        |            |            |            |            |             |             |
|                                | Current | 200ppm/°C                                                                        |            |            |            |            |             |             |
| Transient recovery time        |         | ≤1ms                                                                             |            |            |            |            |             | ≤5ms        |
| Communication interface        |         | USB communication, compatible with the SCPI communication protocol               |            |            |            |            |             |             |
| USB interface                  |         | 5V/1A charging                                                                   |            |            |            |            |             |             |
| Working temperature            |         | 0°C to 40°C                                                                      |            |            |            |            |             |             |
| Relative humidity              |         | ≤90%RH; No condensation                                                          |            |            |            |            |             |             |
| Storage temperature            |         | -20°C to 60°C                                                                    |            |            |            |            |             |             |
| Power supply                   |         | 220Vac±10%                                                                       |            |            |            |            |             |             |
| Display screen size            |         | 2.8-inch color LCD display (240 horizontal × 320 vertical pixels)                |            |            |            |            |             |             |
| Fuselage weight                |         | About 1.5 kilograms                                                              |            |            |            |            |             |             |
| Body size                      |         | 82mm×142mm×226mm                                                                 |            |            |            |            |             |             |
| Standard accessories           |         | Power cord, instruction manual, fuse, USB cable, alligator clip connection cable |            |            |            |            |             |             |

## Details :

Measuring Range : 0-1250 $\mu$ m, 0-50mils  
 Accuracy :  $\pm (3\%+2\mu\text{m}) / \pm (3\%+0.1\text{mils})$   
 Resolution : 1 $\mu$ m / 0.1mils  
 Three Calibration Ways: Zero point, Two point, Initialization.  
 The system errors can be modified promptly by calibration.  
 Measuring Mode : Single Measuring/Consecutive Measuring  
 Data Storage: store 99 sets of data in max.,  
 the data will be eliminated after power off.  
 Digital readout display shows at 180 degrees rotation  
 Buzzer Indication Function  
 Metric-Inch Switch Function  
 Low Battery Indication Function  
 Auto Power Off Function  
 Battery : 3V  
 Product Net Weight : 68g  
 Product Size : 100\*52\*29mm  
 Operation Temperature : 0~+50 $^{\circ}$ C (+32 ~ +120 $^{\circ}$ F)



852A



852E

Thickness Meter

**MODEL: VICTOR 852E**

Specification:

Measurement Range: 0-1250 $\mu$ m / 0-50mil  
 Resolution: 0.1 $\mu$ m / 0.1mil  
 Accuracy:  $\pm(2\%+2\mu\text{m}) / \pm(2\%+0.1\text{mil})$   
 Product Size: 166\*68\*30mm 6.5\*2.5\*1 inch  
 Product Weight: 180g/ 0.4lb (with batteries)  
 Operation Temperature: -10 to +50 $^{\circ}$ C (+12 to +122 $^{\circ}$ F)  
 Note: Only take measurement after the probe of the instrument reaches environment temperature. Please disregard the first several reading if you are not sure whether the probe is stable under current environment temperature

**Model: VICTOR 852C+**

Product Name: Ultrasonic Thickness Meter

**Details:**

Measuring Range: 1.5-200mm  
 Accuracy: 0.5%H+0.1  
 Resolution: 0.1m  
 Sound Velocity Range: 500~9000m/s  
 Operation Frequency: 5MHz.  
 Sensor: Ultrasonic 5MHz $\Phi$ 10  
 Automatically memorize material code and sound velocity.  
 Low Battery Indication Function  
 Auto Power Off Function  
 Battery: 3V(2\*1.5V) AAA Battery  
 Product Net Weight: 220g  
 Product Size: 147\*72\*35mm



852C+

|                                                                      |                                                                                                                                                                    |
|----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                      | 6800                                                                                                                                                               |
| <b>Range</b>                                                         | 0.00mA~1200A                                                                                                                                                       |
| <b>Resolution</b>                                                    | 0.01mA                                                                                                                                                             |
| <b>Accuracy</b> ( 23 $^{\circ}$ C $\pm$ 3 $^{\circ}$ C, below 70%RH) | 0.00mA~59.9A: $\pm 1.5\%\pm 5\text{dgt}$<br>60.00A~199A: $\pm 2\%\pm 5\text{dgt}$<br>200.0A~599A: $\pm 3\%\pm 5\text{dgt}$<br>600A~1200A: $\pm 4\%\pm 5\text{dgt}$ |
| <b>Power</b>                                                         | Zn-Mn dry battery, 6F22, 9V                                                                                                                                        |
| <b>Size of jaw</b>                                                   | $\Phi$ 68mm                                                                                                                                                        |
| <b>Sampling Rate</b>                                                 | about 2 times/s                                                                                                                                                    |
| <b>USB Interface</b>                                                 | Data stored in the memory of the meter via USB upload to PC, or on-line monitoring                                                                                 |
| <b>Storage</b>                                                       | 99units, all used when display FULL                                                                                                                                |
| <b>Peak Hold</b>                                                     | Push HOLD without release, the meter will show the peak value during the pushing period                                                                            |
| <b>Reading Hold</b>                                                  | DH indicating when the reading is hold                                                                                                                             |
| <b>Out of Range</b>                                                  | OL indicating when the current is out of range                                                                                                                     |
| <b>Working Current</b>                                               | 5mA                                                                                                                                                                |
| <b>Line Voltage</b>                                                  | circuit test below AC1600V                                                                                                                                         |
| <b>Range Shift</b>                                                   | Automatically                                                                                                                                                      |



6800

|                                   |                                                                                                                                                                   |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                   | 690                                                                                                                                                               |
| <b>Power Source</b>               | Zinc-manganese dry battery 6F22 9V                                                                                                                                |
| <b>Test Mode</b>                  | Flexible CT: the output signal is the differential of the current to the time. By integrating the output voltage signal, the input current can be truly restored. |
| <b>Coil Diameter</b>              | 200mm diameter                                                                                                                                                    |
| <b>Range</b>                      | AC 0.00A~9999A                                                                                                                                                    |
| <b>Resolution</b>                 | AC 10mA                                                                                                                                                           |
| <b>Accuracy</b>                   | $\pm 2\%+3\text{dgt}$ (The wire is in the center of the flexible coil, 23 $^{\circ}$ C $\pm$ 2 $^{\circ}$ C)                                                      |
| <b>Coil thickness</b>             | 7.5mm (Very suitable for narrow environments and places with dense wiring)                                                                                        |
| <b>Measured Current Frequency</b> | 50Hz/60Hz (automatic identification)                                                                                                                              |
| <b>Data Storage</b>               | 99units, all used when display FULL                                                                                                                               |
| <b>Peak Value Hold</b>            | Push HOLD without release, the meter will show the peak value during the pushing period, display $\blacktriangle$                                                 |
| <b>Data Hold</b>                  | DH indicating the reading is hold                                                                                                                                 |
| <b>Line Voltage</b>               | circuit test below AC1600V                                                                                                                                        |



690





**7100/7100A**

Clamp Leaker

|                                                                                                  | 7100                                                                                                    | 7100A          |
|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|----------------|
| <b>Range</b>                                                                                     | AC 0.0mA~3200A                                                                                          | AC 0.0mA~4000A |
| <b>Resolution</b>                                                                                | AC 0.1mA                                                                                                | AC 0.1A        |
| <b>Measurement Accuracy</b><br>(23°C±3°C, below 70%RH, measured wire at the center of the clamp) | AC 0.0mA~499A ±2%±5dgt<br>AC 500A~999A ±3%±5dgt<br>AC 1000A~2999A ±4%±5dgt<br>AC 3000A~4000A ±5%±5dgt   |                |
| <b>Power</b>                                                                                     | 6V DC(LR6×4 alkaline dry batteries, continuously working for 12 hours)                                  |                |
| <b>Weight of Meter</b>                                                                           | 1.5kg (with batteries)                                                                                  |                |
| <b>Dimension</b>                                                                                 | Length 350mm * width 180mm * thickness 55mm                                                             |                |
| <b>Clamp Size</b>                                                                                | 108mm×148mm (can clamp electric cable of 108mm diameter, or 160mm×4mm flat cable and steel earth wires) |                |
| <b>Sample Rate</b>                                                                               | About 2 times/second                                                                                    |                |
| <b>Frequency</b>                                                                                 | 50Hz ,60Hz automatic identification                                                                     |                |
| <b>Communication Wire</b>                                                                        | RS232 communication wire, 1.8m                                                                          |                |
| <b>Data Storage</b>                                                                              | 99 sets, "FULL" symbol indicate the memory is full                                                      |                |
| <b>Data Hold</b>                                                                                 | "HOLD" symbol appears                                                                                   |                |
| <b>Overflow</b>                                                                                  | "OL" symbol appears                                                                                     |                |



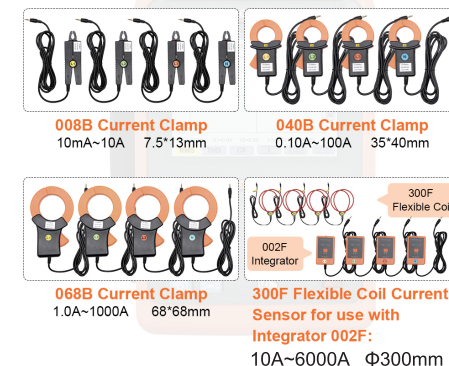
**7100B**

Clamp Leaker

|                               | 7100B                                                                                                                                                    |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Function</b>               | ACA, leakage current, load current on-line test, suitable for electricity leakage patrol inspection of down hole and outdoor multi-conductor thick cable |
| <b>Power Source</b>           | DC 3.7V chargeable lithium battery, USB charging portal, working continuously for 10h                                                                    |
| <b>Display Mode</b>           | Four digital LCD display, backlight function, suitable for dark place                                                                                    |
| <b>Tested Line Diameter</b>   | Φ168mm Conductor, cable or 168mm×245mm bus bar                                                                                                           |
| <b>Measurement Range</b>      | Current: AC 10mA~9999A(50~60Hz automatically)                                                                                                            |
| <b>Resolution</b>             | 10mA                                                                                                                                                     |
| <b>Current Accuracy</b>       | 10mA~999A, ±2%±5dgt<br>1000A~2999A, ±3%±5dgt<br>3000A~9999A, ±4%±5dgt                                                                                    |
| <b>Size of Insulation Rod</b> | 300mm                                                                                                                                                    |
| <b>Instrument Size</b>        | Length width thickness 310mm×270mm×52mm                                                                                                                  |
| <b>Line Voltage</b>           | bare wire test 1000V below, less than 110kV with a safety insulation sheath wire. (operating with an insulation rod)                                     |
| <b>Automatic Shutdown</b>     | About 15mins after startup, the instrument will be automatically shut down to reduce battery consumption                                                 |
| <b>Instrument Mass</b>        | Instrument: 496g(include battery); Total mass: 2.3kg (including insulation rod and instrument box)                                                       |



## OPTIONAL CURRENT CLAMP



**5000**

## Basic function

- ★ Waveform real-time display (4 channels voltage/4 channels current).
- ★ True RMS values of voltages and currents.
- ★ The DC components of voltages.
- ★ Peak current and voltage values.
- ★ Minimum and maximum half-cycle RMS current and voltage values.
- ★ Pharos diagram display.
- ★ Measurement of each harmonic up to order 50.
- ★ Bar charts show harmonic ratios of current and voltage of each phase.
- ★ Total harmonic distortion (THD).
- ★ Active, reactive, apparent power, by phase and cumulative.
- ★ Active, reactive, apparent energy, by phase and cumulative.
- ★ Transformer K factor.
- ★ Power factors (PF) and displacement factors (DPF or COSΦ).
- ★ Short-term voltage flicker (PST).
- ★ Three phase unbalance(current and voltage).

| Basic Function                                 | 5000                                   | Base condition                      | Working condition |
|------------------------------------------------|----------------------------------------|-------------------------------------|-------------------|
| <b>Environment temperature</b>                 | All parameters                         | (23±2)°C                            | -10°C~ 40°C       |
| <b>Relative humidity</b>                       | All parameters                         | 40%~ 60%                            | <80%              |
| <b>Phase-to-neutral voltage</b>                | All parameters                         | (100±1%)V                           | 1.0V~ 1000V       |
| <b>Phase-to-phase voltage</b>                  | True RMS phase-to-phase voltage        | (200±1%)V                           | 1.0V~ 2000V       |
| <b>Current</b>                                 | True RMS current                       | (5±1%)A                             | 10mA~ 1000A       |
| <b>Network frequency</b>                       | All parameters                         | 50Hz±0.1Hz                          | 40Hz~ 70Hz        |
| <b>Phase shift</b>                             | Active power and active energy         | Cosφ=1                              | Cosφ: 0.2~ 1.0    |
|                                                | Reactive power and reactive energy     | Sinφ=1                              | Sinφ: 0.2~ 1.0    |
| <b>Harmonic</b>                                | All parameters                         | <0.1%                               | 0.0%~ 100%        |
| <b>Voltage unbalance</b>                       | All parameters                         | <10%                                | 0.0%~ 100%        |
| <b>Working voltage of device</b>               | All parameters                         | DC9.8V±0.1V                         | DC9.5V~ 10.5V     |
| <b>External electric field, magnetic field</b> | All parameters                         | Should be avoided                   |                   |
| <b>Test position</b>                           | Measured related parameters of current | Tested wire at the center of clamp. |                   |

| General specification                | 5000                                                                                                                                                                                                                                                                                                    |
|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Power supply</b>                  | Rechargeable lithium-ion battery packs 9.6V, backup charger.                                                                                                                                                                                                                                            |
| <b>Battery indicator</b>             | Battery symbol  shows dump energy. When the voltage is too low, automatic shutdown after the 1 minute.                                                                                                                                                                                                  |
| <b>Power consumption</b>             | Current consumption of normal test 490 mA, continuous working for 8 hours.                                                                                                                                                                                                                              |
| <b>Display mode</b>                  | LCD color screen, 640dots×480dots, 5.6 inches, display domain: 116mm×88mm.                                                                                                                                                                                                                              |
| <b>Size of clamp</b>                 | 008B small sharp current clamp: 7.5mm×13mm; 040Bcircle current clamp: 35mm×40mm;<br>068Bcircle current clamp: 68mm×68mm. 300F Flexible Coil Current Sensor (with Integrator) : Φ300mm                                                                                                                   |
| <b>Instrument dimensions</b>         | L×W×H: 240mm×170mm×68 mm.                                                                                                                                                                                                                                                                               |
| <b>Number of channels</b>            | 4U/4I.                                                                                                                                                                                                                                                                                                  |
| <b>Phase-to phase voltage</b>        | 1.0V~2000V.                                                                                                                                                                                                                                                                                             |
| <b>Phase-to-neutral voltage</b>      | 1.0V~1000V.                                                                                                                                                                                                                                                                                             |
| <b>Current</b>                       | 008B current clamp: 10mA~10.0A; 040B current clamp: 0.10A~100A;<br>068B current clamp: 1.0A~1000A; 300F Flexible Coil Current Sensor (with Integrator) : 10A ~ 6000A                                                                                                                                    |
| <b>Frequency</b>                     | 40Hz~70Hz.                                                                                                                                                                                                                                                                                              |
| <b>Parameters of electricity</b>     | W, VA, Var, PF, DPF, cosφ, tanφ.                                                                                                                                                                                                                                                                        |
| <b>Energy parameters</b>             | Wh, Varh, Vah.                                                                                                                                                                                                                                                                                          |
| <b>Harmonic</b>                      | Order 0~50.                                                                                                                                                                                                                                                                                             |
| <b>Total harmonic distortion</b>     | Order 0~50, each phase.                                                                                                                                                                                                                                                                                 |
| <b>Expert mode</b>                   | Yes.                                                                                                                                                                                                                                                                                                    |
| <b>Number of Transient records</b>   | 150 sets.                                                                                                                                                                                                                                                                                               |
| <b>Voltage flicker</b>               | Yes.                                                                                                                                                                                                                                                                                                    |
| <b>Starting current mode</b>         | Yes, 100 seconds.                                                                                                                                                                                                                                                                                       |
| <b>3 phases unbalance</b>            | Yes.                                                                                                                                                                                                                                                                                                    |
| <b>Record</b>                        | 300 days(simultaneous recording 20 parameters, record one point every 5 seconds).                                                                                                                                                                                                                       |
| <b>Min/Max recorded value</b>        | Measurement of maximum and minimum values over a period of time.                                                                                                                                                                                                                                        |
| <b>Alarm</b>                         | 40 different types of parameter selections, 12,800 sets alarm logs.                                                                                                                                                                                                                                     |
| <b>Peak</b>                          | Yes.                                                                                                                                                                                                                                                                                                    |
| <b>Phasor diagram display</b>        | Automatically.                                                                                                                                                                                                                                                                                          |
| <b>Capacity of snapshots</b>         | 60.                                                                                                                                                                                                                                                                                                     |
| <b>Menu language</b>                 | English/Chinese.                                                                                                                                                                                                                                                                                        |
| <b>Communication</b>                 | USB.                                                                                                                                                                                                                                                                                                    |
| <b>Automatic switching off</b>       | When an alarm campaign is initiated or a search for transients, an inrush current capture, or a trend recording is pending or in progress,the device is not automatic switching off.<br>In other test mode, 15 minutes without keystrokes, automatic shutdown after prompt 1 minute.                    |
| <b>Backlight function</b>            | Yes, suitable for use at night and dark place.                                                                                                                                                                                                                                                          |
| <b>Weight</b>                        | Host: 1.6kg (with battery).<br>008B small sharp current clamp: 170g×4;<br>040Bcircle current clamp: 190g×4;<br>068Bcircle current clamp: 510g×4;<br>300F Flexible Coil Current Sensor (with Integrator) : 330g×4;<br>Test wires and power adapter: 900g;<br>Total weight: about 9.2kg (with packaging). |
| <b>Length of voltage test wire</b>   | 3m.                                                                                                                                                                                                                                                                                                     |
| <b>Length of current sensor wire</b> | 2m.                                                                                                                                                                                                                                                                                                     |
| <b>Input impedance</b>               | Input impedance of test voltage:1MΩ.                                                                                                                                                                                                                                                                    |
| <b>Withstand voltage</b>             | Withstand 3700V/50Hz sinusoidal AC voltage for 1 minute between instrument wiring and shell.                                                                                                                                                                                                            |
| <b>Insulation</b>                    | Between instrument wiring and shell ≥10MΩ.                                                                                                                                                                                                                                                              |



5000B

Power Quality Analyser

## Current sensor character

| Type of current senso                                       | True RMS current            | Max error of true RMS current  | Max error of phase angle |
|-------------------------------------------------------------|-----------------------------|--------------------------------|--------------------------|
| <b>FR008 current clamp</b>                                  | 10mA~ 99mA<br>100mA~ 10.0A  | ±(1%+3dgt)<br>±(1%+3dgt)       | ±(1.5°)<br>±(1°)         |
| <b>FR020 current clamp</b>                                  | 0.10A~ 0.99A<br>1.00A~ 100A | ±(1%+3dgt)<br>±(1%+3dgt)       | ±(1.5°)<br>±(1°)         |
| <b>FR050 current clamp</b>                                  | 1.0A~ 9.9A<br>10.0A~ 1000A  | ±(2%+3dgt)<br>±(2%+3dgt)       | ±(3°)<br>±(2°)           |
| <b>FR300RFlexible Coil Current Sensor (with Integrator)</b> | 10A ~ 199A<br>200A~6000A    | ±(1 % + 3dgt)<br>±(1 % + 3dgt) | ±(3°)<br>±(2°)           |



**Small cusp**  
8mmx 15mm  
168gx4



**Round mouth**  
20mmx 20mm  
252gx4



**Round mouth**  
50mmx 50mm  
463gx4



**Flexible coil (with integrator)**  
Φ300mm  
280gx4

| Basic Function                     | 5000B                                                                                                                                                                                           |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Power supply</b>                | Rechargeable lithium-ion battery packs 9.6V, backup charger.                                                                                                                                    |
| <b>Battery indicator</b>           | Battery symbol  shows dump energy. When the voltage is too low, automatic shutdown after the 1 minute.                                                                                          |
| <b>Power consumption</b>           | Current consumption of normal test 490 mA, continuous working for 10 hours.                                                                                                                     |
| <b>Display mode</b>                | LCD color screen, 640dots×480dots, 5.6 inches, display domain: 116mm×88mm.                                                                                                                      |
| <b>Size of clamp</b>               | FR008 small sharp current clamp: 8mm×15mm;<br>FR020circle current clamp: 20mm×20mm;<br>FR050 circle current clamp: 50mm×50mm.<br>FR300R Flexible Coil Current Sensor (with Integrator) : Φ300mm |
| <b>Instrument dimensions</b>       | L×W×H: 277.2mm × 227.5mm × 153mm.                                                                                                                                                               |
| <b>Number of channels</b>          | 4U/4I.                                                                                                                                                                                          |
| <b>Phase-to phase voltage</b>      | 1.0V~2000V.                                                                                                                                                                                     |
| <b>Phase-to-neutral voltage</b>    | 1.0V~1000V.                                                                                                                                                                                     |
| <b>Current</b>                     | FR008 current clamp: 10mA~10.0A;<br>FR020 current clamp: 0.10A~100A;<br>FR050 current clamp: 1.0A~1000A;<br>FR300R Flexible Coil Current Sensor (with Integrator) : 10A ~ 6000A                 |
| <b>Frequency</b>                   | 40Hz~70Hz.                                                                                                                                                                                      |
| <b>Parameters of electricity</b>   | W, VA, Var, PF, DPF, cosφ, tanφ.                                                                                                                                                                |
| <b>Energy parameters</b>           | Wh, Varh, Vah.                                                                                                                                                                                  |
| <b>Harmonic</b>                    | Order 0~50.                                                                                                                                                                                     |
| <b>Total harmonic distortion</b>   | Order 0~50, each phase.                                                                                                                                                                         |
| <b>Expert mode</b>                 | Yes.                                                                                                                                                                                            |
| <b>Number of Transient records</b> | 150 sets.                                                                                                                                                                                       |
| <b>Voltage flicker</b>             | Yes.                                                                                                                                                                                            |
| <b>Starting current mode</b>       | Yes, 100 seconds.                                                                                                                                                                               |
| <b>3 phases unbalance</b>          | Yes.                                                                                                                                                                                            |
| <b>Record</b>                      | 300 days(simultaneous recording 20 parameters, record one point every 5 seconds).                                                                                                               |
| <b>Min/Max recorded value</b>      | Measurement of maximum and minimum values over a period of time.                                                                                                                                |
| <b>Alarm</b>                       | 40 different types of parameter selections, 12,800 sets alarm logs.                                                                                                                             |
| <b>Peak</b>                        | Yes.                                                                                                                                                                                            |

|                                  |                                                                                                                                                                                                                                                                                                                 |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Phasor diagram display           | Automatically.                                                                                                                                                                                                                                                                                                  |
| Capacity of snapshots            | 60.                                                                                                                                                                                                                                                                                                             |
| Menu language                    | English/Chinese.                                                                                                                                                                                                                                                                                                |
| Communication                    | USB.                                                                                                                                                                                                                                                                                                            |
| Automatic switching off          | When an alarm campaign is initiated or a search for transients, an inrush current capture, or a trend recording is pending or in progress, the device is not automatic switching off.<br>In other test mode, 15 minutes without keystrokes, automatic shutdown after prompt 1 minute.                           |
| Backlight function               | Yes, suitable for use at night and dark place.                                                                                                                                                                                                                                                                  |
| Weight                           | Host: 1.6kg (with battery).<br>FR008 small sharp current clamp: 168g×4;<br>FR020 circle current clamp: 252g×4;<br>FR050 circle current clamp: 463g×4;<br>FR300R Flexible Coil Current Sensor (with Integrator) : 280g×4;<br>Test wires and power adapter: 800g;<br>Total weight: about 10.8kg (with packaging). |
| Length of voltage test wire      | 3m.                                                                                                                                                                                                                                                                                                             |
| Length of current sensor wire    | 2m.                                                                                                                                                                                                                                                                                                             |
| Working temperature and humidity | -10°C~40°C; below 80%Rh.                                                                                                                                                                                                                                                                                        |
| Storage temperature and humidity | -10°C~60°C; below 70%Rh.                                                                                                                                                                                                                                                                                        |
| Input impedance                  | Input impedance of test voltage: 1MΩ.                                                                                                                                                                                                                                                                           |
| Withstand voltage                | Withstand 3700V/50Hz sinusoidal AC voltage for 1 minute between instrument wiring and shell.                                                                                                                                                                                                                    |
| Insulation                       | Between instrument wiring and shell ≥10MΩ.                                                                                                                                                                                                                                                                      |
| Structure                        | Double insulation, with insulation vibration-proof sheath.                                                                                                                                                                                                                                                      |
| Safely rules                     | IEC 61010 1000V Cat III / 600V CAT IV, IEC61010-031, IEC61326, Pollution degree: 2.                                                                                                                                                                                                                             |

| Measurement                               | Range                  | Display resolution       | The maximum error in the range of the reference                                                    |
|-------------------------------------------|------------------------|--------------------------|----------------------------------------------------------------------------------------------------|
| Frequency                                 | 40Hz~ 70Hz             | 0.01Hz                   | ±(0.03)Hz                                                                                          |
| True RMS phase-to-neutral voltage         | 1.0V~ 1000V            | Min resolution 0.1V      | ±(0.5%+5dgt)                                                                                       |
| True RMS phase-to-phase voltage           | 1.0V~ 2000V            | Min resolution 0.1V      | ±(0.5%+5dgt)                                                                                       |
| DC voltage                                | 1.0V~ 1000V            | Min resolution 0.1V      | ±(1.0%+5dgt)                                                                                       |
| True RMS current                          | 10mA~ 6000A            | Min resolution 1mA       | ±(0.5%+5dgt)                                                                                       |
| Peak of phase-to-neutral voltage          | 1.0V~ 1414V            | Min resolution 0.1V      | ±(1.0%+5dgt)                                                                                       |
| Peak of phase-to-phase voltage            | 1.0V~ 2828V            | Min resolution 0.1V      | ±(1.0%+5dgt)                                                                                       |
| Current peak                              | 10mA~ 8484A            | Min resolution 1mA       | ±(1.0%+5dgt)                                                                                       |
| Peak factor                               | 1.00~ 3.99             | 0.01                     | ±(1%+2dgt)                                                                                         |
|                                           | 4.00~ 9.99             | 0.01                     | ±(5%+2dgt)                                                                                         |
| Active power                              | 0.000W~ 9999.9kW       | Min resolution 0.001W    | ±(1%+3dgt)Cosφ≥0.8<br>±(1.5%+10dgt)0.2≤Cosφ<0.8<br>±(1%+3dgt)Sinφ≥0.5<br>±(1.5%+10dgt)0.2≤Sinφ<0.5 |
| Reactive power, inductive or capacitive   | 0.000VAR~ 9999.9kVAR   | Min resolution 0.001VAR  | ±(1%+3dgt)Cosφ≥0.8<br>±(1.5%+10dgt)0.2≤Cosφ<0.8<br>±(1%+3dgt)Sinφ≥0.5<br>±(1.5%+10dgt)0.2≤Sinφ<0.5 |
| Apparent power                            | 0.000VA~ 9999.9kVA     | Min resolution 0.001VA   | ±(1%+3dgt)                                                                                         |
| Power factor                              | -1.000~ 1.000          | 0.001                    | ±(1.5%+3dgt)Cosφ≥0.5<br>±(1.5%+10dgt)0.2≤Cosφ<0.5                                                  |
| Active energy                             | 0.000Wh~ 9999.9MWh     | Min resolution 0.001Wh   | ±(1%+3dgt)Cosφ≥0.8<br>±(1.5%+10dgt)0.2≤Cosφ<0.8<br>±(1%+3dgt)Sinφ≥0.5<br>±(1.5%+10dgt)0.2≤Sinφ<0.5 |
| Reactive energy, inductive or capacitive  | 0.000VARh~ 9999.9MVARh | Min resolution 0.001VARh | ±(1%+3dgt)Cosφ≥0.8<br>±(1.5%+10dgt)0.2≤Cosφ<0.8<br>±(1%+3dgt)Sinφ≥0.5<br>±(1.5%+10dgt)0.2≤Sinφ<0.5 |
| Papparent energy                          | 0.000VAh~ 9999.9MVAh   | Min resolution 0.001VAh  | ±(1%+3dgt)                                                                                         |
| Phase angle                               | -179°~ 180°            | 1°                       | ±(2°)                                                                                              |
| Tanφ(VA>50VA)                             | -32.76~ 32.76          | Min resolution 0.001     | φ:±(1°)                                                                                            |
| Phase shift of power factor (DPF)         | -1.000~ 1.000          | 0.001                    | φ:±(1°)                                                                                            |
| Harmonic ratio (order 1 to 50) (Vrms>50V) | 0.0%~ 99.9%            | 0.1%                     | ±(1%+5dgt)                                                                                         |
| Harmonic angle (Vrms>50V)                 | -179°~ 180°            | 1°                       | ±(3°) harmonics 1 to 25<br>±(10°) harmonics 26 to 50                                               |
| Total harmonic ratio (THD or THD-F)≤50    | 0.0%~ 99.9%            | 0.1%                     | ±(1%+5dgt)                                                                                         |
| Distortion factor (DF or THD-R)≤50        | 0.0%~ 99.9%            | 0.1%                     | ±(1%+10dgt)                                                                                        |
| Transformer K factor                      | 1.00~ 99.99            | 0.01                     | ±(5%)                                                                                              |
| 3 phases unbalance                        | 0.0%~ 100%             | 0.1%                     | ±(1%)                                                                                              |



528A/538A

| Model                        | 528A                                                                                                                                                 | 538A                                      |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| Frequency analysis bandwidth | 100Hz~2000Hz                                                                                                                                         | 100Hz~3000Hz                              |
| Frequency division           | a: 100 Hz b: 200 Hz c: 400 Hz                                                                                                                        | a: 100 Hz b: 200 Hz c: 400 Hz             |
| (Center frequency)           | d: 800 Hz e: 1K Hz f: 1.5K Hz<br>g: 2K Hz                                                                                                            | d: 800 Hz e: 1K Hz f: 1.5K Hz<br>g: 3K Hz |
| Max. detection depth         | 2m                                                                                                                                                   | 3m                                        |
| All-pass                     | It can pick up a wide range of sound in the surrounding environment, and it is recommended to use in a relatively quiet environment.                 |                                           |
| Bandpass 1                   | The frequency range is adjustable, can effectively improve the accuracy and efficiency of use. It is recommended to use in a loud noise environment. |                                           |
| Bandpass 2                   | Only the center frequency is adjustable, it is recommended to use in a loud noise environment.                                                       |                                           |
| Real-time mode               | Waveform display                                                                                                                                     |                                           |
| Frequency domain mode        | Bar graph display.                                                                                                                                   |                                           |
| Gain mode                    | Adjustable signal magnification                                                                                                                      |                                           |
| Set up                       | Time and date can be set as required.                                                                                                                |                                           |
| Volume adjustment            | The volume can be adjusted by the keys "+" and "-"                                                                                                   |                                           |
| Vibration Pickup Assembly A  | Triangle sensor, suitable for water leakage detection in most indoor and outdoor environments such as the ground                                     |                                           |
| Vibration Pickup Assembly B  | Small cylindrical sensor, suitable for leak detection in small indoor spaces such as walls and under cabinets                                        |                                           |
| Battery time                 | Power supply working time ≥ 35 hours after the battery is fully charged                                                                              |                                           |
| Operation temperature        | -10°C~+50°C                                                                                                                                          |                                           |
| Storage temperature          | -10°C~+70°C                                                                                                                                          |                                           |
| Power                        | 4800mAh rechargeable lithium battery                                                                                                                 |                                           |
| Screen                       | 7 inch color LCD screen.                                                                                                                             |                                           |
| Size                         | (L×W×D) : 270×169×68mm.                                                                                                                              |                                           |
| Weight                       | Host 0.77kg (including battery, excluding accessories)                                                                                               |                                           |



518

## Water Pipe Leak Detector

Water Leak Detector is a special instrument for searching and confirming the location of water pipe leak. It can also be used for other pressure pipe system. When the liquid in pipe overflows under pressure, noise can propagate along the pipe or spread to the ground through buried media, our instrument can confirm the location of leaks along the pipeline or above the ground surface.

## MODEL: 518

### Specification

Maximum scanning depth  
Ferrous metal: 110mm  
Non-ferrous metals: 110mm  
Copper conductors (Live): 50mm  
Wood: 25mm  
Working temperature: -10°C ~ +50°C  
Storage temperature: -20°C ~ +70°C  
Humidity: ≤75% Altitude: ≤2000m  
Battery: 3\*1.5V AAA  
Dimensions: 185\*85\*33mm  
Weight: 180g

Mode 5001  
Technical Parameters  
1.Measuring range: 4°90°  
2.Resolution: 0.05°  
3.Accuracy: ±0.2°  
4.Repeatability: 0.1°  
5.Battery: AAA×2 battery  
6.Working temperature: 0°C~40°C  
7. Convenient to be attached to the object Measuring workpiece  
8.Absolute zero measurement based on the level surface  
9.Dimension: 57\*57\*30.5mm; N.Weight: 200g



**5001/5003**

Digital Inclinometer

Mode 5003  
Technical Parameters  
1.Measuring range: 4°90°  
2.Resolution: 0.05°  
3.Accuracy: ±0.2°  
4.Repeatability: 0.1°  
5.Battery: AAA×2 battery  
6.Working temperature: 0°C~40°C  
7. Convenient to be attached to the object Measuring workpiece  
8.Absolute zero measurement based on the level surface  
9.Dimension: 61\*59\*31mm; N.Weight: 200g

## DIGITAL PROTRACTOR

Accuracy 0 and 90° ≤ 0.10°  
Other degree ≤ 0.15°  
Resolution 0.05°  
Range 4° 90° (0~360°)  
Repeatability ≤ 0.10°  
Battery 3V (2 pieces AAA battery)  
Working current ≤ 8mA  
Working temperature 0~40°C  
Relative humidity ≤ 80%  
Automatic readout flipping right side up for the convenient reading when the protractor is upside down.



**5005/5006**

Digital Protractor

| Model                  | 5150                                          | 5200           | 5300           |
|------------------------|-----------------------------------------------|----------------|----------------|
| Measurement range      | 150mm/6"                                      | 200mm/8"       | 300mm/12"      |
| Accuracy               | 0.01mm/0.0005"                                | 0.01mm/0.0005" | 0.01mm/0.0005" |
| L                      | 235mm                                         | 287mm          | 390mm          |
| A                      | 40mm                                          | 50mm           | 60mm           |
| B                      | 21mm                                          | 24mm           | 27mm           |
| C                      | 16mm                                          | 16mm           | 16mm           |
| D                      | 3.5mm                                         | 3.5mm          | 4.0mm          |
| Repeatability          | 0.01mm/0.0005"                                |                |                |
| Max. measurement speed | 3 m/s                                         |                |                |
| Operating temperature  | 0°C~40°C                                      |                |                |
| Power                  | SR44(silver oxide cell) 1.5V 1 battery        |                |                |
| Average battery life   | The warranty is above 1 year under normal use |                |                |



**5150/5200/5300**

Digital Caliper

Measurement range: 0-150mm  
Resolution (mm): 0.01  
Measurement speed: ≤ 1.5m/s  
Power Supply: LR44 1.5V Battery  
Operating humidity: <80%  
Operating temperature: 0~+40°C  
Storage temperature: -10~+60°C



**New Model**

**5150S**

MODEL: YITENSEN 10N/50N/100N/200N/300N/500N  
Main technical parameters

| Main technical parameters        |                                         |      |      |              |      |       |
|----------------------------------|-----------------------------------------|------|------|--------------|------|-------|
| The max. Load value              | 10N                                     | 50N  | 100N | 200N         | 300N | 500N  |
|                                  | 1kg                                     | 5kg  | 10kg | 20kg         | 30kg | 50kg  |
|                                  | 2.2Lb                                   | 11Lb | 22Lb | 45Lb         | 65Lb | 110Lb |
| Load Value                       | 0.01N                                   |      |      | 0.1N         |      |       |
|                                  | 0.001KG                                 |      |      | 0.01KG       |      |       |
|                                  | 0.001Lb                                 |      |      | 0.01Lb       |      |       |
| The sensor                       | Sensor inside                           |      |      |              |      |       |
| Precision                        | ±0.5%                                   |      |      |              |      |       |
| Power                            | 3.7V lithium battery                    |      |      |              |      |       |
| Charging time                    | 4~6 hours                               |      |      |              |      |       |
| Continuous usage time of battery | About 15 hours                          |      |      |              |      |       |
| Battery life                     | ≥ 300 times                             |      |      |              |      |       |
| Charger                          | Input: AC220V 50Hz                      |      |      | Output:DC 5V |      |       |
|                                  | 1000mA                                  |      |      |              |      |       |
| Working temperature              | 5℃ ~35℃                                 |      |      |              |      |       |
| Transportation temperature       | -10℃ ~60℃                               |      |      |              |      |       |
| Relative humidity                | 15%~80%RH                               |      |      |              |      |       |
| Work environment                 | No focus, Non-corrosive in surroundings |      |      |              |      |       |



**10N/ 50N/100N/200N/300N/ 500N**

DIGITAL FORCE GAUGE





8586B

|                                    |                                        |
|------------------------------------|----------------------------------------|
| Basic Function                     | 8586B                                  |
| Power consumption                  | 750w (MAX)                             |
| Input voltage                      | AC (100V/110V/120V/220V/230V /240V/)   |
|                                    | 50/60Hz (optional)                     |
| Display mode                       | LED screen display                     |
| Heating & soldering station        |                                        |
| Power consumption                  | 700w (MAX)                             |
| Temperature range                  | 100~500 °C & (212°F-932°F)             |
| Air pump type                      | Fan type                               |
| Noise                              | <52d B(A)                              |
| Air flow                           | 120L/min (MAX)                         |
| Electrical soldering station       |                                        |
| Power                              | 70w (MAX)                              |
| Temperature range                  | 200~480°C                              |
| Temperature stability              | ±2 °C (still air and no load)          |
| Temperature accuracy               | ±15 °C                                 |
| Impedance of welding tip to ground | <2Ω                                    |
| Voltage of welding tip to ground   | <2mV                                   |
| Heating core                       | Four-core stainless steel heating core |
| Working voltage of heating core    | 24DC                                   |
| Overall dimensions of unit         | 167 (L)*100(W)*131(H) MM               |
| Weight                             | 1.86KG                                 |
| USB port                           | 5V and 2A (max)                        |

| No. | Type of impact device | hardness value of standard Leeb hardness block | Error of displayed value | Repeatability of displayed value |
|-----|-----------------------|------------------------------------------------|--------------------------|----------------------------------|
| 1   | D                     | 760±30HLD<br>530±40HLD                         | ±6 HLD<br>±10 HLD        | 6 HLD<br>10 HLD                  |
| 2   | DC                    | 760±30HLDC<br>530±40HLDC                       | ±6 HLDC<br>±10 HLDC      | 6 HLD<br>10 HLD                  |
| 3   | DL                    | 878±30HLDL<br>736±40HLDL                       | ±12 HLDL                 | 12 HLDL                          |
| 4   | D+15                  | 766±30HLD+15<br>544±40HLD+15                   | ±12 HLD+15               | 12 HLD+15                        |
| 5   | G                     | 590±40HLG<br>500±40HLG                         | ±12 HLG                  | 12 HLG                           |
| 6   | E                     | 725±30HLE<br>508±40HLE                         | ±12 HLE                  | 12 HLE                           |
| 7   | C                     | 822±30HLC<br>590±40HLC                         | ±12 HLC                  | 12 HLC                           |



853A

Leeb Hardness Tester

| Model                       | NG-030                                   | NG-060                                    | NG-135                                     | NG-200                                     | NG-340                                   |
|-----------------------------|------------------------------------------|-------------------------------------------|--------------------------------------------|--------------------------------------------|------------------------------------------|
| Min. Resolution             | 0.01                                     |                                           | 0.1                                        |                                            |                                          |
| Max. Operation Range (N.m)  | 30N.m/22.12ft.lb/265.5in.lb/305.93kgf.cm | 60N.m/44.25ft.lb/531.04in.lb/611.82kgf.cm | 135N.m/99.57ft.lb/119.5in.lb/1376.61kgf.cm | 200N.m/147.5ft.lb/177.0in.lb/2039.43kgf.cm | 340N.m/250ft.lb/300.9in.lb/3467.03kgf.cm |
| Square Drive inches         | 3/8                                      |                                           | 1/2                                        |                                            |                                          |
| Measured Torque Range (N.m) | 1.5~30                                   | 2~60                                      | 6.75~135                                   | 10~200                                     | 17~340                                   |
| Length(mm)                  | 420                                      |                                           | 535                                        |                                            | 655                                      |
| Accuracy                    | Clockwise: ±2% counterclockwise ±2.5%    |                                           |                                            |                                            |                                          |
| Data storage capacity       | 100                                      |                                           |                                            |                                            |                                          |
| Operation mode              | Peak hold mode (P) /Real-time mode (T)   |                                           |                                            |                                            |                                          |
| Unit                        | N.m, in.lb, ft.lb, kgf.cm                |                                           |                                            |                                            |                                          |
| Ratchet head type           | Double-side ratchet head                 |                                           |                                            |                                            |                                          |
| Number of ratchet gear      | 36                                       |                                           |                                            |                                            |                                          |
| Button                      | 5                                        |                                           |                                            |                                            |                                          |
| Battery                     | AA battery × 2 1.5V (No. 5 battery)      |                                           |                                            |                                            |                                          |
| Operation temperature       | -10℃~60℃                                 |                                           |                                            |                                            |                                          |
| Storage temperature         | -20℃~70℃                                 |                                           |                                            |                                            |                                          |
| humidity                    | No condensation to 90%                   |                                           |                                            |                                            |                                          |
| Drop test height            | 1 meter                                  |                                           |                                            |                                            |                                          |
| Vibration test condition    | 10G                                      |                                           |                                            |                                            |                                          |
| Life time test              | 10000 times                              |                                           |                                            |                                            |                                          |



NG-30/NG-60/NG-135/NG-200/NG-340

Digital torque wrench



822M

## Mini Gas Detector

This meter is a combustible gas leakage detector, which is used to detect the leakage of combustible gas quickly and reliably.

## Technical data

| Basic Function        | 822M                                       |
|-----------------------|--------------------------------------------|
| Sensor                | Gas-sensitive semi-conductor               |
| Reaction Range        | 50~100PPM(methane)                         |
| Reactions Sensitivity | Approx.<50ppm(methane)                     |
| Warm-Up Time          | Approx.30 sec                              |
| Reactions time        | <=500PPM: Approx.5sec >500PPM: Approx.2sec |
| Alarm mode            | Visible and audible                        |
| Operating conditions  | 0 to 50°C / 20 to 80%RH                    |
| Storage conditions    | -10 to 60°C / 20...80% RH                  |
| Batteries             | 2x1.5V AAA Alkaline battery                |



821B

## Technical data

| Basic Function       | 821B                                                                                                                                                                     |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Gas detection        | CO                                                                                                                                                                       |
| Measuring range      | 0~1000μmol/mol                                                                                                                                                           |
| Resolution           | 1                                                                                                                                                                        |
| Accuracy             | When the measuring range is (0~50) μmol/mol, maximum allowable error is: 5 μmol/mol<br>When the measurement range is (50~1000) μmol/mol, maximum allowable error is: 10% |
| Response time (90%)  | Less than 30 seconds                                                                                                                                                     |
| Indication mode      | LCD displays real-time data and system state, LED, sound, vibration indication alarm                                                                                     |
| Storage Conditions   | Temperature: -10~55°C; Humidity: <85%RH                                                                                                                                  |
| Operation Conditions | Temperature: -20~50°C; Humidity: <95%RH non-condensing                                                                                                                   |
| Working voltage      | DC 3.7V (Lithium battery capacity 1800mAh)                                                                                                                               |
| Battery Model        | LP103450-1800mAh                                                                                                                                                         |
| Charging time        | 6~8h                                                                                                                                                                     |
| Standby time         | More than 8h on end (slightly change with working state)                                                                                                                 |
| Dimensions           | 71*153*49mm                                                                                                                                                              |
| Weight               | 215.4g (with battery and back button)                                                                                                                                    |



829A



820D

## Compound Gas Monitor range

Compound Gas Monitor adopts high-quality gas sensors, which displays safety and reliability with accurate measurement and stable performance. It has excellent sensitivity and repeatability, easy to use and maintain, and meets the requirements by safety monitoring in industrial site for high reliability of the equipment. The shell is made of high-strength engineering plastics and compound non-slip rubber, dust and explosion-proof, with high strength and smooth handfeel. Compound Gas Monitor is widely used in petroleum, chemical, environmental protection, metallurgy, refining, gas transmission and distribution, biochemical medicine, agricultural research, etc.

| Gas type         | 829A |        |            | 820D   |                 |                  |
|------------------|------|--------|------------|--------|-----------------|------------------|
|                  | Unit | Range  | Resolution | Range  | Low alarm point | High alarm point |
| Ex               | %LEL | 0~100  | 0.1        | 0~100  | 25              | 50               |
| O <sub>2</sub>   | %VOL | 0~30   | 0.1        | 0~30   | 19.5            | 23.5             |
| H <sub>2</sub> S | PPM  | 0~100  | 0.1        | 0~100  | 15              | 35               |
| CO               | PPM  | 0~1000 | 1          | 0~1000 | 50              | 150              |

## Technical data

| Model                | 829A                                                                                 | 820D                                                                                                  |
|----------------------|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| Accuracy             | ±5%FS                                                                                | ±5%FS                                                                                                 |
| Response time (90%)  | Less than 30 seconds                                                                 | ≤30 seconds                                                                                           |
| Indication mode      | LCD displays real-time data and system state, LED, sound, vibration indication alarm | Real-time data and system status display, lighting, vibration and voice (Chinese and English) prompts |
| Storage Conditions   | Temperature: -10~55°C; Humidity: <85%RH                                              | *                                                                                                     |
| Operation Conditions | Temperature: -20~50°C; Humidity: < 95%RH non-condensing                              | Temperature -10°C~55°C; humidity 10~95%RH condensation                                                |
| Working voltage      | DC 3.7V (Lithium battery capacity 1800mAh)                                           | DC3.7V (Lithium battery capacity 2000mAh)                                                             |
| Charging time        | 6~8h                                                                                 | *                                                                                                     |
| Standby time         | More than 8h on end (slightly change with working state)                             | *                                                                                                     |
| Dimensions           | 153*71*49mm                                                                          | 140*73*32mm                                                                                           |
| Weight               | 218.7g With battery                                                                  | 205g                                                                                                  |



380S

## Shenzhen VICTOR 380S 25Hz Circuit Board Thermal Analyzer 3D Thermal Image pcb USB connection DC 5V Test Electric Leakage

Victor 380S is a new generation of PCBA infrared thermal imaging analyzer, which is suitable for thermal simulation of circuit design, rapid maintenance of circuit board and detection of defective electronic materials.

Features The user can quickly locate of the current leakage or short circuit on PCBA. With clear images, users can even observe the chipset pins of thermal video.

In 3D mode, users can detect ultra-small current leakage. To detect very small temperature difference between good and defectboards, which is difficult by other instruments. To help thermal design, testing, verification, optimization, componentsselection, and help extend product life cycle. Curve data is convenient for R&D engineers to record thermal experimental data.

## Technical data

| Basic Function       | 380S                     |
|----------------------|--------------------------|
| Infrared resolution  | 256*192                  |
| Refresh rate         | 25Hz                     |
| FOV                  | 56°x42°                  |
| Measurement distance | 100mm - 150mm            |
| Interface            | USB Type C               |
| Input voltage        | DC 5V                    |
| Measurement range    | -15°C~600°C(5°F~+1112°F) |
| Storage temperature  | -20°C~60°C               |
| Working temperature  | 0°C~50°C                 |
| Overall weight       | 1200g                    |
| Product size         | 150mm x 150mm x 230mm    |

DM9



## 7 Inch Digital Microscope

Product name: DM9

Video maximum pixel: 1080FHD

Lens optic size: 1/4"

Picture resolution: 16M, 12M, 10M, 8M, 5M, 3M, 2MHD, 1.3M

Video resolution: 1080FHD, 1080P, 720P

Video format: avi

Focus mode: manual

Picture format: JPG

Magnification times: 1200X

Illuminant: 8 LED lights (brightness adjustable)

Focusing range: 10~40mm (can watch distant view)

PC resolution and image transfer rate: 1280\*720/30fps

White balance: automatic

Exposure: automatic

PC operating system: Win7, win8,1, win10, Mac OS x 12 or higher

Supported language: English, Portuguese, Simplified Chinese, Traditional Chinese, Japanese, French, German, Korean, Russian, Spanish, Arabic, Italian, Dutch

Lens construction: 2G+IR

Aperture: F4.5

Lens angle: 16°

Interface and Signal Transmission Mode: Micro/USB2.0

Operating temperature: -20°C ~ +60°C

Operating humidity: 30%~85%RH

Working current: 700mA

Power dissipation: 3.5W



90

**VICTOR 90** wrist high-voltage alarm provides a safe, practical and convenient new high-voltage alarm device for live operators. Using non-contact sensing technology, the alarm is accurate, power saving and durable, and the standby time is up to 12 months. The unique automatic trigger detection function of the alarm ensures the safety of live workers.

## Technical data

| Model                            | 90                                                                                         |
|----------------------------------|--------------------------------------------------------------------------------------------|
| Voltage level                    | 1KV/6.6kV/10kV/35kV/66kV/110kV                                                             |
| Features                         | High pressure alarm                                                                        |
| Alarm voltage range              | 1kV~ 220kV                                                                                 |
| Alarm distance error             | ±10cm (23℃+1℃, 80%RH, under reference conditions)                                          |
| working frequency                | 50Hz/60Hz                                                                                  |
| Electricity test method.         | Contactless                                                                                |
| Detection mode                   | auto trigger                                                                               |
| Battery Life                     | Continuous work (sound and light alarm): about 24 hours<br>Standby time: about 12 months   |
| Alarm method.                    | Indicator light: 8000XL visible LED light under visible light<br>Buzzer: 60dB (60CM apart) |
| Protection class                 | IP54                                                                                       |
| Insulation test                  | AC3700V/rms (between exposed metal and plastic case)                                       |
| Working temperature and humidity | -10℃~40℃; below 80%rh                                                                      |
| Storage temperature and humidity | -10℃~60℃; below 70%rh                                                                      |



90A



90B

## High voltage power alarm

**VICTOR 90A / 90B** high voltage alarm is a new safe, practical and convenient high voltage alarm device suitable for close voltage operators. After wearing the alarm by the operator, when approaching a certain distance from the high voltage charged body, the alarm according to the corresponding safety distance of the voltage level, to remind the electrical staff to pay attention to safety and avoid the high voltage electric shock accident. High voltage alarm above 1kV, non-contact sensing technology, alarm is accurate. The alarm has a unique automatic trigger detection function to ensure the safety of live workers. VICTOR 90A is worn on the upper part of the operator's outermost overalls arm, and VICTOR 90B is mounted on the operator's helmet.

| Model                            | 90A                                                                                        | 90B |
|----------------------------------|--------------------------------------------------------------------------------------------|-----|
| Alarm voltage range              | 1kV~500kV                                                                                  |     |
| Alarm distance error             | +10cm (23℃ +1℃, 80%RH, under reference conditions)                                         |     |
| working frequency                | 50Hz/60Hz                                                                                  |     |
| Test method                      | Contactless                                                                                |     |
| Detection mode                   | Auto trigger                                                                               |     |
| Battery Life                     | Continuous work (sound and light alarm): about 24 hours, standby time: about 12 months     |     |
| Alarm method                     | Indicator light: LED light visible under 8000XL visible light Buzzer: 60dB (distance 60CM) |     |
| Protection level                 | IP54                                                                                       |     |
| Working temperature and humidity | -10℃~40℃; below 80%RH                                                                      |     |
| Storage temperature and humidity | -10℃~60℃; below 70%RH                                                                      |     |
| power supply                     | 2 CR1632 button batteries                                                                  |     |
| Display size                     | without                                                                                    |     |
| body color                       | Black+orange                                                                               |     |
| Body weight                      | About 51g (including battery), About 60g (including battery)                               |     |
| Standard inner packing           | Color box                                                                                  |     |
| Product Color                    | Black and Orange                                                                           |     |
| Size                             | 88mmX32mmX30mm                                                                             |     |





862M

## Overview

Magnetic pole identification pen is a fast, easy and safe tool, which is used to identify the polarity of magnetic field. The N / S polarity can be distinguished by the contact between the probe and the object. This instrument has the characteristics of high identification accuracy, small and light, simple operation and exquisite workmanship. It is a highly sensitive product.

## Technical parameter

| Basic Function      | 862M                                        |
|---------------------|---------------------------------------------|
| sensitivity         | ±5mT(50Gs)                                  |
| display             | 2 LED lights (red = N pole, green = S pole) |
| battery             | 2 batteries, 1.5V AAA                       |
| usage time          | More than 10 hours                          |
| service temperature | -20°C~+80°C                                 |
| storage temperature | -40°C~+150°C                                |
| size                | About 156 × 24 × 20mm                       |
| weight              | About 55g                                   |

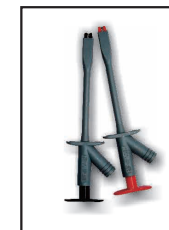
## ELECTRONIC TESTING MULTI-FUNCTION PROBE

Product category: general accessories

A scalability probe with safety handle and pressure spring make testing more convenient .

Standard banana interface is adaptable to different test leads .

CAT III 1000V , CAT IV 600V 10A



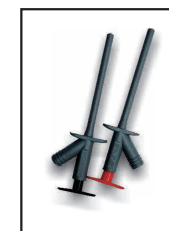
## ELECTRONIC TESTING MULTI-FUNCTION PROBE

Product category: general accessories

A scalability small probe with safety handle and pressure spring make testing more convenient .

Standard banana interface is adaptable to different test leads .

CAT III 1000V 10A



## TEST JACK

Product category: Multi-function standard adapter

switching test applies to resistance ,capacitance, triode and diode.



## TEST LEADS

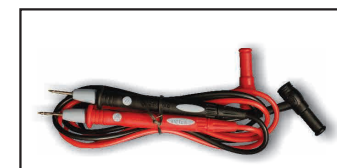
Product category: General accessories

Flexible club , full holster and cross jack to ensure the effectiveness of the connection.

Wire length is 900mm , stick length is 105mm ,effective probe is 18mm .

Resistance to low and high temperature : 0°C-40°C

CAT III 1000V 10A



## TP01 BANANA TEMPERATURE PROBE

Product category: Temperature probe

Cross jack, applies to general temperature measurement .

Teflon coating insulation .

For liquid and gel temperature measurement

Accuracy : ±0.75%

Testing range : -40°C-250°C ( -40°F-482°F )



## TP01 K TYPE TEMPERATURE PROBE

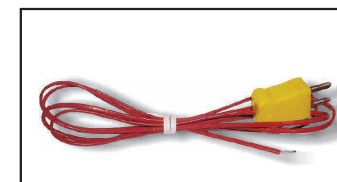
Product category: Temperature probe

Flat plug input to ensure the effectiveness of the connection.

applies to general temperature measurement.

Accuracy : ±0.75%

Testing range : -40°C-250°C ( -40°F-482°F )





## 26/26H

Protection grade : IP65

Accuracy :  $\pm 0.01\%$ 

HART communication (only VICTOR 26H)  
Two independent channels for input and output, allowing in-time input and output operation;

| Project         |                        | Model                                                                                            | 26                                                                                               | 26H                                                                                              |
|-----------------|------------------------|--------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
|                 |                        | Performance parameters                                                                           |                                                                                                  |                                                                                                  |
| Source          | DC millivolt           | Range                                                                                            | -10 ~ 110mV                                                                                      | -10 ~ 110mV                                                                                      |
|                 |                        | Accuracy= $\pm(\% \text{ of the set value} + \% \text{ of range})$                               | 0.01%+0.01%                                                                                      | 0.01%+0.01%                                                                                      |
|                 |                        | Resolution                                                                                       | 1uV                                                                                              | 1uV                                                                                              |
|                 | DC voltage             | Range                                                                                            | -0.1 ~ 11V                                                                                       | -0.1 ~ 11V                                                                                       |
|                 |                        | Accuracy= $\pm(\% \text{ of the set value} + \% \text{ of range})$                               | 0.01%+0.01%                                                                                      | 0.01%+0.01%                                                                                      |
|                 |                        | Resolution                                                                                       | 10uV/0.1mV                                                                                       | 10uV/0.1mV                                                                                       |
|                 | DC current             | Range                                                                                            | 0 ~ 33mA                                                                                         | 0 ~ 33mA                                                                                         |
|                 |                        | Accuracy= $\pm(\% \text{ of the set value} + \% \text{ of range})$                               | 0.01%+0.01%                                                                                      | 0.01%+0.01%                                                                                      |
|                 |                        | Resolution                                                                                       | 1uA                                                                                              | 1uA                                                                                              |
|                 | Sink current           | Range                                                                                            | 0 ~ 33mA                                                                                         | 0 ~ 33mA                                                                                         |
|                 |                        | Accuracy= $\pm(\% \text{ of the set value} + \% \text{ of range})$                               | 0.01%+0.01%                                                                                      | 0.01%+0.01%                                                                                      |
|                 |                        | Resolution                                                                                       | 1uA                                                                                              | 1uA                                                                                              |
|                 | Resistance             | External power supply                                                                            | 5 ~ 28V                                                                                          | 5 ~ 28V                                                                                          |
|                 |                        | Range                                                                                            | 0 ~ 4K $\Omega$                                                                                  | 0 ~ 4K $\Omega$                                                                                  |
|                 |                        | Accuracy= $\pm(\% \text{ of the set value} + \% \text{ of range})$                               | 0.01%+0.01%                                                                                      | 0.01%+0.01%                                                                                      |
|                 | Thermocouple           | Resolution                                                                                       | 0.01 $\Omega$ /0.1 $\Omega$                                                                      | 0.01 $\Omega$ /0.1 $\Omega$                                                                      |
|                 |                        | Range                                                                                            | R/S/K/E/J/T/B/N/L/U                                                                              | R/S/K/E/J/T/B/N/L/U                                                                              |
|                 |                        | Accuracy                                                                                         | 0.4 $^{\circ}\text{C}$                                                                           | 0.4 $^{\circ}\text{C}$                                                                           |
|                 | RTD                    | Resolution                                                                                       | 0.1 $^{\circ}\text{C}/1^{\circ}\text{C}$                                                         | 0.1 $^{\circ}\text{C}/1^{\circ}\text{C}$                                                         |
|                 |                        | Range                                                                                            | Pt100/Pt200/Pt500/Pt1000/Cu10/Cu50                                                               | Pt100/Pt200/Pt500/Pt1000/Cu10/Cu50                                                               |
|                 |                        | Accuracy                                                                                         | 0.2 $^{\circ}\text{C}$                                                                           | 0.2 $^{\circ}\text{C}$                                                                           |
| Measurement     | Frequency (Hz)         | Resolution                                                                                       | 0.1 $^{\circ}\text{C}$                                                                           | 0.1 $^{\circ}\text{C}$                                                                           |
|                 |                        | Range                                                                                            | 1Hz ~ 50KHz                                                                                      | 1Hz ~ 50KHz                                                                                      |
|                 |                        | Accuracy                                                                                         | $\pm 2\text{words}$                                                                              | $\pm 2\text{words}$                                                                              |
|                 | Frequency (CMP)        | Resolution                                                                                       | 0.01Hz/1Hz/0.1KHz/2KHz                                                                           | 0.01Hz/1Hz/0.1KHz/2KHz                                                                           |
|                 |                        | Range                                                                                            | 60 ~ 1200 CPM                                                                                    | 60 ~ 1200 CPM                                                                                    |
|                 |                        | Accuracy                                                                                         | $\pm 2\text{words}$                                                                              | $\pm 2\text{words}$                                                                              |
|                 | Pulse                  | Resolution                                                                                       | 1CPM                                                                                             | 1CPM                                                                                             |
|                 |                        | Range                                                                                            | 1Hz ~ 10KHz                                                                                      | 1Hz ~ 10KHz                                                                                      |
|                 |                        | Accuracy                                                                                         | 1 ~ 100000cyc                                                                                    | 1 ~ 100000cyc                                                                                    |
|                 | Switch                 | Resolution                                                                                       | $\pm 2\text{words}$                                                                              | $\pm 2\text{words}$                                                                              |
|                 |                        | Range                                                                                            | 1Hz ~ 50KHz                                                                                      | 1Hz ~ 50KHz                                                                                      |
|                 |                        | Accuracy                                                                                         | $\pm 2\text{words}$                                                                              | $\pm 2\text{words}$                                                                              |
|                 | Pressure               | Resolution                                                                                       | 0.01Hz/1Hz/0.1KHz/2KHz                                                                           | 0.01Hz/1Hz/0.1KHz/2KHz                                                                           |
|                 |                        | Range                                                                                            | Depends on the pressure module                                                                   | Depends on the pressure module                                                                   |
|                 |                        | Accuracy= $\pm(\% \text{ of the set value} + \% \text{ of range})$                               | Depends on the pressure module                                                                   | Depends on the pressure module                                                                   |
|                 | Loop power supply      | Resolution                                                                                       | 5 digit display                                                                                  | 5 digit display                                                                                  |
|                 |                        | Range                                                                                            | 1 ~ 100000cyc                                                                                    | 1 ~ 100000cyc                                                                                    |
|                 |                        | Accuracy                                                                                         | $\pm 2\text{words}$                                                                              | $\pm 2\text{words}$                                                                              |
|                 | Pulse                  | Resolution                                                                                       | 1cyc                                                                                             | 1cyc                                                                                             |
|                 |                        | Range                                                                                            | 24V                                                                                              | 24V                                                                                              |
|                 |                        | Accuracy                                                                                         | $\pm 10\%$                                                                                       | $\pm 10\%$                                                                                       |
|                 | The maximum current    | Resolution                                                                                       | 22mA                                                                                             | 22mA                                                                                             |
|                 |                        | Range                                                                                            | 1 ~ 100000cyc                                                                                    | 1 ~ 100000cyc                                                                                    |
|                 |                        | Accuracy                                                                                         | $\pm 2\text{words}$                                                                              | $\pm 2\text{words}$                                                                              |
| Other functions | HART                   | Backlight                                                                                        | N/A                                                                                              | $\checkmark$                                                                                     |
|                 |                        | Auto Power-off                                                                                   | $\checkmark$                                                                                     | $\checkmark$                                                                                     |
|                 |                        | Charging function                                                                                | $\checkmark$                                                                                     | $\checkmark$                                                                                     |
|                 |                        | Room temperature display                                                                         | $\checkmark$                                                                                     | $\checkmark$                                                                                     |
|                 |                        | Battery detection                                                                                | $\checkmark$                                                                                     | $\checkmark$                                                                                     |
|                 | Communication function | The ramp signal                                                                                  | $\checkmark$                                                                                     | $\checkmark$                                                                                     |
|                 |                        | RS232 serial communication, can realize remote control instrument by the device driver software. | RS232 serial communication, can realize remote control instrument by the device driver software. | RS232 serial communication, can realize remote control instrument by the device driver software. |
|                 |                        | Characteristic                                                                                   | EN61010-1 : 2001                                                                                 | EN61010-1 : 2001                                                                                 |
|                 |                        | Safety                                                                                           | The input and output AC350V/1 minutes                                                            | The input and output AC350V/1 minutes                                                            |
|                 |                        | Insulation                                                                                       | The input and output DC500V /50M $\Omega$                                                        | The input and output DC500V /50M $\Omega$                                                        |
|                 |                        | EMC                                                                                              | EN61326-1 : 2006                                                                                 | EN61326-1 : 2006                                                                                 |
|                 |                        | Authentication                                                                                   | CE                                                                                               | CE                                                                                               |
|                 |                        | Display                                                                                          | 3.2" TFT screen                                                                                  | 3.2" TFT screen                                                                                  |
|                 |                        | Power supply                                                                                     | 4x1.5V AA Alkaline battery                                                                       | 4x1.5V AA Alkaline battery                                                                       |
|                 |                        | Size                                                                                             | 206 x 97 x 60 mm                                                                                 | 206 x 97 x 60 mm                                                                                 |
|                 |                        | Weight                                                                                           | about 633g                                                                                       | about 633g                                                                                       |
|                 |                        | Standard Quantity Per Carton                                                                     | 6pcs                                                                                             | 6pcs                                                                                             |
|                 |                        | Standard Carton Measurement                                                                      | 530mm*405mm*310mm                                                                                | 530mm*405mm*310mm                                                                                |
|                 |                        | Standard Carton Gross Weight                                                                     | 12.6kg                                                                                           | 12.6kg                                                                                           |

|                 |                        |                                                                                                  |                                                                                                  |                                                                                                  |
|-----------------|------------------------|--------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| Measurement     | DC millivolt           | Range                                                                                            | -5 ~ 550mV                                                                                       | -5 ~ 550mV                                                                                       |
|                 |                        | Accuracy= $\pm(\% \text{ of Reading} + \% \text{ of Range})$                                     | 0.01%+0.01%                                                                                      | 0.01%+0.01%                                                                                      |
|                 |                        | Resolution                                                                                       | 1uV/10uV                                                                                         | 1uV/10uV                                                                                         |
|                 | DC voltage             | Range                                                                                            | -0.5 ~ 35V                                                                                       | -0.5 ~ 35V                                                                                       |
|                 |                        | Accuracy= $\pm(\% \text{ of Reading} + \% \text{ of Range})$                                     | 0.01%+0.01%                                                                                      | 0.01%+0.01%                                                                                      |
|                 |                        | Resolution                                                                                       | 0.1mV/1mV                                                                                        | 0.1mV/1mV                                                                                        |
|                 | DC current             | Range                                                                                            | -5 ~ 55mA                                                                                        | -5 ~ 55mA                                                                                        |
|                 |                        | Accuracy= $\pm(\% \text{ of Reading} + \% \text{ of Range})$                                     | 0.01%+0.01%                                                                                      | 0.01%+0.01%                                                                                      |
|                 |                        | Resolution                                                                                       | 1uA                                                                                              | 1uA                                                                                              |
|                 | Resistance             | Range                                                                                            | 0 ~ 5.5K $\Omega$                                                                                | 0 ~ 5.5K $\Omega$                                                                                |
|                 |                        | Accuracy= $\pm(\% \text{ of Reading} + \% \text{ of Range})$                                     | 0.01%+0.01%                                                                                      | 0.01%+0.01%                                                                                      |
|                 |                        | Resolution                                                                                       | 0.01 $\Omega$ /0.1 $\Omega$                                                                      | 0.01 $\Omega$ /0.1 $\Omega$                                                                      |
|                 | Thermocouple           | Range                                                                                            | R/S/K/E/J/T/B/N/L/U                                                                              | R/S/K/E/J/T/B/N/L/U                                                                              |
|                 |                        | Accuracy                                                                                         | 0.5 $^{\circ}\text{C}$                                                                           | 0.5 $^{\circ}\text{C}$                                                                           |
|                 |                        | Resolution                                                                                       | 0.1 $^{\circ}\text{C}/1^{\circ}\text{C}$                                                         | 0.1 $^{\circ}\text{C}/1^{\circ}\text{C}$                                                         |
|                 | RTD                    | Range                                                                                            | Pt100/Pt200/Pt500/Pt1000/Cu10/Cu50                                                               | Pt100/Pt200/Pt500/Pt1000/Cu10/Cu50                                                               |
|                 |                        | Accuracy                                                                                         | 0.3 $^{\circ}\text{C}$                                                                           | 0.3 $^{\circ}\text{C}$                                                                           |
|                 |                        | Resolution                                                                                       | 0.1 $^{\circ}\text{C}$                                                                           | 0.1 $^{\circ}\text{C}$                                                                           |
|                 | Frequency (Hz)         | Range                                                                                            | 3Hz ~ 50KHz                                                                                      | 3Hz ~ 50KHz                                                                                      |
|                 |                        | Accuracy                                                                                         | $\pm 2\text{words}$                                                                              | $\pm 2\text{words}$                                                                              |
|                 |                        | Resolution                                                                                       | 0.01Hz                                                                                           | 0.01Hz                                                                                           |
|                 | Frequency (CMP)        | Range                                                                                            | 180 ~ 3000000 CPM                                                                                | 180 ~ 3000000 CPM                                                                                |
|                 |                        | Accuracy                                                                                         | $\pm 2\text{words}$                                                                              | $\pm 2\text{words}$                                                                              |
|                 |                        | Resolution                                                                                       | 1CPM                                                                                             | 1CPM                                                                                             |
|                 | Switch                 | Range                                                                                            | CLOSE/OPEN                                                                                       | CLOSE/OPEN                                                                                       |
|                 |                        | Threshold                                                                                        | 200 ~ 300 $\Omega$                                                                               | 200 ~ 300 $\Omega$                                                                               |
|                 |                        | Accuracy= $\pm(\% \text{ of Reading} + \% \text{ of Range})$                                     | Depends on the pressure module                                                                   | Depends on the pressure module                                                                   |
|                 | Pressure               | Range                                                                                            | Depends on the pressure module                                                                   | Depends on the pressure module                                                                   |
|                 |                        | Resolution                                                                                       | 5 digit display                                                                                  | 5 digit display                                                                                  |
|                 |                        | Range                                                                                            | 1 ~ 100000cyc                                                                                    | 1 ~ 100000cyc                                                                                    |
|                 | Loop power supply      | Accuracy                                                                                         | $\pm 2\text{words}$                                                                              | $\pm 2\text{words}$                                                                              |
|                 |                        | Resolution                                                                                       | 1cyc                                                                                             | 1cyc                                                                                             |
|                 |                        | Range                                                                                            | 24V                                                                                              | 24V                                                                                              |
|                 | Pulse                  | Accuracy                                                                                         | $\pm 10\%$                                                                                       | $\pm 10\%$                                                                                       |
|                 |                        | The maximum current                                                                              | 22mA                                                                                             | 22mA                                                                                             |
|                 |                        | Resolution                                                                                       | 5 digit display                                                                                  | 5 digit display                                                                                  |
| Other functions | HART                   | Backlight                                                                                        | $\checkmark$                                                                                     | $\checkmark$                                                                                     |
|                 |                        | Auto Power-off                                                                                   | $\checkmark$                                                                                     | $\checkmark$                                                                                     |
|                 |                        | Charging function                                                                                | $\checkmark$                                                                                     | $\checkmark$                                                                                     |
|                 |                        | Room temperature display                                                                         | $\checkmark$                                                                                     | $\checkmark$                                                                                     |
|                 |                        | Battery detection                                                                                | $\checkmark$                                                                                     | $\checkmark$                                                                                     |
|                 | Communication function | The ramp signal                                                                                  | $\checkmark$                                                                                     | $\checkmark$                                                                                     |
|                 |                        | RS232 serial communication, can realize remote control instrument by the device driver software. | RS232 serial communication, can realize remote control instrument by the device driver software. | RS232 serial communication, can realize remote control instrument by the device driver software. |
|                 |                        | Characteristic                                                                                   | EN61010-1 : 2001                                                                                 | EN61010-1 : 2001                                                                                 |
|                 |                        | Safety                                                                                           | The input and output AC350V/1 minutes                                                            | The input and output AC350V/1 minutes                                                            |
|                 |                        | Insulation                                                                                       | The input and output DC500V /50M $\Omega$                                                        | The input and output DC500V /50M $\Omega$                                                        |
|                 |                        | EMC                                                                                              | EN61326-1 : 2006                                                                                 | EN61326-1 : 2006                                                                                 |
|                 |                        | Authentication                                                                                   | CE                                                                                               | CE                                                                                               |
|                 |                        | Display                                                                                          | 3.2" TFT screen                                                                                  | 3.2" TFT screen                                                                                  |
|                 |                        | Power supply                                                                                     | 4x1.5V AA Alkaline battery                                                                       | 4x1.5V AA Alkaline battery                                                                       |
|                 |                        | Size                                                                                             | 206 x 97 x 60 mm                                                                                 | 206 x 97 x 60 mm                                                                                 |
|                 |                        | Weight                                                                                           | about 633g                                                                                       | about 633g                                                                                       |
|                 |                        | Standard Quantity Per Carton                                                                     | 6pcs                                                                                             | 6pcs                                                                                             |
|                 |                        | Standard Carton Measurement                                                                      | 530mm*405mm*310mm                                                                                | 530mm*405mm*310mm                                                                                |
|                 |                        | Standard Carton Gross Weight                                                                     | 12.6kg                                                                                           | 12.6kg                                                                                           |

\* Note: table range for the maximum range, precision is the highest accuracy (reading%), the resolution is the highest resolution.



24/25

Accuracy :  $\pm 0.02\%$

Two independent channels for input and output, allowing in-time input and output operation;

| Project                |              | Model                                                                 | 24                                      | 25                                      |
|------------------------|--------------|-----------------------------------------------------------------------|-----------------------------------------|-----------------------------------------|
| Performance parameters |              |                                                                       |                                         |                                         |
| Source                 | DC millivolt | Range                                                                 | -10 ~ 110mV                             | -10 ~ 110mV                             |
|                        |              | Accuracy=<br>$\pm(\% \text{ of the set value} + \% \text{ of range})$ | 0.02%+0.01%                             | 0.02%+0.01%                             |
|                        | DC voltage   | Resolution                                                            | 1uV                                     | 1uV                                     |
|                        |              | Range                                                                 | -0.1 ~ 11V                              | -0.1 ~ 11V                              |
|                        |              | Accuracy=<br>$\pm(\% \text{ of the set value} + \% \text{ of range})$ | 0.02%+0.01%                             | 0.02%+0.01%                             |
|                        | DC current   | Resolution                                                            | 10uV/0.1mV                              | 10uV/0.1mV                              |
|                        |              | Range                                                                 | 0 ~ 22mA                                | 0 ~ 22mA                                |
|                        |              | Accuracy=<br>$\pm(\% \text{ of the set value} + \% \text{ of range})$ | 0.02%+0.02%                             | 0.02%+0.02%                             |
|                        | Sink current | Resolution                                                            | 1uA                                     | 1uA                                     |
|                        |              | Range                                                                 | 0 ~ 22mA                                | 0 ~ 22mA                                |
|                        |              | Accuracy=<br>$\pm(\% \text{ of the set value} + \% \text{ of range})$ | 0.02%+0.02%                             | 0.02%+0.02%                             |
|                        | Resistance   | Resolution                                                            | 1uA                                     | 1uA                                     |
|                        |              | Range                                                                 | 0 ~ 22mA                                | 0 ~ 22mA                                |
|                        | Thermocouple | Range                                                                 | 0 ~ 40K $\Omega$                        | 0 ~ 40K $\Omega$                        |
|                        |              | Accuracy=<br>$\pm(\% \text{ of the set value} + \% \text{ of range})$ | 0.02%+0.02%                             | 0.02%+0.02%                             |
|                        | RTD          | Resolution                                                            | 0.01 $\Omega$ /0.1 $\Omega$ /1 $\Omega$ | 0.01 $\Omega$ /0.1 $\Omega$ /1 $\Omega$ |
|                        |              | Range                                                                 | R/S/K/E/J/T/B/N                         | R/S/K/E/J/T/B/N                         |
|                        | Frequency    | Accuracy                                                              | 0.4 $^{\circ}$ C                        | 0.4 $^{\circ}$ C                        |
|                        |              | Resolution                                                            | 0.1 $^{\circ}$ C/1 $^{\circ}$ C         | 0.1 $^{\circ}$ C/1 $^{\circ}$ C         |
|                        | Pulse        | Range                                                                 | Pt100/Pt200/Pt500/<br>Pt1000/Cu10/Cu50  | Pt100/Pt200/Pt500/<br>Pt1000/Cu10/Cu50  |
|                        |              | Accuracy                                                              | 0.2 $^{\circ}$ C                        | 0.2 $^{\circ}$ C                        |
|                        | Switch       | Resolution                                                            | 0.1 $^{\circ}$ C                        | 0.1 $^{\circ}$ C                        |
|                        |              | Range                                                                 | 1Hz ~ 110KHz                            | 1Hz ~ 110KHz                            |
|                        | Pressure     | Accuracy                                                              | 1Hz ~ 10KHz                             | 1Hz ~ 10KHz                             |
|                        |              | Resolution                                                            | 0.01Hz/1Hz/0.1KHz/2KHz                  | 0.01Hz/1Hz/0.1KHz/2KHz                  |
|                        | Pressure     | Range                                                                 | 1 ~ 100000cyc                           | 1 ~ 100000cyc                           |
|                        |              | Accuracy                                                              | $\pm 2\text{words}$                     | $\pm 2\text{words}$                     |
|                        | Pressure     | Resolution                                                            | N/A                                     | N/A                                     |
|                        |              | Range                                                                 | 1Hz ~ 110KHz                            | 1Hz ~ 110KHz                            |
|                        | Pressure     | Accuracy                                                              | $\pm 2\text{words}$                     | $\pm 2\text{words}$                     |
|                        |              | Resolution                                                            | 0.01Hz/1Hz/0.1KHz/2KHz                  | 0.01Hz/1Hz/0.1KHz/2KHz                  |
|                        | Pressure     | Range                                                                 | Depends on the pressure module          | Depends on the pressure module          |
|                        |              | Accuracy=<br>$\pm(\% \text{ of the set value} + \% \text{ of range})$ | N/A                                     | N/A                                     |
|                        | Pressure     | Resolution                                                            | 5 digit display                         | 5 digit display                         |

|         |                              |                                                                 |                                                                                                  |                                                                                                  |
|---------|------------------------------|-----------------------------------------------------------------|--------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| Measure | DC millivolt                 | Range                                                           | -5 ~ 550mV                                                                                       | -5 ~ 550mV                                                                                       |
|         |                              | Accuracy=<br>$\pm(\% \text{ of Reading} + \% \text{ of Range})$ | 0.02%+0.01%                                                                                      | 0.02%+0.01%                                                                                      |
|         | DC voltage                   | Resolution                                                      | 1uV/10uV                                                                                         | 1uV/10uV                                                                                         |
|         |                              | Range                                                           | -0.5 ~ 55V                                                                                       | -0.5 ~ 55V                                                                                       |
|         |                              | Accuracy=<br>$\pm(\% \text{ of Reading} + \% \text{ of Range})$ | 0.02%+0.01%                                                                                      | 0.02%+0.01%                                                                                      |
|         | DC current                   | Resolution                                                      | 0.1mV/1mV                                                                                        | 0.1mV/1mV                                                                                        |
|         |                              | Range                                                           | -5 ~ 55mA                                                                                        | -5 ~ 55mA                                                                                        |
|         |                              | Accuracy=<br>$\pm(\% \text{ of Reading} + \% \text{ of Range})$ | 0.02%+0.01%                                                                                      | 0.02%+0.01%                                                                                      |
|         | Resistance                   | Resolution                                                      | 1uA                                                                                              | 1uA                                                                                              |
|         |                              | Range                                                           | 0 ~ 5.5K $\Omega$                                                                                | 0 ~ 5.5K $\Omega$                                                                                |
|         | Thermocouple                 | Accuracy=<br>$\pm(\% \text{ of Reading} + \% \text{ of Range})$ | 0.05%+0.02%                                                                                      | 0.05%+0.02%                                                                                      |
|         |                              | Resolution                                                      | 0.01 $\Omega$ /0.1 $\Omega$                                                                      | 0.01 $\Omega$ /0.1 $\Omega$                                                                      |
|         | RTD                          | Range                                                           | R/S/K/E/J/T/B/N                                                                                  | R/S/K/E/J/T/B/N                                                                                  |
|         |                              | Accuracy                                                        | 0.7 $^{\circ}$ C                                                                                 | 0.7 $^{\circ}$ C                                                                                 |
|         | Frequency                    | Resolution                                                      | 0.1 $^{\circ}$ C/1 $^{\circ}$ C                                                                  | 0.1 $^{\circ}$ C/1 $^{\circ}$ C                                                                  |
|         |                              | Range                                                           | Pt100/Pt200/Pt500/<br>Pt1000/Cu10/Cu50                                                           | Pt100/Pt200/Pt500/<br>Pt1000/Cu10/Cu50                                                           |
|         | Switch                       | Accuracy                                                        | 0.3 $^{\circ}$ C                                                                                 | 0.3 $^{\circ}$ C                                                                                 |
|         |                              | Resolution                                                      | 0.1 $^{\circ}$ C                                                                                 | 0.1 $^{\circ}$ C                                                                                 |
|         | Pressure                     | Range                                                           | 3 Hz ~ 50KHz                                                                                     | 3 Hz ~ 50KHz                                                                                     |
|         |                              | Accuracy                                                        | $\pm 2\text{words}$                                                                              | $\pm 2\text{words}$                                                                              |
|         | Continuity beeper            | Resolution                                                      | 0.01Hz/0.1Hz/1Hz                                                                                 | 0.01Hz/0.1Hz/1Hz                                                                                 |
|         |                              | Range                                                           | 0.01Hz/0.1Hz/1Hz                                                                                 | 0.01Hz/0.1Hz/1Hz                                                                                 |
|         | Loop power supply            | Threshold                                                       | N/A                                                                                              | N/A                                                                                              |
|         |                              | Range                                                           | Depends on the pressure module                                                                   | Depends on the pressure module                                                                   |
|         | Other functions              | Accuracy=<br>$\pm(\% \text{ of Reading} + \% \text{ of Range})$ | N/A                                                                                              | N/A                                                                                              |
|         |                              | Resolution                                                      | Depends on the pressure module                                                                   | Depends on the pressure module                                                                   |
|         | Communication function       | Range                                                           | 0 ~ 500 $\Omega$                                                                                 | 0 ~ 500 $\Omega$                                                                                 |
|         |                              | Accuracy                                                        | $\leq 50\Omega\text{sound}$                                                                      | $\leq 50\Omega\text{sound}$                                                                      |
|         | Safety                       | Resolution                                                      | 0.01 $\Omega$                                                                                    | 0.01 $\Omega$                                                                                    |
|         |                              | Range                                                           | 24V                                                                                              | 24V                                                                                              |
|         | Withstand voltage            | Accuracy                                                        | $\pm 10\%$                                                                                       | $\pm 10\%$                                                                                       |
|         |                              | The maximum current                                             | 22mA                                                                                             | 22mA                                                                                             |
|         | Insulation                   | Backlight                                                       | <input checked="" type="checkbox"/>                                                              | <input checked="" type="checkbox"/>                                                              |
|         |                              | Auto Power-off                                                  | <input checked="" type="checkbox"/>                                                              | <input checked="" type="checkbox"/>                                                              |
|         | EMC                          | Charging function                                               | <input checked="" type="checkbox"/>                                                              | <input checked="" type="checkbox"/>                                                              |
|         |                              | Room temperature display                                        | <input checked="" type="checkbox"/>                                                              | <input checked="" type="checkbox"/>                                                              |
|         | Authentication               | Battery detection                                               | <input checked="" type="checkbox"/>                                                              | <input checked="" type="checkbox"/>                                                              |
|         |                              | The ramp signal                                                 | <input checked="" type="checkbox"/>                                                              | <input checked="" type="checkbox"/>                                                              |
|         | Display                      | Communication function                                          | RS232 serial communication, can realize remote control instrument by the device driver software. | RS232 serial communication, can realize remote control instrument by the device driver software. |
|         |                              | Safety                                                          | EN61010-1: 2001                                                                                  | EN61010-1: 2001                                                                                  |
|         | Power supply                 | Withstand voltage                                               | The input and output AC350V/1 minutes                                                            | The input and output AC350V/1 minutes                                                            |
|         |                              | Insulation                                                      | The input and output DC500V /50MQ                                                                | The input and output DC500V /50MQ                                                                |
|         | Size                         | EMC                                                             | EN61326-1: 2006                                                                                  | EN61326-1: 2006                                                                                  |
|         |                              | Authentication                                                  | CE                                                                                               | CE                                                                                               |
|         | Weight                       | Display                                                         | Double display on the LCD screen                                                                 | Double display on the LCD screen                                                                 |
|         |                              | Power supply                                                    | 4x1.5V AAA Alkaline battery                                                                      | 4x1.5V AAA Alkaline battery                                                                      |
|         | Standard Quantity Per Carton | Size                                                            | 205 x 95 x 42 mm                                                                                 | 205 x 95 x 42 mm                                                                                 |
|         |                              | Weight                                                          | About 500g                                                                                       | About 500g                                                                                       |
|         | Standard Carton Measurement  | Standard Quantity Per Carton                                    | 10pcs                                                                                            | 10pcs                                                                                            |
|         |                              | Standard Carton Measurement                                     | 395mm*385mm*260mm                                                                                | 395mm*385mm*260mm                                                                                |
|         | Standard Carton Gross Weight | Standard Carton Gross Weight                                    | 12.4Kg                                                                                           | 12.4Kg                                                                                           |
|         |                              | Standard Carton Gross Weight                                    | 12.4Kg                                                                                           | 12.4Kg                                                                                           |

\* Note: table range for the maximum range, precision is the highest accuracy (reading%), the resolution is the



**New Model**

**24 Pro**

**NEW type holster**  
**Highest input measurement accuracy of 0.01%**  
**Analog output measurement with the highest accuracy of 0.01%**

## Technical data

| Model        | 24 Pro                                          |                                                                                               |
|--------------|-------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Measure      | DC voltage                                      | Range<br>50mV-500mV-5V-30V                                                                    |
|              |                                                 | Resolution<br>0.001mV-0.01mV-0.1V-0.001V                                                      |
|              |                                                 | Basic accuracy<br>0.01%+0.01%                                                                 |
|              | DC current                                      | Range<br>50mA                                                                                 |
|              |                                                 | Resolution<br>0.001mA                                                                         |
|              |                                                 | Basic accuracy<br>0.01%+0.01%                                                                 |
|              | Resistance                                      | Range<br>500Ω-5KΩ                                                                             |
|              |                                                 | Resolution<br>0.01Ω-0.1Ω                                                                      |
|              |                                                 | Basic accuracy<br>0.01%+0.01%                                                                 |
|              | Thermocouple                                    | Wire<br>2Wire-3Wire-4Wire                                                                     |
|              |                                                 | Range<br>R.S.K.E.J.T.N.B.L.U.A.C.D.G.P.M                                                      |
|              |                                                 | Resolution<br>0.1°C-1°C                                                                       |
|              | RTD                                             | Basic accuracy<br>0.5°C                                                                       |
|              |                                                 | The reference junction compensation<br>√                                                      |
|              |                                                 | Range<br>Pt100(385)-Pt200(385)-Pt500(385)-Pt1000(385)-Pt100(3916)-Pt100(3926)-Ni120-Cu10-Cu50 |
|              | Frequency                                       | Resolution<br>0.1°C                                                                           |
|              |                                                 | Basic accuracy<br>0.3°C                                                                       |
|              |                                                 | Wire<br>2Wire-3Wire-4Wire                                                                     |
| Source       | DC voltage                                      | Range<br>100mV-1V-10V                                                                         |
|              |                                                 | Resolution<br>0.001mV-0.01mV-0.001V                                                           |
|              |                                                 | Basic accuracy<br>0.01%+0.01%                                                                 |
|              | DC current                                      | Range<br>33mA                                                                                 |
|              |                                                 | Resolution<br>0.001mA                                                                         |
|              |                                                 | Basic accuracy<br>0.01%+0.01%                                                                 |
|              | Resistance                                      | Range<br>400Ω-4000Ω                                                                           |
|              |                                                 | Resolution<br>0.01Ω-0.1Ω                                                                      |
|              |                                                 | Basic accuracy<br>0.01%+0.01%                                                                 |
|              | Thermocouple                                    | Range<br>R.S.K.E.J.T.N.B.L.U.A.C.D.G.P.M                                                      |
|              |                                                 | Resolution<br>0.1°C-1°C                                                                       |
|              |                                                 | Basic accuracy<br>0.5°C                                                                       |
|              | RTD                                             | The reference junction compensation<br>√                                                      |
|              |                                                 | Range<br>Pt100(385)-Pt200(385)-Pt500(385)-Pt1000(385)-Pt100(3916)-Pt100(3926)-Ni120-Cu10-Cu50 |
|              |                                                 | Resolution<br>0.1°C                                                                           |
|              | Frequency                                       | Basic accuracy<br>0.3°C                                                                       |
|              |                                                 | Wire<br>2Wire-3Wire-4Wire                                                                     |
|              |                                                 | Range<br>100Hz-1KHz-10KHz-50KHz-CPM                                                           |
| Others       | PC Communication                                | Infrared isolated USB                                                                         |
|              | HART                                            | √                                                                                             |
|              | 24V loop power supply and measuring the current | √                                                                                             |
| Power Supply | 4*1.5V AA or Special AC adapter (option)        |                                                                                               |
| Display      | TFT                                             |                                                                                               |



**11 Pro**



**14 Pro**



**15 Pro**



## Technical data

|                                      | Model            |                       | 11 Pro                                                                                     | 14 Pro                                                                                     | 15 Pro                         |
|--------------------------------------|------------------|-----------------------|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------|
| Input measurement                    | DCV              | Range                 | /                                                                                          | 50mV/500mV/5V/30V                                                                          | 50mV/500mV/5V/30V              |
|                                      |                  | Precision             | /                                                                                          | 0.01%+0.01%                                                                                | 0.01%+0.01%                    |
|                                      | DCA              | Range                 | /                                                                                          | /                                                                                          | 50mA                           |
|                                      |                  | Precision             | /                                                                                          | /                                                                                          | 0.01%+0.01%                    |
|                                      | Resistance       | Range                 | /                                                                                          | 500Ω-5KΩ                                                                                   | /                              |
|                                      |                  | Precision             | /                                                                                          | 0.01%+0.01%                                                                                | /                              |
|                                      |                  | Wire                  | /                                                                                          | Two-wire system,<br>three-wire system,<br>four-wire system                                 | /                              |
|                                      | TC               | Range                 | /                                                                                          | R/S/K/E/J/T/N<br>B/L/U/A/C/D/G/P/M                                                         | /                              |
|                                      |                  | Precision             | /                                                                                          | 0.7°C                                                                                      | /                              |
|                                      |                  | Cold end compensation | /                                                                                          | Yes                                                                                        | /                              |
|                                      | RTD              | Range                 | /                                                                                          | Pt100(385)/Pt200(385)/Pt500(385)<br>Pt1000(385)/Pt100(3916)<br>Pt100(3926)/Ni120/Cu10/Cu50 | /                              |
|                                      |                  | Precision             | /                                                                                          | 0.3°C                                                                                      | /                              |
|                                      |                  | Wire                  | /                                                                                          | Two-wire system,<br>three-wire system,<br>four-wire system                                 | /                              |
|                                      | Frequency        | Range                 | /                                                                                          | /                                                                                          | 500Hz/5KHz/50KHz/CPM           |
| Precision                            |                  | /                     | /                                                                                          | ±2                                                                                         |                                |
| Switch quantity measurement          |                  | /                     | /                                                                                          | CLOSE / OPEN                                                                               |                                |
| Pressure                             |                  | /                     | /                                                                                          | Depending on the pressure module                                                           |                                |
| Analog output                        | DCV              | Range                 | 100mV/1V/10V                                                                               | 100mV/1V/10V                                                                               | 100mV/1V/10V                   |
|                                      |                  | Precision             | 0.01%+0.01%                                                                                | 0.01%+0.01%                                                                                | 0.01%+0.01%                    |
|                                      | DCA              | Range                 | 33mA                                                                                       | /                                                                                          | 33mA                           |
|                                      |                  | Precision             | 0.01%+0.01%                                                                                | /                                                                                          | 0.01%+0.01%                    |
|                                      | Resistance       | Range                 | 400Ω/4000Ω                                                                                 | 400Ω/4000Ω                                                                                 | /                              |
|                                      |                  | Precision             | 0.01%+0.01%                                                                                | 0.01%+0.01%                                                                                | /                              |
|                                      | TC               | Range                 | R/S/K/E/J/T/N<br>B/L/U/A/C/D/G/P/M                                                         | R/S/K/E/J/T/N<br>B/L/U/A/C/D/G/P/M                                                         | /                              |
|                                      |                  | Precision             | 0.7°C                                                                                      | 0.7°C                                                                                      | /                              |
|                                      |                  | Cold end compensation | Yes                                                                                        | Yes                                                                                        | /                              |
|                                      | RTD              | Range                 | Pt100(385)/Pt200(385)/Pt500(385)<br>Pt1000(385)/Pt100(3916)<br>Pt100(3926)/Ni120/Cu10/Cu50 | Pt100(385)/Pt200(385)/Pt500(385)<br>Pt1000(385)/Pt100(3916)<br>Pt100(3926)/Ni120/Cu10/Cu50 | /                              |
|                                      |                  | Precision             | 0.3°C                                                                                      | 0.3°C                                                                                      | /                              |
|                                      | Frequency        | Range                 | 100Hz/1KHz/10KHz/<br>50KHz/CPM                                                             | /                                                                                          | 100Hz/1KHz/10KHz/<br>50KHz/CPM |
|                                      |                  | Precision             | ±2                                                                                         | /                                                                                          | ±2                             |
|                                      | Pulse            | Range                 | 100000 cycles                                                                              | /                                                                                          | 100000 cycles                  |
|                                      |                  | Precision             | ±2                                                                                         | /                                                                                          | ±2                             |
|                                      | Switch quantity  | Range                 | 100Hz/1KHz/10KHz/50KHz                                                                     | /                                                                                          | 100Hz/1KHz/10KHz/50KHz         |
|                                      |                  | Precision             | ±2                                                                                         | /                                                                                          | ±2                             |
|                                      | PC Communication |                       |                                                                                            | Infrared isolated USB                                                                      | Infrared isolated USB          |
| 24V circuit power supply             |                  |                       | /                                                                                          | /                                                                                          | Yes                            |
| Output resistance excitation current |                  |                       | Constant current/pulse                                                                     | Constant current/pulse                                                                     | /                              |
| Cold end compensation                |                  |                       | Manual/Automatic                                                                           | Manual/Automatic                                                                           | /                              |
| Power supply                         |                  |                       | 4×AA                                                                                       | 4×AA                                                                                       | 4×AA                           |
| Display                              |                  |                       | TFT                                                                                        | TFT                                                                                        | TFT                            |



11+

14+

15+

| Project |              | The reference model<br>Performance parameters | 11+                                              | 14+                                         | 15+            |
|---------|--------------|-----------------------------------------------|--------------------------------------------------|---------------------------------------------|----------------|
| Source  | DC millivolt | Range                                         | -10 ~ 1100mV                                     | -10.000 ~ 100.000mV                         | -100 ~ 1100mV  |
|         |              | Accuracy= ±(% of the set value+% of range)    | 0.02%+0.01%                                      | 0.02%+0.01%                                 | 0.02%+0.01%    |
|         | DC voltage   | Range                                         | 1uV                                              | 1uV                                         | 0.01mV         |
|         |              | Accuracy= ±(% of the set value+% of range)    | 0.02%+0.01%                                      | 0.02%+0.01%                                 | 0.02%+0.01%    |
|         | DC current   | Range                                         | 0 ~ 22mA                                         | 10uV                                        | 0.1mV          |
|         |              | Accuracy= ±(% of the set value+% of range)    | 0.02%+0.02%                                      | N/A                                         | 0.02%+0.02%    |
|         | Sink current | Range                                         | 0 ~ 22mA                                         | N/A                                         | 0 ~ 22mA       |
|         |              | Accuracy= ±(% of the set value+% of range)    | 0.02%+0.02%                                      | N/A                                         | 0.02%+0.02%    |
|         | Resistance   | Range                                         | 0 ~ 40KΩ                                         | 0 ~ 4KΩ                                     | N/A            |
|         |              | Accuracy= ±(% of the set value+% of range)    | 0.02%+0.02%                                      | 0.02%+0.02%                                 | N/A            |
|         | Frequency    | Range                                         | 0.01Hz/0.1Hz/1Hz/10Hz/100Hz/1KHz/10KHz/50KHz/CPM | 0.01Hz/0.1Hz                                | 1Hz ~ 10KHz    |
|         |              | Accuracy                                      | ±2words                                          | N/A                                         | ±2words        |
|         | Pulse        | Range                                         | 1 ~ 1000000cyc                                   | N/A                                         | 1 ~ 1000000cyc |
|         |              | Accuracy                                      | ±2words                                          | N/A                                         | ±2words        |
|         | Switch       | Range                                         | 1Hz ~ 110KHz                                     | N/A                                         | 1cyc           |
|         |              | Accuracy                                      | ±2words                                          | N/A                                         | N/A            |
|         | Thermocouple | Range                                         | 0.1Hz/1Hz/0.1KHz/2KHz                            | 10types (R/S/K/E/J/T/B/N/L/U)               | N/A            |
|         |              | Accuracy                                      | 0.4°C                                            | 0.4°C                                       | N/A            |
|         | RTD          | Range                                         | 6types (Pt100/Pt200/Pt500/Pt1000/Cu10/Cu50)      | 6types (Pt100/Pt200/Pt500/Pt1000/Cu10/Cu50) | N/A            |
|         |              | Accuracy                                      | 0.2°C                                            | 0.2°C                                       | N/A            |
|         |              | Resolution                                    | 0.1°C                                            | 0.1°C                                       | N/A            |

## 709H

Protection grade : IP65

Accuracy :  $\pm 0.01\%$

HART communication



|                 |                   |                                  |             |                                |
|-----------------|-------------------|----------------------------------|-------------|--------------------------------|
| Measure         | DC millivolt      | Range                            | -5 ~ 550mV  | -20 ~ 220mV                    |
|                 |                   | Accuracy=                        | 0.02%+0.01% | 0.02%+0.02%                    |
|                 |                   | $\pm$ (% of Reading+ % of Range) |             |                                |
|                 | DC voltage        | Resolution                       | 1uV/10uV    | 0.01mV                         |
|                 |                   | Range                            | -0.5 ~ 55V  |                                |
|                 |                   | Accuracy=                        |             | 0.02%+0.01%                    |
|                 | DC current        | $\pm$ (% of Reading+ % of Range) |             | 0.1mV/1mV                      |
|                 |                   | Resolution                       |             | -4 ~ 55mA                      |
|                 |                   | Range                            |             | 0.02%+0.01%                    |
|                 | Resistance        | Accuracy=                        |             | 1uA                            |
|                 |                   | $\pm$ (% of Reading+ % of Range) |             |                                |
|                 |                   | Resolution                       |             |                                |
| Other functions | Frequency         | Range                            | 0 ~ 5.5KQ   |                                |
|                 |                   | Accuracy=                        | 0.05%+0.02% |                                |
|                 |                   | $\pm$ (% of Reading+ % of Range) |             |                                |
|                 | Switch            | Resolution                       | 0.01Q/0.1Q  |                                |
|                 |                   | Range                            |             | 3 ~ 50KHz                      |
|                 |                   | Accuracy                         |             | $\pm 2$ words                  |
|                 | Pressure          | Resolution                       |             | 0.01Hz/0.1Hz/1Hz               |
|                 |                   | Range                            |             | CLOSE/OPEN                     |
|                 |                   | Threshold                        |             | 200 ~ 300Q                     |
|                 | Loop power supply | Range                            |             | Depends on the pressure module |
|                 |                   | Accuracy=                        |             | Depends on the pressure module |
|                 |                   | $\pm$ (% of Reading+ % of Range) |             |                                |
| Other functions | Thermocouple      | Resolution                       |             | 5 digit display                |
|                 |                   | Range                            |             | 24V                            |
|                 |                   | Accuracy                         |             | $\pm 10\%$                     |
|                 | RTD               | The maximum current              |             | 22mA                           |
|                 |                   | Range                            |             |                                |
|                 |                   | Accuracy                         |             |                                |
|                 | Continuity beeper | Resolution                       |             |                                |
|                 |                   | Range                            |             |                                |
|                 |                   | Accuracy                         |             |                                |
|                 | Backlight         | Resolution                       |             |                                |
|                 |                   | Range                            |             |                                |
|                 |                   | Accuracy                         |             |                                |

\* /te: table range for the maximum range, precision is the highest accuracy (reading%), the resolution is the highest resolution.

| Project                      |                                  | Referencemodel<br>Performance<br>parameters                                                                    | 709H                                                                                 |
|------------------------------|----------------------------------|----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Source                       | DC current<br>(DCmA)             | Range                                                                                                          | 0.000~22.000mA                                                                       |
|                              |                                  | Accuracy<br>±(% of the set value + % of range)                                                                 | 0.01%+0.015%                                                                         |
|                              |                                  | Resolution                                                                                                     | 1uA                                                                                  |
|                              | Analog transmitter<br>(SIMULATE) | Range                                                                                                          | 0.000~22.000mA                                                                       |
|                              |                                  | Accuracy<br>±(% of the set value + % of range)                                                                 | 0.01%+0.015%                                                                         |
|                              |                                  | Resolution                                                                                                     | 1uA                                                                                  |
| Measurement                  | DC voltage<br>(DCV)              | External power supply                                                                                          | 5 ~ 28V                                                                              |
|                              |                                  | Range                                                                                                          | -2.000~28.000V                                                                       |
|                              |                                  | Accuracy<br>±( % of Reading+ % of Range)                                                                       | 0.01%+0.01%                                                                          |
|                              | DC current<br>(DCmA)             | Resolution                                                                                                     | 1mV                                                                                  |
|                              |                                  | Range                                                                                                          | -4.000 ~33.000mA                                                                     |
|                              |                                  | Accuracy<br>±( % of Reading+ % of Range)                                                                       | 0.01%+0.01%                                                                          |
|                              | Loop power supply<br>(LOOP)      | Resolution                                                                                                     | 1uA                                                                                  |
|                              |                                  | Range                                                                                                          | 24V                                                                                  |
|                              |                                  | The maximum current                                                                                            | 22mA                                                                                 |
|                              |                                  | Driving ability                                                                                                | No HART resistance of 1KΩ.<br>HART resistance is 750 Ω.                              |
|                              | HART communication               |                                                                                                                | Support HART general instructions and general application instructions. Able to read |
| Other functions              | Protection grade                 | IP65                                                                                                           |                                                                                      |
|                              | Backlight                        | ✓                                                                                                              |                                                                                      |
|                              | Backlight brightness adjustment  | ✓                                                                                                              |                                                                                      |
|                              | 25%、100%step output              | ✓                                                                                                              |                                                                                      |
|                              | Automatic ramp                   | ✓                                                                                                              |                                                                                      |
|                              | Automatic step                   | ✓                                                                                                              |                                                                                      |
|                              | mA、%Switch the display           | ✓                                                                                                              |                                                                                      |
|                              | Auto Power-off                   | ✓                                                                                                              |                                                                                      |
|                              | Power Adaptation function        | ✓                                                                                                              |                                                                                      |
|                              | Battery Low display              | ✓                                                                                                              |                                                                                      |
| PC online communication      |                                  | Compatible with infrared isolation USB serial communication interface<br>can realize remote control instrument |                                                                                      |
| Characteristic               |                                  |                                                                                                                |                                                                                      |
| Electrical safety            |                                  | EN61010-1：2001                                                                                                 |                                                                                      |
| Insulation                   |                                  | DC500V/50MΩ                                                                                                    |                                                                                      |
| EMC                          |                                  | EN61326-1：2006                                                                                                 |                                                                                      |
| Authentication               |                                  | CE                                                                                                             |                                                                                      |
| Display                      |                                  | 3.2 inch TFT color display                                                                                     |                                                                                      |
| Power supply                 |                                  | 4×1.5V AA Alkaline battery / adapter                                                                           |                                                                                      |
| Size                         |                                  | 206 × 97 × 60 mm                                                                                               |                                                                                      |
| Weight                       |                                  | About600g                                                                                                      |                                                                                      |
| Standard Quantity Per Carton |                                  |                                                                                                                |                                                                                      |
| Standard Carton Measurement  |                                  |                                                                                                                |                                                                                      |
| Standard Carton Gross Weight |                                  |                                                                                                                |                                                                                      |



**New Model**

**01S**

NEW type holster  
Accuracy :  $\pm 0.05\%$



**New Model**

**02S**

NEW type holster  
Accuracy :  $\pm 0.05\%$

| Output function        | Range      | Output range       | Resolution | Accuracy                                                                                 |
|------------------------|------------|--------------------|------------|------------------------------------------------------------------------------------------|
| DC voltage             | 100mV      | -10.000mV~110.00mV | 0.01mV     | 0.05%+0.03mV                                                                             |
| DCV                    | 1V         | -0.1000V~1.1000V   | 0.0001V    | 0.05%+0.3mV                                                                              |
| Ohm                    | 400Ω       | 0~400.0Ω           | 0.1Ω       | 0.05%+0.2Ω                                                                               |
| OHM                    | 4KΩ        | 0~4.000KΩ          | 1Ω         | 0.05%+2Ω                                                                                 |
| Thermocouple TC        | R          | 0°C ~1767°C        | 1°C        | 0~100°C/10~1767°C<br>1.5°C/1.2°C                                                         |
|                        | S          | 0°C ~1767°C        | 1°C        | 0~100°C/100~1767°C<br>1.5°C/1.2°C                                                        |
|                        | K          | -200.0°C ~1372.0°C | 0.1°C      | -200.0~-100.0°C/-100.0~400.0°C/400.0~1200.0°C/1200.0~1372.0°C<br>0.6°C/0.5°C/0.7°C/0.9°C |
|                        | E          | -200.0°C ~1000.0°C | 0.1°C      | -200.0~-100.0°C/-100.0~600.0°C/600.0~1000.0°C<br>0.6°C/0.5°C/0.4°C                       |
|                        | J          | -200.0°C ~1200.0°C | 0.1°C      | -200.0~-100.0°C/-100.0~800.0°C/800.0~1200.0°C<br>0.6°C/0.5°C/0.7°C                       |
|                        | T          | -250.0°C ~400.0°C  | 0.1°C      | -250.0~400.0°C<br>0.6°C                                                                  |
|                        | N          | -200.0°C ~1300.0°C | 0.1°C      | -200.0~-100.0°C/-100.0~900.0°C/900.0~1300.0°C<br>1.0°C/0.7°C/0.8°C                       |
|                        | B          | 600°C ~1820°C      | 1°C        | 600~800°C/800~1820°C<br>1.5°C/1.1°C                                                      |
|                        | A          | 0°C ~2500°C        | 1°C        | 0~1600°C/1600~2000°C/2000~2500°C<br>2.0°C/2.2°C/2.4°C                                    |
|                        | C          | 0°C ~2310°C        | 1°C        | 0~1600°C/1600~2000°C/2000~2310°C<br>2.0°C/2.2°C/2.4°C                                    |
| Thermal resistance RTD | D          | 0°C ~2310°C        | 1°C        | 0~100°C/100~270°C/270~1200°C/270~2310°C<br>2.6°C/2.4°C/2.2°C/2.4°C                       |
|                        | Pt100 385  | -200.0°C ~800.0°C  | 0.1°C      | -200.0~0.0°C/0.0~400.0°C/400.0~800.0°C<br>0.3°C/0.5°C/0.8°C                              |
|                        | Pt200 385  | -200.0°C ~630.0°C  | 0.1°C      | -200.0~100.0°C<br>0.8°C/0.9°C/1.0°C                                                      |
|                        | Pt500 385  | -200.0°C ~630.0°C  | 0.1°C      | 100.0~300.0°C<br>0.4°C/0.5°C/0.7°C                                                       |
|                        | Pt1000 385 | -200.0°C ~630.0°C  | 0.1°C      | 300.0~630.0°C<br>0.2°C/0.5°C/0.7°C                                                       |
|                        | Cu50       | -50.0°C ~150.0°C   | 0.1°C      | 0.6°C                                                                                    |

| Output function        | Range      | Output range       | Resolution | Accuracy                                                                                 |
|------------------------|------------|--------------------|------------|------------------------------------------------------------------------------------------|
| DC voltage             | 100mV      | -10.000mV~110.00mV | 0.01mV     | 0.05%+0.03mV                                                                             |
| DCV                    | 1V         | -0.1000V~1.1000V   | 0.0001V    | 0.05%+0.3mV                                                                              |
| Ohm                    | 400Ω       | 0~400.0Ω           | 0.1Ω       | 0.05%+0.2Ω                                                                               |
| OHM                    | 4KΩ        | 0~4.000KΩ          | 1Ω         | 0.05%+2Ω                                                                                 |
| Thermocouple TC        | R          | 0°C ~1767°C        | 1°C        | 0~100°C/10~1767°C<br>1.5°C/1.2°C                                                         |
|                        | S          | 0°C ~1767°C        | 1°C        | 0~100°C/100~1767°C<br>1.5°C/1.2°C                                                        |
|                        | K          | -200.0°C ~1372.0°C | 0.1°C      | -200.0~-100.0°C/-100.0~400.0°C/400.0~1200.0°C/1200.0~1372.0°C<br>0.6°C/0.5°C/0.7°C/0.9°C |
|                        | E          | -200.0°C ~1000.0°C | 0.1°C      | -200.0~-100.0°C/-100.0~600.0°C/600.0~1000.0°C<br>0.6°C/0.5°C/0.4°C                       |
|                        | J          | -200.0°C ~1200.0°C | 0.1°C      | -200.0~-100.0°C/-100.0~800.0°C/800.0~1200.0°C<br>0.6°C/0.5°C/0.7°C                       |
|                        | T          | -250.0°C ~400.0°C  | 0.1°C      | -250.0~400.0°C<br>0.6°C                                                                  |
|                        | N          | -200.0°C ~1300.0°C | 0.1°C      | -200.0~-100.0°C/-100.0~900.0°C/900.0~1300.0°C<br>1.0°C/0.7°C/0.8°C                       |
|                        | B          | 600°C ~1820°C      | 1°C        | 600~800°C/800~1820°C<br>1.5°C/1.1°C                                                      |
|                        | A          | 0°C ~2500°C        | 1°C        | 0~1600°C/1600~2000°C/2000~2500°C<br>2.0°C/2.2°C/2.4°C                                    |
|                        | C          | 0°C ~2310°C        | 1°C        | 0~1600°C/1600~2000°C/2000~2310°C<br>2.0°C/2.2°C/2.4°C                                    |
| Thermal resistance RTD | D          | 0°C ~2310°C        | 1°C        | 0~100°C/100~270°C/270~1200°C/270~2310°C<br>2.6°C/2.4°C/2.2°C/2.4°C                       |
|                        | Pt100 385  | -200.0°C ~800.0°C  | 0.1°C      | -200.0~0.0°C/0.0~400.0°C/400.0~800.0°C<br>0.3°C/0.5°C/0.8°C                              |
|                        | Pt200 385  | -200.0°C ~630.0°C  | 0.1°C      | -200.0~100.0°C<br>0.8°C/0.9°C/1.0°C                                                      |
|                        | Pt500 385  | -200.0°C ~630.0°C  | 0.1°C      | 100.0~300.0°C<br>0.4°C/0.5°C/0.7°C                                                       |
|                        | Pt1000 385 | -200.0°C ~630.0°C  | 0.1°C      | 300.0~630.0°C<br>0.2°C/0.5°C/0.7°C                                                       |
|                        | Cu50       | -50.0°C ~150.0°C   | 0.1°C      | 0.6°C                                                                                    |

| Measurement function        | Range      | Measurement range  | Resolution | Accuracy                                                           |
|-----------------------------|------------|--------------------|------------|--------------------------------------------------------------------|
| DC voltage                  | 100mV      | -110.00mV~110.00mV | 0.01mV     | 0.05%+0.03mV                                                       |
| DCV                         | 1V         | -1.1000V~1.1000V   | 0.0001V    | 0.05%+0.3mV                                                        |
|                             | 35V        | -35.000V~35.000V   | 0.001V     | 0.02%+2mV                                                          |
| Resistance                  | 500Ω       | 0~500.0Ω           | 0.01Ω      | 0.05%+0.2Ω                                                         |
| OHM                         | 5KΩ        | 0~5.000KΩ          | 0.0001KΩ   | 0.05%+2Ω                                                           |
| Thermocouple TC             | R          | 0°C ~1767°C        | 1°C        | 0~500°C<br>2.5°C                                                   |
|                             | S          | 0°C ~1767°C        | 1°C        | 500~1767°C<br>2°C                                                  |
|                             | K          | -100.0°C ~1372.0°C | 0.1°C      | -100.0~0.0°C/0.0~1372.0°C<br>1.2°C/0.8°C                           |
|                             | E          | -50.0°C ~1000.0°C  | 0.1°C      | -50.0~0.0°C/0.0~1000.0°C<br>0.9°C/1.5°C                            |
|                             | J          | -60.0°C ~1200.0°C  | 0.1°C      | -60.0~0.0°C/0.0~1200.0°C<br>1.0°C/0.7°C                            |
|                             | T          | -100.0°C ~400.0°C  | 0.1°C      | -100.0~0.0°C/0.0~400.0°C<br>1.0°C/0.7°C                            |
|                             | N          | -200.0°C ~1300.0°C | 0.1°C      | -200.0~0.0°C/0.0~1300.0°C<br>1.5°C/0.9°C                           |
|                             | B          | 600°C ~1820°C      | 1°C        | 600~800°C/800~1000°C/1000~1820°C<br>2.2°C/1.8°C/1.4°C              |
|                             | A          | 0°C ~2500°C        | 1°C        | 0~1600°C/1600~2000°C/2000~2500°C<br>2.0°C/2.2°C/2.4°C              |
|                             | C          | 0°C ~2310°C        | 1°C        | 0~1600°C/1600~2000°C/2000~2310°C<br>2.0°C/2.2°C/2.4°C              |
| Thermal resistance RTD (4W) | D          | 0°C ~2310°C        | 1°C        | 0~100°C/100~270°C/270~1200°C/270~2310°C<br>2.6°C/2.4°C/2.2°C/2.4°C |
|                             | Pt100 385  | -200.0°C ~800.0°C  | 0.1°C      | -200.0~0.0°C/0.0~400.0°C/400.0~800.0°C<br>0.5°C/0.7°C/0.8°C        |
|                             | Pt200 385  | -200.0°C ~630.0°C  | 0.1°C      | -200.0~100.0°C/100.0~300.0°C/300.0~630.0°C<br>0.8°C/0.9°C/1.0°C    |
|                             | Pt500 385  | -200.0°C ~630.0°C  | 0.1°C      | -200.0~100.0°C/100.0~300.0°C/300.0~630.0°C<br>0.4°C/0.5°C/0.7°C    |
|                             | Pt1000 385 | -200.0°C ~630.0°C  | 0.1°C      | -200.0~100.0°C/100.0~300.0°C/300.0~630.0°C<br>0.3°C/0.5°C/0.7°C    |
|                             | Cu50       | -50.0°C ~150.0°C   | 0.1°C      | -50.0~150.0°C<br>0.7°C                                             |
| On/off detection            | 500Ω       | <50Ω sounding      | 0.01Ω      |                                                                    |



**04S/05S**

NEW type holster  
Accuracy :  $\pm 0.05\%$

| Output function            | Range | Output range       | Resolution | Accuracy  |
|----------------------------|-------|--------------------|------------|-----------|
| 04S DC voltage DCV         | 10V   | -1.000V~11.000V    | 0.001V     | 0.05%+2mV |
| DC current DCI             | 30mA  | 0.000mA~30.000mA   | 0.001mA    | 0.05%+4uA |
| 05S DC current DCI         | 30mA  | 0.000mA~30.000mA   | 0.001mA    | 0.05%+4uA |
| Measurement function       | Range | Measurement range  | Resolution | Accuracy  |
| DC voltage DCV             | 35V   | -35.000V~35.000V   | 0.001V     | 0.02%+2mV |
| DC current DCI             | 30mA  | -35.000mA~35.000mA | 0.001mA    | 0.02%+4uA |
| 05S Loop power supply LOOP | 24 V  |                    |            | 10%       |

New Model

06/07

NEW type holster  
Accuracy:0.05%



## Technical data

| Project                      |                                                     |                                     | V/mA Calibrator<br>06 | Temperature Calibrator<br>07            |                       |
|------------------------------|-----------------------------------------------------|-------------------------------------|-----------------------|-----------------------------------------|-----------------------|
| Measure                      | DC voltage                                          | Range                               | 100mV-1V-35V          | 100mV-1V-35V                            |                       |
|                              |                                                     | Resolution                          | 0.01mV-0.1mV-1mV      | 0.01mV-0.1mV-1mV                        |                       |
|                              |                                                     | Basic accuracy                      | 0.05%+0.03mV          | 0.05%+0.03mV                            |                       |
|                              | Resistance                                          | Range                               | /                     | 500Ω-5KΩ                                |                       |
|                              |                                                     | Resolution                          |                       | 0.01Ω-0.1Ω                              |                       |
|                              |                                                     | Basic accuracy                      |                       | 0.05%+0.2Ω                              |                       |
|                              | DC current                                          | Wire                                |                       | 2W-3W-4W                                |                       |
|                              |                                                     | Range                               | 30mA                  | 30mA                                    |                       |
|                              |                                                     | Resolution                          | 0.001mA               | 0.001mA                                 |                       |
|                              | Thermocouple                                        | Basic accuracy                      | 0.02%+4uA             | 0.02%+4uA                               |                       |
|                              |                                                     | Range                               | /                     | E-K-J-T-N-R-S-B-A-C-D                   |                       |
|                              |                                                     | Resolution                          |                       | 0.1°C-1°C                               |                       |
| Source                       | DC voltage                                          | Basic accuracy                      |                       | 0.7°C                                   |                       |
|                              |                                                     | The reference junction compensation |                       | √                                       |                       |
|                              |                                                     | RTD                                 |                       | √                                       |                       |
|                              | Resistance                                          | Range                               | /                     | Cu50- Pt100- Pt200- Pt500- Pt1000       |                       |
|                              |                                                     | Resolution                          |                       | 0.1°C                                   |                       |
|                              |                                                     | Basic accuracy                      |                       | 0.3°C                                   |                       |
| Other                        | DC current                                          | Wire                                |                       | 2W-3W-4W                                |                       |
|                              |                                                     | Range                               | 10V                   | 100mV-1V-10V                            |                       |
|                              |                                                     | Resolution                          | 0.001V                | 0.01mV-0.1mV-1mV                        |                       |
|                              | Thermocouple                                        | Basic accuracy                      | 0.05%+2mV             | 0.05%+0.03mV                            |                       |
|                              |                                                     | Range                               | /                     | 400Ω-4000Ω                              |                       |
|                              |                                                     | Resolution                          |                       | 0.1Ω-1Ω                                 |                       |
|                              | RTD                                                 | Basic accuracy                      |                       | 0.05%+0.2Ω                              |                       |
|                              |                                                     | Range                               | 20mA                  | 20mA                                    |                       |
|                              |                                                     | Resolution                          | 0.001mA               | 0.001mA                                 |                       |
|                              | Power Supply                                        | Thermocouple                        | Basic accuracy        | 0.05%+4uA                               | 0.05%+4uA             |
|                              |                                                     |                                     | Range                 | /                                       | E-K-J-T-N-R-S-B-A-C-D |
|                              |                                                     |                                     | Resolution            |                                         | 0.1°C-1°C             |
| RTD                          |                                                     | Basic accuracy                      |                       | 0.7°C                                   |                       |
|                              |                                                     | The reference junction compensation |                       | √                                       |                       |
|                              |                                                     | RTD                                 | /                     | Pt100- Pt200- Pt500- Pt1000- Cu50       |                       |
| Auto Power-off               | DC voltage                                          | Range                               | /                     | 0.1°C                                   |                       |
|                              |                                                     | Resolution                          |                       | 0.3°C                                   |                       |
|                              |                                                     | Basic accuracy                      |                       | 0.3°C                                   |                       |
|                              | Resistance                                          | Range                               | √                     | √                                       |                       |
|                              |                                                     | Resolution                          | √                     | √                                       |                       |
|                              |                                                     | Basic accuracy                      | √                     | √                                       |                       |
|                              | DC current                                          | Range                               | √                     | √                                       |                       |
|                              |                                                     | Resolution                          | √                     | √                                       |                       |
|                              |                                                     | Basic accuracy                      | √                     | √                                       |                       |
|                              | Thermocouple                                        | Range                               | √                     | √                                       |                       |
|                              |                                                     | Resolution                          | √                     | √                                       |                       |
|                              |                                                     | Basic accuracy                      | √                     | √                                       |                       |
| RTD                          | Range                                               | √                                   | √                     |                                         |                       |
|                              | Resolution                                          | √                                   | √                     |                                         |                       |
|                              | Basic accuracy                                      | √                                   | √                     |                                         |                       |
| Backlight                    | Simulating transmitter                              |                                     | √                     | √                                       |                       |
|                              | 25%, 100% step output                               |                                     | √                     | √                                       |                       |
|                              | Automatic ramp                                      |                                     | √                     | √                                       |                       |
|                              | Automatic step                                      |                                     | √                     | √                                       |                       |
|                              | Display current and % of span                       |                                     | √                     | √                                       |                       |
|                              | The 24V loop power supply and measuring the current |                                     | √                     | √                                       |                       |
|                              | °C/ °F conversion                                   |                                     | √                     | √                                       |                       |
|                              | Size                                                |                                     | 180×90×52             | 180×90×52                               |                       |
|                              | Weight                                              |                                     | About 1kg             | About 1kg                               |                       |
|                              | Accessories                                         |                                     | Test line- manual     | Test line- manual- Thermocouple adapter |                       |
|                              | Standard Quantity Per Carton                        |                                     | 10PCS                 | 10PCS                                   |                       |
|                              | Standard Carton Measurement                         |                                     | 395mm*385mm*260mm     | 395mm*385mm*260mm                       |                       |
| Standard Carton Cross Weight |                                                     | 11.5Kg                              | 11.5Kg                |                                         |                       |



77+



79A+



79+



| Project        |                               |                        | 77+                            | 78+                            | 79+                            | 79A+                           |
|----------------|-------------------------------|------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| Measurement    | DC voltage                    | Range                  | ±51V                           | 60mV-1000V                     | 60mV-1000V                     | 50mV-1000V                     |
|                |                               | The highest resolution | 10mV                           | 0.01mV                         | 0.01mV                         | 0.01mV                         |
|                |                               | Basic accuracy         | 0.5%                           | 0.2%                           | 0.2%                           | 0.1%                           |
|                | AC voltage                    | Range                  | 510V                           | 6V-600V                        | 6V-600V                        | 1000V                          |
|                |                               | The highest resolution | 100mV                          | 0.1mV                          | 0.1mV                          | 0.1mV                          |
|                |                               | Basic accuracy         | 1.5%                           | 0.5%                           | 0.5%                           | 0.5%                           |
|                | VFC                           | AC Voltage             | ✓                              | 600V                           | 600V                           | 500V                           |
|                | Resistance                    | Range                  | 5kΩ                            | 600Ω-60MΩ                      | 600Ω-60MΩ                      | 50MΩ                           |
|                |                               | The highest resolution | 1Ω                             | 0.1Ω                           | 0.1Ω                           | 0.1Ω                           |
|                |                               | Basic accuracy         | 0.5%                           | 0.2%                           | 0.2%                           | 0.1%                           |
|                | DC current                    | Range                  | ±50mA                          | 600mA                          | 600mA                          | ±500mA                         |
|                |                               | The highest resolution | 10uA                           | 10uA                           | 10uA                           | 1uA                            |
|                |                               | Basic accuracy         | 0.1%+4                         | 0.2%                           | 0.2%                           | 0.1%                           |
|                | AC current                    | Range                  |                                | 600mA                          | 600mA                          | 500mA                          |
|                |                               | The highest resolution | N/A                            | 10uA                           | 10uA                           | 1uA                            |
|                |                               | Basic accuracy         |                                | 0.5%                           | 0.5%                           | 0.5%                           |
|                | Thermocouple                  | Range                  |                                |                                | R, S, B, E, K, J, T, N         | R, S, B, E, K, J, T, N         |
|                |                               | The highest resolution | N/A                            | N/A                            | 1°C                            | 1°C                            |
|                |                               | Basic accuracy         |                                |                                | 0.5%                           | 0.5%                           |
|                | RTD                           | Range                  |                                |                                | Cu50, Pt100, Pt1000            | Cu50, Pt100, Pt1000            |
|                |                               | The highest resolution | N/A                            | N/A                            | 1°C                            | 1°C                            |
|                |                               | Basic accuracy         |                                |                                | 0.5%                           | 0.5%                           |
|                | CAP                           | Range                  |                                |                                |                                | 1000uF                         |
|                |                               | The highest resolution | N/A                            | N/A                            | N/A                            | 0.01nF                         |
|                |                               | Basic accuracy         |                                |                                |                                | 5%                             |
| Source         | Frequency                     |                        | N/A                            | 10Hz~10kHz                     | 10Hz~10kHz                     | 10Hz~10kHz                     |
|                | Diode test                    |                        | ✓                              | ✓                              | ✓                              | ✓                              |
|                | Continuity beeper             |                        | ✓                              | ✓                              | ✓                              | ✓                              |
|                | Data hold                     |                        | ✓                              | ✓                              | ✓                              | ✓                              |
|                | Relative value measurement    |                        | N/A                            | ✓                              | ✓                              | ✓                              |
|                | DC voltage                    | Range                  | -1V-11V                        | 100mV-10V                      | 100mV-10V                      | 100mV-10V                      |
|                |                               | Resolution             | 0.01V                          | 0.1mV, 1mV                     | 0.01mV, 0.1mV                  | 0.001mV, 0.01mV, 0.1mV         |
|                |                               | Basic accuracy         | 0.2%+4                         | 0.2%                           | 0.2%                           | 0.2%                           |
|                | Resistance                    | Range                  | N/A                            | N/A                            | 0~400.0Ω                       | 4kΩ                            |
|                |                               | Resolution             |                                |                                | 0.1Ω                           | 0.1Ω                           |
|                |                               | Basic accuracy         |                                |                                | 0.05%+2                        | 0.2%                           |
|                | DC current                    | Range                  | 22mA                           | 30mA                           | 30mA                           | 30mA                           |
|                |                               | Resolution             | 0.001mA                        | 0.01mA                         | 0.001mA                        | 0.001mA                        |
|                |                               | Basic accuracy         | 0.2%                           | 0.2%                           | 0.2%                           | 0.2%                           |
|                | Simulating transmitter        |                        | ✓                              | ✓                              | ✓                              | ✓                              |
|                | 25%、100%Step output           |                        | ✓                              | ✓                              | ✓                              | ✓                              |
|                | Automatic ramp                |                        | N/A                            | ✓                              | ✓                              | ✓                              |
|                | Automatic step                |                        | N/A                            | ✓                              | ✓                              | ✓                              |
|                | Display current and % of span |                        | ✓                              | ✓                              | ✓                              | ✓                              |
|                | Loop power                    |                        | 24V                            | 24V                            | 24V                            | 24V                            |
|                | Frequency                     |                        | N/A                            | 100Hz-10kHz                    | 100Hz-10kHz                    | 1.0Hz-11.0kHz                  |
|                | Thermocouple                  |                        | N/A                            | N/A                            | R, S, B, E, K, J, T, N         | R, S, B, E, K, J, T, N         |
|                | RTD                           |                        | N/A                            | N/A                            | Cu50, Pt100, Pt1000            | Cu50, Pt100, Pt1000            |
|                | The 24V loop power supply     |                        | ✓                              | ✓                              | ✓                              | ✓                              |
|                | Built in 250Ω                 |                        | ✓                              | ✓                              | ✓                              | ✓                              |
| Loop detection | Power Supply                  |                        | 3×1.5V AA Alkaline battery     | 4×1.5V AAA Alkaline battery    | 4×1.5V AAA Alkaline battery    | 4×1.5V AA Alkaline battery     |
|                | Auto Power-off                |                        | ✓                              | ✓                              | ✓                              | ✓                              |
|                | Backlight                     |                        | N/A                            | ✓                              | ✓                              | ✓                              |
|                | Safety                        |                        | CAT IV 600V Pollution degree 2 | CAT IV 600V Pollution degree 2 | CAT IV 600V Pollution degree 2 | CAT IV 600V Pollution degree 2 |
|                | Size                          |                        | 180×90×52                      | 205×95×42                      | 205×95×42                      | 205×97×60                      |
|                | Weight                        |                        | About 400g                     | About 500g                     | About 500g                     | About 1600g                    |
|                | Accessories                   |                        | Test line、manual、fuse          | Test line、manual、fuse          | Test line、manual、fuse          | Test line、manual、fuse          |
|                | Standard Quantity Per Carton  |                        | 12pcs                          | 10pcs                          | 10pcs                          | 6pcs                           |
|                | Standard Carton Measurement   |                        | 395mm*385mm*260mm              | 395mm*385mm*260mm              | 395mm*385mm*260mm              | 395mm*385mm*260mm              |
|                | Standard Carton Gross Weight  |                        | 9.2Kg                          | 9.8Kg                          | 10.2Kg                         | 10.5Kg                         |

## PCE01/02 Pressure Calibration Instrument

PCE01/02 Pressure Calibration Instrument includes process calibration device, communication cable for pressure module, pressure transformation joint, high accuracy pressure module and common thread transformation joint. Cooperate use of the Instrument with pressure manual pump suit can make Users' pressure calibration more convenient. This Instrument is widely used in measurement, petroleum, chemical, power, metallurgy, national defense and instrument manufacture industries for precise measurement and calibration of pressure measurement.

PCE01/02 pressure calibration instrument, a perfect combination of electric signal calibration and pressure signal calibration.

### 1.Features of the Pressure Calibration Instrument:

- Can make on-spot calibration of various pressure instruments or equipments, provide with 20 pressure modules of different types and ranges, the pressure calibration range is from -100KPA~60MPa with 0.05% high accuracy.
- Can measure and output electric signals of DC voltage, DC current, Ohms, frequency, thermocouples, RTD with basic accuracy as high as 0.02%(specific functions are set by the configuration selected by Users).
- Can simulate transmitter, provide 24V DC power.
- Portable suitcase, system-wide configurations, convenient to use and carry.
- Selectable pressure manual pump to make the calibration much easier.



## 2.pressure calibration device configuration table

| Serial number | Part name                          | Model /specification                                                                                                     | Number | Remarks                 |
|---------------|------------------------------------|--------------------------------------------------------------------------------------------------------------------------|--------|-------------------------|
| 1             | Multifunctional process calibrator | 25                                                                                                                       | 1      | Only PCE02              |
| 2             | V/mA/pressure calibrator           | 15+                                                                                                                      | 1      | Only PCE01              |
| 3             | VPMS seriesdigital pressure module | 20 kinds of optional                                                                                                     | 1      | You can select multiple |
| 4             | CALCP pressure adapter             | A000018                                                                                                                  | 1      |                         |
| 5             | Communication cable                | A000046                                                                                                                  | 1      |                         |
| 6             | The adapter                        | 1/4 NPT internal thread 1/4 BSP external thread                                                                          | 1      | Options                 |
| 7             | The adapter                        | M20*1.5internal thread 1/4 BSP external thread                                                                           | 1      | Options                 |
| 8             | Handpump                           | K/P/-0.85~25BAR                                                                                                          | 1      | Options                 |
| 9             | Hand pump                          | HTP1/0~700BAR<br>Attached: portable box 1, hose 1, all kinds of pressure adapter 8, kettle 1, the sealing gasket several | 1      | Options                 |

## PCE03/04 Pressure Calibration Equipment Introduce

PCE03/04 Pressure Calibration Equipment includes a process calibrator, pressure module communication cable, high accuracy pressure module and a usual thread adapter. used in conjunction with pressure hand pump kit, Let users pressure calibration more simple and convenient. The equipment can be used to precision pressure test and pressure calibration in metrology, petroleum, chemical, power, metallurgy, national defense and instrument manufacturing industry.

PCE03/04 Pressure Calibration Equipment is a perfect combination of electrical signal and pressure signal calibration.

### 1. Pressure Calibration Equipment characteristic

- Pressure Calibration Equipment can calibrate different types of pressure instrument or equipment, and it can equipped with 20 different types, different range pressure module, pressure calibration range from -100KPa to 60MPa, the accuracy up to 0.05%.
- Measurement and Output DC voltage, DC current, Ohm, Frequency, Thermocouple, Thermal resistance, almost all electrical signals. basic accuracy up to 0.02% (particular functions depending on the user 's configuration).
- Pressure Calibration Equipment can simulate the transmitter, 24V DC power supply.
- Portable suitcase, systematism configuration, convenient use and portability.
- User can choose with pressure hand pump, so that the pressure calibration easier.



## 2. Pressure Calibration Equipment configuration table

| serial number | Configuration item                   | Model                          | Number | Remark                      |
|---------------|--------------------------------------|--------------------------------|--------|-----------------------------|
| 1             | Multifunction Process Calibrator     | 26                             | 1      | Only PCE03                  |
| 2             | Multifunction Process Calibrator     | 26H                            | 1      | only PCE04                  |
| 3             | VPM-S series digital pressure module | More than 20 kinds of types    | 1      | User can select one or more |
| 4             | Communication cable                  | A000046                        | 1      |                             |
| 5             | Thread adapter                       | 1/4 NPT female to 1/4 BSP male | 1      | Options                     |
| 6             | Thread adapter                       | M20*1.5 female to 1/4 BSP male | 1      | Options                     |
| 7             | hand pump kit                        | K/P40.85~25BAR                 | 1      | Options                     |
| 8             | hand pump kit                        | HTP1/0~700BAR                  | 1      |                             |

Note : 1, 2, 3, 4, items details please see the "product catalog".

## VPM-S series digit pressure module introduce

### Feature :

VPM-S series digit pressure module contains more pressure type, such as gauge, compound and absolute; Self temperature compensation; Digital communication mode; the modules are compatible with YITENSEN calibrators; performance to meet almost any calibration and measurement task.

- High measure accuracy : 0.05% F. S. , temperature coefficient is  $\pm 0.001\%/^{\circ}\text{C}$
- Wide measure range : -0.1~60MPa, more than a score of pressure ranges
- Wide temperature compensate range : from 0 to  $50^{\circ}\text{C}$
- More Pressure Type : gauge, absolute and compound pressure modules available
- Digit communication output : pressure resolution is 5 digits, support exchange of pressure modules without setup and calibration.
- Self contained calibration : Calibration data are stored and processed inside the VPM. Enabling calibration and traceability follows the module.
- Portable and rugged construction : Engineered for rough field use, almost unbreakable.
- The VPM-S series digit pressure modules are compatible with YITENSEN25 or YITENSEN15+ calibrators.



| Pressure Module Model, Range & Acc. |             |            |            |                               |          |                        |
|-------------------------------------|-------------|------------|------------|-------------------------------|----------|------------------------|
| Model                               | Range(kPa)  | Range(bar) | Range(psi) | Sensor type                   | Pressure | Accuracy (%)<br>0~50°C |
| VPM100KGS                           | 0~100KPa    | 0~1bar     | 0~15psi    | isolated, 316 stainless steel | gauge    | 0.05                   |
| VPM200KGS                           | 0~200KPa    | 0~2bar     | 0~30psi    | isolated, 316 stainless steel | gauge    | 0.05                   |
| VPM500KGS                           | 0~500KPa    | 0~5bar     | 0~72psi    | isolated, 316 stainless steel | gauge    | 0.05                   |
| VPM001MGS                           | 0~1MPa      | 0~10bar    | 0~150psi   | isolated, 316 stainless steel | gauge    | 0.05                   |
| VPM002MGS                           | 0~2MPa      | 0~20bar    | 0~300psi   | isolated, 316 stainless steel | gauge    | 0.05                   |
| VPM005MGS                           | 0~5MPa      | 0~50bar    | 0~725psi   | isolated, 316 stainless steel | gauge    | 0.05                   |
| VPM010MGS                           | 0~10MPa     | 0~100bar   | 0~1500psi  | isolated, 316 stainless steel | gauge    | 0.05                   |
| VPM020MGS                           | 0~20MPa     | 0~200bar   | 0~3000psi  | isolated, 316 stainless steel | gauge    | 0.05                   |
| VPM040MGS                           | 0~40MPa     | 0~400bar   | 0~5800psi  | isolated, 316 stainless steel | gauge    | 0.05                   |
| VPM060MGS                           | 0~60MPa     | 0~600bar   | 0~8700psi  | isolated, 316 stainless steel | gauge    | 0.05                   |
| VPM100KAS                           | 0~100KPa    | 0~1bar     | 0~15psi    | isolated, 316 stainless steel | vacuum   | 0.05                   |
| VPM200KAS                           | 0~200KPa    | 0~2bar     | 0~30psi    | isolated, 316 stainless steel | vacuum   | 0.05                   |
| VPM500KAS                           | 0~500KPa    | 0~5bar     | 0~72psi    | isolated, 316 stainless steel | vacuum   | 0.05                   |
| VPM001MAS                           | 0~1MPa      | 0~10bar    | 0~150psi   | isolated, 316 stainless steel | absolute | 0.05                   |
| VPM002MAS                           | 0~2MPa      | 0~20bar    | 0~300psi   | isolated, 316 stainless steel | absolute | 0.05                   |
| VPM005MAS                           | 0~5MPa      | 0~50bar    | 0~725psi   | isolated, 316 stainless steel | absolute | 0.05                   |
| VPM010MAS                           | 0~10MPa     | 0~100bar   | 0~1500psi  | isolated, 316 stainless steel | absolute | 0.05                   |
| VPM020MAS                           | 0~20MPa     | 0~200bar   | 0~3000psi  | isolated, 316 stainless steel | absolute | 0.05                   |
| VPM100KCS                           | -100~100KPa | -1~1bar    | -15~15psi  | isolated, 316 stainless steel | Compound | 0.05                   |
| VPM200KCS                           | -100~200KPa | -1~2bar    | -15~30psi  | isolated, 316 stainless steel | Compound | 0.05                   |
| VPM500KCS                           | -100~500KPa | -1~7bar    | -15~100psi | isolated, 316 stainless steel | Compound | 0.05                   |
| VPM001MCS                           | -0.1~1MPa   | -1~10bar   | -15~150psi | isolated, 316 stainless steel | Compound | 0.05                   |
| VPM002MCS                           | -0.1~2MPa   | -1~20bar   | -15~300psi | isolated, 316 stainless steel | Compound | 0.05                   |



60F/60G/60H

## Technical data

| Function                     | 60F                                        | 60G                                        | 60H                                        |
|------------------------------|--------------------------------------------|--------------------------------------------|--------------------------------------------|
| Insulation resistance        | Resistance range                           | 50V /200MΩ                                 | N/A                                        |
|                              |                                            | 100V / 500MΩ                               | N/A                                        |
|                              |                                            | 250V / 2000MΩ                              | 250V / 2000MΩ                              |
|                              |                                            | 500V /5GΩ                                  | 500V /5GΩ                                  |
|                              |                                            | 1000V /10GΩ                                | 1000V /10GΩ                                |
|                              |                                            | 1500V /20GΩ                                | N/A                                        |
|                              |                                            | 2000V /50GΩ                                | N/A                                        |
|                              |                                            | 2500V /100GΩ                               | 2500V /50GΩ                                |
| Voltage test                 | DC Range                                   | 0 ~ 1000V                                  | 30 ~ 1000V                                 |
|                              | AC Range                                   | 30 ~ 750V                                  | 30 ~ 750V                                  |
| PI                           | ✓                                          | ✓                                          | ✓                                          |
| DAR                          | ✓                                          | ✓                                          | ✓                                          |
| COMP                         | ✓                                          | ✓                                          | ✓                                          |
| Short circuit current        | About 1.3mA                                | About 1.3mA                                | About 1.3mA                                |
| TIME                         | ✓                                          | ✓                                          | ✓                                          |
| Automatic release voltage    | ✓                                          | ✓                                          | ✓                                          |
| Power Supply                 | Alkaline battery 1.5V (LR6) ×The 8 section | Alkaline battery 1.5V (LR6) ×The 8 section | Alkaline battery 1.5V (LR6) ×The 8 section |
| Automatic shutdown           | ✓                                          | ✓                                          | ✓                                          |
| Backlight                    | The white LED                              | The white LED                              | The white LED                              |
| Storage                      | 100 groups                                 | 100 groups                                 | 100 groups                                 |
| adapter interface            | ✓                                          | ✓                                          | ✓                                          |
| Size                         | 178(L)×110(W)×59(D)mm                      | 178(L)×110(W)×59(D)mm                      | 178(L)×110(W)×59(D)mm                      |
| Weight                       | About 600g (Does not contain a battery)    | About 600g (Does not contain a battery)    | About 600g (Does not contain a battery)    |
| Standard Quantity Per Carton | 12 pcs                                     | 12 pcs                                     | 12 pcs                                     |
| Standard Carton Measurement  | 430×350×225mm                              | 430×350×225mm                              | 430×350×225mm                              |
| Standard Carton Gross Weight | 12.4KG                                     | 12.2KG                                     | 10.8KG                                     |



3123

3125



3126

## Technical data

| Model                           | 3123                   | 3125                                                                                                              | 3126                                                                                                              |
|---------------------------------|------------------------|-------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| 250V                            | Resistance range       | 0 ~ 250GΩ                                                                                                         | 0 ~ 250GΩ                                                                                                         |
|                                 | Resistance accuracy    | 5%                                                                                                                | 5%                                                                                                                |
|                                 | Rated current          | 1mA                                                                                                               | 1mA                                                                                                               |
|                                 |                        |                                                                                                                   |                                                                                                                   |
| 500V                            | Resistance range       | 0 ~ 500GΩ                                                                                                         | 0 ~ 500GΩ                                                                                                         |
|                                 | Resistance accuracy    | 5%                                                                                                                | 5%                                                                                                                |
|                                 | Rated current          | 1mA                                                                                                               | 1mA                                                                                                               |
|                                 |                        |                                                                                                                   |                                                                                                                   |
| 1000V                           | Resistance range       | 0 ~ 1000GΩ                                                                                                        | 0 ~ 1000GΩ                                                                                                        |
|                                 | Resistance accuracy    | 5%                                                                                                                | 5%                                                                                                                |
|                                 | Rated current          | 1mA                                                                                                               | 1mA                                                                                                               |
|                                 |                        |                                                                                                                   |                                                                                                                   |
| 2500V                           | Resistance range       | 0 ~ 2.5TΩ                                                                                                         | 0 ~ 2.5TΩ                                                                                                         |
|                                 | Resistance accuracy    | 5%                                                                                                                | 5%                                                                                                                |
|                                 | Rated current          | 1mA                                                                                                               | 1mA                                                                                                               |
|                                 |                        |                                                                                                                   |                                                                                                                   |
| 5000V                           | Resistance range       | N/A                                                                                                               | 0 ~ 5TΩ                                                                                                           |
|                                 | Resistance accuracy    |                                                                                                                   | 5%                                                                                                                |
|                                 | Rated current          |                                                                                                                   | 1mA                                                                                                               |
|                                 |                        |                                                                                                                   |                                                                                                                   |
| The leakage current measurement |                        | 0 ~ 5000uA                                                                                                        | 0 ~ 5000uA                                                                                                        |
| Short circuit current           |                        | About 3mA                                                                                                         | About 3mA                                                                                                         |
| Polarization index (PI)         |                        | ✓                                                                                                                 | ✓                                                                                                                 |
| Induced absorption ratio (DAR)  |                        | ✓                                                                                                                 | ✓                                                                                                                 |
| Step voltage (SV)               |                        | ✓                                                                                                                 | ✓                                                                                                                 |
| The timing measurement (TIME)   |                        | ✓                                                                                                                 | ✓                                                                                                                 |
| Slope test (RAMP)               |                        | ✓                                                                                                                 | ✓                                                                                                                 |
| Comparison function (COMP)      |                        | ✓                                                                                                                 | ✓                                                                                                                 |
| Automatic release voltage       |                        | ✓                                                                                                                 | ✓                                                                                                                 |
| Temperature measurement         |                        | Range: 0 ~ 70.0°C                                                                                                 | 0 ~ 70.0°C                                                                                                        |
| Voltage test                    | DC Range               | 0 ~ 1000V                                                                                                         | 0 ~ 1000V                                                                                                         |
|                                 | AC Range               | 30 ~ 750V                                                                                                         | 30 ~ 750V                                                                                                         |
| Storage                         | Manual: 500groups      | Manual: 500groups                                                                                                 | Manual: 500groups                                                                                                 |
|                                 | Homework: 1000groups   | Homework: 1000groups                                                                                              | Homework: 1000groups                                                                                              |
| Online communication            |                        | Isolation of USB communication, SCPI command, can realize remote control instrument by the device driver software | Isolation of USB communication, SCPI command, can realize remote control instrument by the device driver software |
| The system time                 |                        | The date +24h time (Replace the battery without re setting)                                                       | The date +24h time (Replace the battery without re setting)                                                       |
| The power indicator             |                        | Display the remaining battery power                                                                               | Display the remaining battery power                                                                               |
| Automatic shutdown              |                        | ✓                                                                                                                 | ✓                                                                                                                 |
| Backlight                       |                        | The white LED                                                                                                     | The white LED                                                                                                     |
| Size and shape                  |                        | 210mm(L) × 155mm(W) × 95mm(D)                                                                                     | 210mm(L) × 155mm(W) × 95mm(D)                                                                                     |
| Weight                          |                        | 1750g (Does not contain a battery)                                                                                | 1750g (Does not contain a battery)                                                                                |
| Power supply                    |                        | Alkaline battery 1.5V (LR6) ×The 8 section<br>The power adapter (AC100~250V)*                                     | Alkaline battery 1.5V (LR6) ×The 8 section<br>The power adapter (AC100~250V)*                                     |
| Overload                        | Insulation resistance: | AC1200V/10S                                                                                                       | Insulation resistance: AC1200V/10S                                                                                |
|                                 | Voltage range:         | AC720V/10S                                                                                                        | Voltage range: AC720V/10S                                                                                         |
| Withstand voltage               |                        | AC8320V(50/60Hz)/5S<br>(Between the circuit and the outer box)                                                    | AC8320V(50/60Hz)/5S<br>(Between the circuit and the outer box)                                                    |
| Insulation resistance           |                        | 1000MΩ or greater/ DC 1000V<br>(Between the circuit and the outer box)                                            | 1000MΩ or greater/ DC 1000V<br>(Between the circuit and the outer box)                                            |
| Standard Quantity Per Carton    |                        | 4pcs                                                                                                              | 4pcs                                                                                                              |
| Standard Carton Measurement     |                        | 510mm*350mm*330mm                                                                                                 | 510mm*350mm*330mm                                                                                                 |
| Standard Carton Gross Weight    |                        | 13Kg                                                                                                              | 14Kg                                                                                                              |



4106A



4107B



4108

## Technical data

| Function                     |          | 4106                                        | 4106A                                       |
|------------------------------|----------|---------------------------------------------|---------------------------------------------|
| Earth Resistance function    | Range    | 20Ω, ±(2%+15)                               | 20Ω, ±(2%+3)                                |
|                              | accuracy | 200Ω, ±(2%+5)                               | 200Ω, ±(2%+3)                               |
|                              |          | 2000Ω, ±(3%+5)                              | 2000Ω, ±(2%+3)                              |
|                              |          | 20kΩ, ±(3%+5)                               | N/A                                         |
| Short circuit current        |          | About 20mA                                  | About 3mA                                   |
| Voltage test                 | Range    | UST 50V                                     | UST 50V                                     |
| Measurement of RE method     |          | 2pole, 3pole, 4pole                         | 3pole, 4pole                                |
| Comparison function (COMP)   |          | ✓                                           | ✓                                           |
| ρ                            |          | ✓                                           | ✓                                           |
| Storage                      |          | 100 groups                                  | N/A                                         |
| Power supply                 |          | Alkaline battery 1.5V (LR6) × The 8 section | Alkaline battery 1.5V (LR6) × The 8 section |
| adapter interface            |          | ✓                                           | ✓                                           |
| Automatic shutdown           |          | ✓                                           | ✓                                           |
| Backlight                    |          | The white LED                               | The white LED                               |
| Size and shape               |          | 178(L) × 110(W) × 58.5(D) mm                | 178(L) × 110(W) × 58.5(D) mm                |
| Weight                       |          | About 500g (Does not contain a battery)     | About 500g (Does not contain a battery)     |
| Standard Quantity Per Carton |          | 6pcs                                        | 6pcs                                        |
| Standard Carton Measurement  |          | 530 × 405 × 310 mm                          | 530 × 405 × 310 mm                          |
| Standard Carton Gross Weight |          | 21kg                                        | 19.4kg                                      |

## Technical data

| Model                           |                | 4107A                                       | 4107B                                           | 4108                                            |
|---------------------------------|----------------|---------------------------------------------|-------------------------------------------------|-------------------------------------------------|
| RE                              | Range          | 0.020Ω ~ 19.99kΩ                            | 0.020Ω ~ 19.99kΩ                                | 0.02Ω ~ 199.9kΩ                                 |
|                                 | Basic accuracy | 2%+0.03Ω                                    | 2%+0.03Ω                                        | 2%+5                                            |
| A single clamp                  | Range          | N/A                                         | 0.020Ω ~ 19.99kΩ                                | 0.02Ω ~ 19.99kΩ                                 |
|                                 | Basic accuracy |                                             | 5%+0.03Ω                                        | 5%+5                                            |
| Double clamp                    | Range          | N/A                                         | 0.02Ω ~ 100Ω                                    | 0.02Ω ~ 100Ω                                    |
|                                 | Basic accuracy |                                             | 10%+0.6                                         | 10%+2                                           |
| Equipotential resistance        | Range          | N/A                                         | N/A                                             | 0.02Ω ~ 1999Ω                                   |
|                                 | Basic accuracy |                                             |                                                 | 2%+2                                            |
| Voltage test                    | DC Range       | 0 ~ ±999.9V                                 | 0 ~ ±999.9V                                     | N/A                                             |
|                                 | AC Range       | 30.0 ~ 750.0V                               | 30.0 ~ 750.0V                                   |                                                 |
| Disturbance voltage (UST)       | Range          | 0.0V ~ 50.0V                                | 0.0V ~ 50.0V                                    | 0.0V ~ 50.0V                                    |
|                                 | Basic accuracy | 5%+5                                        | 5%+5                                            | 5%+5                                            |
| Interference frequency (FST)    | Range          | 16 ~ 400Hz                                  | 16 ~ 400Hz                                      | 16 ~ 400Hz                                      |
|                                 | Basic accuracy | 1%+5                                        | 1%+5                                            | 1%+5                                            |
| Clamp current measurement (IST) | Range          | N/A                                         | 1.0mA ~ 20.0A                                   | 1.0mA ~ 20.0A                                   |
|                                 | Basic accuracy |                                             | 5%+5                                            | 5%+5                                            |
| ρ                               |                | ✓                                           | ✓                                               | ✓                                               |
| Short circuit current           |                | <250mA                                      | <250mA                                          | <250mA                                          |
| COMP                            |                | ✓                                           | ✓                                               | ✓                                               |
| Measurement method              |                | 2pole, 3pole, 4pole                         | 2pole, 3pole, 4pole, single clamp, double clamp | 2pole, 3pole, 4pole, single clamp, double clamp |
| Power Supply                    |                | Alkaline battery 1.5V (LR6) × The 8 section | Alkaline battery 1.5V (LR6) × The 8 section     | Alkaline battery 1.5V (LR6) × The 8 section     |
| Automatic shutdown              |                | ✓                                           | ✓                                               | ✓                                               |
| Display type                    |                | 240 * 128 dot matrix                        | LCD                                             | LCD                                             |
| Backlight                       |                | ✓                                           | ✓                                               | ✓                                               |
| Storage                         |                | ✓                                           | ✓                                               | ✓                                               |
| Communication                   |                | USB                                         | USB                                             | USB                                             |
| Size                            |                | 210mm(L) × 155mm(W) × 95mm(D)               | 210mm(L) × 155mm(W) × 95mm(D)                   | 210mm(L) × 155mm(W) × 95mm(D)                   |
| Weight                          |                | About 5500g (Does not contain a battery)    | About 6500g (Does not contain a battery)        | About 6500g (Does not contain a battery)        |
| Standard Quantity Per Carton    |                | 2pcs                                        | 2pcs                                            | 1pcs                                            |
| Standard Carton Measurement     |                | 510 × 350 × 330 mm                          | 510 × 350 × 330 mm                              | 395mm × 385mm × 260mm                           |
| Standard Carton Gross Weight    |                | 11.9kg                                      | 14kg                                            | 7.9kg                                           |



## Technical data

| Project                             |                | 98A+                                                    | 98C+                                                            |
|-------------------------------------|----------------|---------------------------------------------------------|-----------------------------------------------------------------|
| DC voltage                          | Range          | 200mV/2V/20V/200V/1000V                                 | 200mV/2V/20V/200V/1000V                                         |
|                                     | Basic accuracy | ±(0.05%+10)                                             | ±(0.05%+10)                                                     |
| AC voltage                          | Range          | 200mV/2V/20V/200V/1000V                                 | 200mV/2V/20V/200V/1000V                                         |
|                                     | Basic accuracy | ±(0.5%+40)                                              | ±(0.5%+40)                                                      |
| DC current                          | Range          | 200uA/2000uA/20mA/200mA/2A/10A                          | 200uA/2000uA/20mA/200mA/2A/10A                                  |
|                                     | Basic accuracy | ±(0.2%+10)                                              | ±(0.2%+10)                                                      |
| AC current                          | Range          | 200uA/2000uA/20mA/200mA/2A/10A                          | 200uA/2000uA/20mA/200mA/2A/10A                                  |
|                                     | Basic accuracy | ±(0.8%+30)                                              | ±(0.8%+30)                                                      |
| Resistance                          | Range          | 200Ω/2kΩ/20kΩ/200kΩ/2MΩ/20MΩ/60MΩ                       | 200Ω/2kΩ/20kΩ/200kΩ/2MΩ/20MΩ/60MΩ                               |
|                                     | Basic accuracy | ±(0.2%+5)                                               | ±(0.2%+5)                                                       |
| Capacitance                         | Range          | 10nF/100nF/1000nF/10uF/100uF/1000uF/10mF/100mF          | 10nF/100nF/1000nF/10uF/100uF/1000uF/10mF/100mF                  |
|                                     | Basic accuracy | ±(5%+5)                                                 | ±(5%+5)                                                         |
| Frequency                           | Range          | 10Hz/100Hz/1KHz/10KHz/100KHz/1MHz/5MHz                  | 10Hz/100Hz/1KHz/10KHz/100KHz/1MHz/5MHz                          |
|                                     | Basic accuracy | ±(0.02%+4)                                              | ±(0.02%+4)                                                      |
| Thermocouple                        | Range          | K indexing: -200.0°C ~ 1372.0°C                         | K indexing: -200.0°C ~ 1372.0°C                                 |
|                                     | Basic accuracy | ±(0.5%+3°C)                                             | ±(0.5%+3°C)                                                     |
| RTD                                 | Range          | Pt100: -200.0°C ~ 850.0°C                               | Pt100: -200.0°C ~ 850.0°C                                       |
|                                     | Basic accuracy | ±(0.5%+3°C)                                             | ±(0.5%+3°C)                                                     |
| Display words                       |                | 22000                                                   | 22000                                                           |
| The measurement rate                |                | Slow 5 times/second; Fast 20 times/second               | Slow 5 times/second; Fast 20 times/second                       |
| Analog Bar graph                    |                | 20 times / sec                                          | 20 times / sec                                                  |
| Automatic / manual range            |                | ✓                                                       | ✓                                                               |
| Measure the true effective value    |                | ✓                                                       | ✓                                                               |
| Bandwidth                           |                | 20Hz~1kHz                                               | 20Hz~1kHz                                                       |
| The duty ratio                      |                | 10% ~ 90%                                               | 10% ~ 90%                                                       |
| Diode test                          |                | ✓                                                       | ✓                                                               |
| Continuity beeper                   |                | ✓                                                       | ✓                                                               |
| dBm                                 |                | ✓                                                       | ✓                                                               |
| AC+DC/AC+Hz                         |                | ✓                                                       | ✓                                                               |
| MAX/MIN/AVG                         |                | ✓                                                       | ✓                                                               |
| Relative value measurement          |                | ✓                                                       | ✓                                                               |
| Data Hold                           |                | ✓                                                       | ✓                                                               |
| Auto Hold                           |                | ✓                                                       | ✓                                                               |
| Peak Hold                           |                | ✓                                                       | ✓                                                               |
| Comparison function                 |                | ✓                                                       | ✓                                                               |
| VFC                                 |                | ✓                                                       | ✓                                                               |
| The reference junction compensation |                | ✓                                                       | ✓                                                               |
| °C/°F conversion                    |                | ✓                                                       | ✓                                                               |
| Input impedance                     |                | 10MΩ                                                    | 10MΩ                                                            |
| Data recording                      |                | 2000 group                                              | 2000 group                                                      |
| Online communication                |                | Infrared USB communication module and PC communication. | 1-The wireless communication module and PC communication 2-APP" |
| Auto power-off                      |                | ✓                                                       | ✓                                                               |
| Display type                        |                | LCD                                                     | LCD                                                             |
| Backlight                           |                | ✓                                                       | ✓                                                               |
| Power Supply                        |                | 3×AAA Alkaline batteries                                | 3×AAA Alkaline batteries                                        |
| Safety                              |                | CAT. III, 1000V; CAT. IV, 600V                          | CAT. III, 1000V; CAT. IV, 600V                                  |
| Electromagnetic compatibility       |                | IEC61326-1, Group2, Class B                             | IEC61326-1, Group1, Class B                                     |
| Size                                |                | 185(L)×90(W)×54(D)mm                                    | 185(L)×90(W)×54(D)mm                                            |
| Weight                              |                | About500g                                               | About500g                                                       |
| Standard Quantity Per Carton        |                | 10pcs                                                   | 10pcs                                                           |
| Standard Carton Measurement         |                | 395mm×385mm×260mm                                       | 395mm×385mm×260mm                                               |
| Standard Carton Cross Weight        |                | 10Kg                                                    | 10Kg                                                            |

| Project                             |                | 189A                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DC voltage                          | Range          | 50mV/500mV/5V/50V/500V/1000V                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                     | Basic accuracy | ± (0.025%+5dgt)                                                                                                                                                                                                                                                                                                                                                                                                                          |
| AC voltage                          | Range          | 50mV/500mV/5V/50V/500V/750V                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                     | Basic accuracy | ± (0.7%+30dgt)                                                                                                                                                                                                                                                                                                                                                                                                                           |
| DC current                          | Range          | 500uA/5000uA/50mA/500mA/5A/10A                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                     | Basic accuracy | ± (0.15%+10dgt)                                                                                                                                                                                                                                                                                                                                                                                                                          |
| AC current                          | Range          | 500uA/5000uA/50mA/500mA/5A/10A                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                     | Basic accuracy | ± (0.8%+30dgt)                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Resistance                          | Range          | 50Ω/500Ω/5kΩ/50kΩ/500kΩ/5MΩ/50MΩ                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                     | Basic accuracy | ± (0.05%+5dgt)                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Capacitance                         | Range          | 10nF/100nF/1000nF/10uF/100uF/1000uF/10mF/100mF                                                                                                                                                                                                                                                                                                                                                                                           |
|                                     | Basic accuracy | ± (5%+5dgt)                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Frequency                           | Range          | 10Hz ~ 100kHz                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                     | Basic accuracy | ± (0.02%+4dgt)                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Thermocouple                        | Range          | K indexing: -200.0°C-1360.0°C                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                     | Basic accuracy | ± (0.5%+3°C)                                                                                                                                                                                                                                                                                                                                                                                                                             |
| RTD                                 | Range          | Pt100: -200.0°C-850.0°C                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                     | Basic accuracy | ± (0.5%+3°C)                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Display words                       |                | 55000                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| The measurement rate                |                | Fast: 20 times / sec<br>Slow: 5 times / sec                                                                                                                                                                                                                                                                                                                                                                                              |
| Analog Bar graph                    |                | The fastest rate: 20 times / sec                                                                                                                                                                                                                                                                                                                                                                                                         |
| Automatic / manual range            |                | ✓                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Measure the true effective value    |                | ✓                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Bandwidth                           |                | 50kHz                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Duty cycle ratio                    |                | 10%~90%                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Diode test                          |                | ✓                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Continuity beeper                   |                | ✓                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| dBm                                 |                | ✓                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Low pass filter                     |                | ✓                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| MAX/MIN/AVG                         |                | ✓                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Relative value measurement          |                | ✓                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Data Hold                           |                | ✓                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Data Hold                           |                | ✓                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Peak Hold                           |                | ✓                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| The reference junction compensation |                | ✓                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| °C/°F conversion                    |                | ✓                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Change rate                         |                | ✓                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Input impedance                     |                | 10MΩ                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Data recording                      |                | Manual record: 1000group<br>Homework: 1000 groups of records                                                                                                                                                                                                                                                                                                                                                                             |
| Online communication                |                | 189A can undertake wired communication with infrared serial port of the compatible USB connection.<br><br>Support ASCII can realize remote control instrument by the device driver software. The powerful function, friendly man-machine interface, the user can conveniently obtain multiple data parameters of instrument, and the data storage, processing, management, access to data is displayed in the graphical or tabular form. |
| Auto power-off                      |                | ✓                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Display type                        |                | LCD                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Backlight                           |                | ✓                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Power Supply                        |                | 4×1.5 AA Alkaline batteries                                                                                                                                                                                                                                                                                                                                                                                                              |
| Safety                              |                | CAT IV 600V, CAT III 1000V                                                                                                                                                                                                                                                                                                                                                                                                               |
| Electromagnetic compatibility       |                | IEC61326-1, Group1, Class B                                                                                                                                                                                                                                                                                                                                                                                                              |
| Size                                |                | 206×97×60mm                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Weight                              |                | About 500g                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Standard Quantity Per Carton        |                | 10pcs                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Standard Carton Measurement         |                | 395mm×385mm×260mm                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Standard Carton Gross Weight        |                | 11.3Kg                                                                                                                                                                                                                                                                                                                                                                                                                                   |



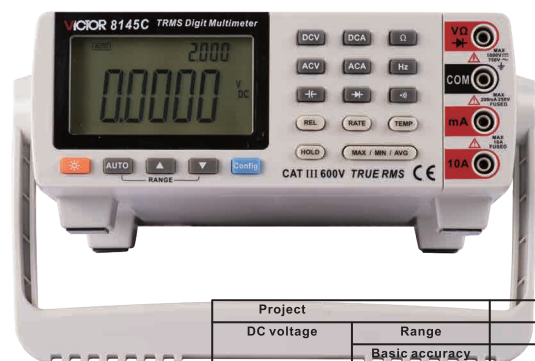
98A+



98C+



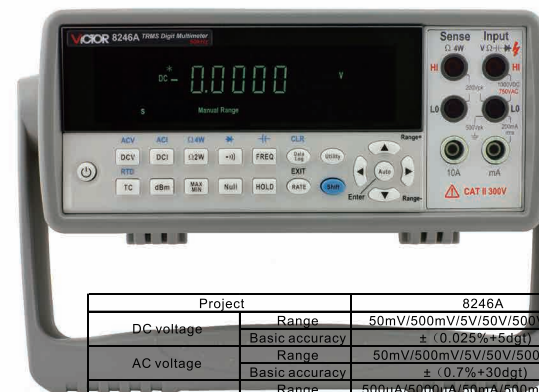
189A



## 8145C

Accuracy: 0.05%  
Display words: 22000

| Project                             |                | 8145C                                     |
|-------------------------------------|----------------|-------------------------------------------|
| DC voltage                          | Range          | 200mV/2V/20V/200V/1000V                   |
|                                     | Basic accuracy | $\pm (0.05\% + 4\text{dgt})$              |
| AC voltage                          | Range          | 200mV/2V/20V/200V/750V                    |
|                                     | Basic accuracy | $\pm (0.5\% + 40\text{dgt})$              |
| DC current                          | Range          | 0.2mA/2mA/20mA/200mA/10A                  |
|                                     | Basic accuracy | $\pm (0.2\% + 10\text{dgt})$              |
| AC current                          | Range          | 0.2mA/2mA/20mA/200mA/10A                  |
|                                     | Basic accuracy | $\pm (0.8\% + 30\text{dgt})$              |
| Resistance                          | Range          | 200Ω/2kΩ/20kΩ/200kΩ/2MΩ/20MΩ/60MΩ         |
|                                     | Basic accuracy | $\pm (0.2\% + 5\text{dgt})$               |
| Capacitance                         | Range          | 10nF/100nF/1000nF/10uF/100uF/1000uF       |
|                                     | Basic accuracy | $\pm (5\% + 5\text{dgt})$                 |
| Frequency                           | Range          | 10Hz ~ 10MHz                              |
|                                     | Basic accuracy | $\pm (0.02\% + 4\text{dgt})$              |
| Thermocouple                        | Range          | K: -200.0°C ~ 1372.0°C                    |
|                                     | Basic accuracy | $\pm (0.5\% + 5^\circ\text{C})$           |
| Display words                       |                | 22000                                     |
| The measurement                     |                | Quick: 20 times / sec    Slow: 3 time sec |
| Automatic /                         |                | ✓                                         |
| True RMS                            |                | ✓                                         |
| Bandwidth                           |                | 1kHz                                      |
| Diode test                          |                | ✓                                         |
| Continuity beeper                   |                | ✓                                         |
| MAX/MIN/AVG                         |                | ✓                                         |
| Relative value measurement          |                | ✓                                         |
| Data Hold                           |                | ✓                                         |
| The reference junction compensation |                | ✓                                         |
| °C / ° F conversion                 |                | ✓                                         |
| Communication                       |                | The isolation of the USB interface and PC |
| Online communication                |                | Support ASCII, can realize remote         |
| Display type                        |                | LCD                                       |
| Backlight                           |                | ✓                                         |
| Power Supply                        |                | 220V±10%AC or 110V±10%AC, 50Hz or 60Hz    |
| Power                               |                | About 3W                                  |
| Safety                              |                | CAT II 300V                               |
| Electromagnetic compatibility       |                | IEC61326-1, Group1, Class B               |
| Size                                |                | 245 × 220 × 82 (mm dgt)                   |
| Weight                              |                | About 2kg                                 |
| Standard Quantity Per Carton        |                | 6pcs                                      |
| Standard Carton Measurement         |                | 585mm*505mm*323mm                         |
| Standard Carton Gross Weight        |                | 13.6Kg                                    |



## 8246A/8246B

Accuracy: 0.025%  
Display words: 55000

| Project                             |                | 8246A                                                                                                                                                                                                                                                                                                                          | 8246B                                          |
|-------------------------------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
| DC voltage                          | Range          | 50mV/500mV/5V/50V/500V/1000V                                                                                                                                                                                                                                                                                                   | 50mV/500mV/5V/50V/500V/1000V                   |
|                                     | Basic accuracy | $\pm (0.025\% + 5\text{dgt})$                                                                                                                                                                                                                                                                                                  | $\pm (0.025\% + 5\text{dgt})$                  |
| AC voltage                          | Range          | 50mV/500mV/5V/50V/500V/750V                                                                                                                                                                                                                                                                                                    | 50mV/500mV/5V/50V/500V/750V                    |
|                                     | Basic accuracy | $\pm (0.7\% + 30\text{dgt})$                                                                                                                                                                                                                                                                                                   | $\pm (0.7\% + 30\text{dgt})$                   |
| DC current                          | Range          | 500uA/5000uA/50mA/500mA/5A/10A                                                                                                                                                                                                                                                                                                 | 500uA/5000uA/50mA/500mA/5A/10A                 |
|                                     | Basic accuracy | $\pm (0.15\% + 10\text{dgt})$                                                                                                                                                                                                                                                                                                  | $\pm (0.15\% + 10\text{dgt})$                  |
| AC current                          | Range          | 500uA/5000uA/50mA/500mA/5A/10A                                                                                                                                                                                                                                                                                                 | 500uA/5000uA/50mA/500mA/5A/10A                 |
|                                     | Basic accuracy | $\pm (0.8\% + 30\text{dgt})$                                                                                                                                                                                                                                                                                                   | $\pm (0.8\% + 30\text{dgt})$                   |
| Resistance                          | Range          | 500Ω/5kΩ/50kΩ/500kΩ/5MΩ/50MΩ                                                                                                                                                                                                                                                                                                   | 500Ω/5kΩ/50kΩ/500kΩ/5MΩ/50MΩ                   |
|                                     | Basic accuracy | $\pm (0.05\% + 5\text{dgt})$                                                                                                                                                                                                                                                                                                   | $\pm (0.05\% + 5\text{dgt})$                   |
| Capacitance                         | Range          | 10nF/100nF/1000nF/10uF/100uF/1000uF/10mF/100mF                                                                                                                                                                                                                                                                                 | 10nF/100nF/1000nF/10uF/100uF/1000uF/10mF/100mF |
|                                     | Basic accuracy | $\pm (5\% + 5\text{dgt})$                                                                                                                                                                                                                                                                                                      | $\pm (5\% + 5\text{dgt})$                      |
| Frequency                           | Range          | 10Hz ~ 100kHz                                                                                                                                                                                                                                                                                                                  | 10Hz ~ 100kHz                                  |
|                                     | Basic accuracy | $\pm (0.02\% + 4\text{dgt})$                                                                                                                                                                                                                                                                                                   | $\pm (0.02\% + 4\text{dgt})$                   |
| Thermocouple                        | Range          | K: -200.0°C ~ 1372.0°C                                                                                                                                                                                                                                                                                                         | K: -200.0°C ~ 1372.0°C                         |
|                                     | Basic accuracy | $\pm (0.5\% + 0.5^\circ\text{C})$                                                                                                                                                                                                                                                                                              | $\pm (0.5\% + 0.5^\circ\text{C})$              |
| RTD                                 | Range          | Pt100: -200.0°C ~ 800.0°C                                                                                                                                                                                                                                                                                                      | Pt100: -200.0°C ~ 800.0°C                      |
|                                     | Basic accuracy | $\pm (0.5\% + 0.5^\circ\text{C})$                                                                                                                                                                                                                                                                                              | $\pm (0.5\% + 0.5^\circ\text{C})$              |
| Display words                       |                | 55000                                                                                                                                                                                                                                                                                                                          | 55000                                          |
| The measurement rate                |                | Quick: 20 times / sec<br>Slow: 5 times / sec                                                                                                                                                                                                                                                                                   | Quick: 20 times / sec<br>Slow: 5 times / sec   |
| Automatic / manual range            |                | ✓                                                                                                                                                                                                                                                                                                                              | ✓                                              |
| True RMS                            |                | ✓                                                                                                                                                                                                                                                                                                                              | ✓                                              |
| Bandwidth                           |                | 50kHz                                                                                                                                                                                                                                                                                                                          | 1kHz                                           |
| The duty ratio                      |                | 10%~90%                                                                                                                                                                                                                                                                                                                        | 10%~90%                                        |
| Diode test                          |                | ✓                                                                                                                                                                                                                                                                                                                              | ✓                                              |
| Continuity beeper                   |                | ✓                                                                                                                                                                                                                                                                                                                              | ✓                                              |
| Four wire resistance measurements   |                | ✓                                                                                                                                                                                                                                                                                                                              | ✓                                              |
| dBm                                 |                | ✓                                                                                                                                                                                                                                                                                                                              | ✓                                              |
| MAX/MIN/AVG                         |                | ✓                                                                                                                                                                                                                                                                                                                              | ✓                                              |
| Relative value measurement          |                | ✓                                                                                                                                                                                                                                                                                                                              | ✓                                              |
| Data Hold                           |                | ✓                                                                                                                                                                                                                                                                                                                              | ✓                                              |
| The reference junction compensation |                | ✓                                                                                                                                                                                                                                                                                                                              | ✓                                              |
| °C / ° F conversion                 |                | ✓                                                                                                                                                                                                                                                                                                                              | ✓                                              |
| Change rate                         |                | ✓                                                                                                                                                                                                                                                                                                                              | ✓                                              |
| Communication interface             |                | Configurable isolation USB, isolated RS232 communication                                                                                                                                                                                                                                                                       |                                                |
| Online communication                |                | Support ASCII can realize remote control instrument by the device driver software. The powerful function, friendly man-machine interface, the user can conveniently obtain multiple data parameters of instrument, and the data storage, processing, management, access to data is displayed in the graphical or tabular form. |                                                |
| Auto power-off                      |                | ✓                                                                                                                                                                                                                                                                                                                              | ✓                                              |
| Display type                        |                | VFD                                                                                                                                                                                                                                                                                                                            | VFD                                            |
| Power Supply                        |                | 220V±10%AC or 110V±10%AC, 50Hz                                                                                                                                                                                                                                                                                                 | 220V±10%AC or 110V±10%AC, 50Hz                 |
| Power                               |                | About 3W                                                                                                                                                                                                                                                                                                                       | About 3W                                       |
| Safety                              |                | CAT II 300V                                                                                                                                                                                                                                                                                                                    | CAT II 300V                                    |
| Electromagnetic compatibility       |                | IEC61326-1, Group1, Class B                                                                                                                                                                                                                                                                                                    | IEC61326-1, Group1, Class B                    |
| Size                                |                | 315*260*110 (mm dgt)                                                                                                                                                                                                                                                                                                           | 315*260*110 (mm dgt)                           |
| Weight                              |                | About 5kg                                                                                                                                                                                                                                                                                                                      | About 5kg                                      |
| Standard Quantity Per Carton        |                | 4pcs                                                                                                                                                                                                                                                                                                                           | 4pcs                                           |
| Standard Carton Measurement         |                | 650mm*390mm*370mm                                                                                                                                                                                                                                                                                                              | 650mm*390mm*370mm                              |
| Standard Carton Gross Weight        |                | 21 Kg                                                                                                                                                                                                                                                                                                                          | 21 Kg                                          |



8265

## Technical data

|                                     |                                                                                                                                                                                                                                                                                                                                            |       |                                          |                |                           |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------------------------------------------|----------------|---------------------------|
| Project                             | 8265                                                                                                                                                                                                                                                                                                                                       |       |                                          |                |                           |
| DC voltage                          | <table> <tr> <td>Range</td><td>100mV/1V/10V/100V/1000V</td></tr> <tr> <td>Basic accuracy</td><td><math>\pm(0.0035+0.0005\%)</math></td></tr> </table>                                                                                                                                                                                      | Range | 100mV/1V/10V/100V/1000V                  | Basic accuracy | $\pm(0.0035+0.0005\%)$    |
| Range                               | 100mV/1V/10V/100V/1000V                                                                                                                                                                                                                                                                                                                    |       |                                          |                |                           |
| Basic accuracy                      | $\pm(0.0035+0.0005\%)$                                                                                                                                                                                                                                                                                                                     |       |                                          |                |                           |
| AC voltage                          | <table> <tr> <td>Range</td><td>100mV/1V/10V/100V/750V</td></tr> <tr> <td>Basic accuracy</td><td><math>\pm(0.05\%+0.03\%)</math></td></tr> </table>                                                                                                                                                                                         | Range | 100mV/1V/10V/100V/750V                   | Basic accuracy | $\pm(0.05\%+0.03\%)$      |
| Range                               | 100mV/1V/10V/100V/750V                                                                                                                                                                                                                                                                                                                     |       |                                          |                |                           |
| Basic accuracy                      | $\pm(0.05\%+0.03\%)$                                                                                                                                                                                                                                                                                                                       |       |                                          |                |                           |
| DC current                          | <table> <tr> <td>Range</td><td>10mA/100mA/1A/10A</td></tr> <tr> <td>Basic accuracy</td><td><math>\pm(0.015\%+0.005\%)</math></td></tr> </table>                                                                                                                                                                                            | Range | 10mA/100mA/1A/10A                        | Basic accuracy | $\pm(0.015\%+0.005\%)$    |
| Range                               | 10mA/100mA/1A/10A                                                                                                                                                                                                                                                                                                                          |       |                                          |                |                           |
| Basic accuracy                      | $\pm(0.015\%+0.005\%)$                                                                                                                                                                                                                                                                                                                     |       |                                          |                |                           |
| AC current                          | <table> <tr> <td>Range</td><td>10mA/100mA/1A/10A</td></tr> <tr> <td>Basic accuracy</td><td><math>\pm(0.05\%+0.05\%)</math></td></tr> </table>                                                                                                                                                                                              | Range | 10mA/100mA/1A/10A                        | Basic accuracy | $\pm(0.05\%+0.05\%)$      |
| Range                               | 10mA/100mA/1A/10A                                                                                                                                                                                                                                                                                                                          |       |                                          |                |                           |
| Basic accuracy                      | $\pm(0.05\%+0.05\%)$                                                                                                                                                                                                                                                                                                                       |       |                                          |                |                           |
| Resistance                          | <table> <tr> <td>Range</td><td>100Ω/1KΩ/10KΩ/100KΩ/1MΩ/10MΩ/100MΩ</td></tr> <tr> <td>Basic accuracy</td><td><math>\pm(0.01\%+0.001\%)</math></td></tr> </table>                                                                                                                                                                            | Range | 100Ω/1KΩ/10KΩ/100KΩ/1MΩ/10MΩ/100MΩ       | Basic accuracy | $\pm(0.01\%+0.001\%)$     |
| Range                               | 100Ω/1KΩ/10KΩ/100KΩ/1MΩ/10MΩ/100MΩ                                                                                                                                                                                                                                                                                                         |       |                                          |                |                           |
| Basic accuracy                      | $\pm(0.01\%+0.001\%)$                                                                                                                                                                                                                                                                                                                      |       |                                          |                |                           |
| Capacitance                         | <table> <tr> <td>Range</td><td>10nF/100nF/1000nF/10uF/100uF/1000uF/10mF</td></tr> <tr> <td>Basic accuracy</td><td><math>\pm(1\%+0.5\%)</math></td></tr> </table>                                                                                                                                                                           | Range | 10nF/100nF/1000nF/10uF/100uF/1000uF/10mF | Basic accuracy | $\pm(1\%+0.5\%)$          |
| Range                               | 10nF/100nF/1000nF/10uF/100uF/1000uF/10mF                                                                                                                                                                                                                                                                                                   |       |                                          |                |                           |
| Basic accuracy                      | $\pm(1\%+0.5\%)$                                                                                                                                                                                                                                                                                                                           |       |                                          |                |                           |
| Frequency                           | <table> <tr> <td>Range</td><td>3Hz ~ 100kHz</td></tr> <tr> <td>Basic accuracy</td><td><math>\pm 0.01\%</math></td></tr> </table>                                                                                                                                                                                                           | Range | 3Hz ~ 100kHz                             | Basic accuracy | $\pm 0.01\%$              |
| Range                               | 3Hz ~ 100kHz                                                                                                                                                                                                                                                                                                                               |       |                                          |                |                           |
| Basic accuracy                      | $\pm 0.01\%$                                                                                                                                                                                                                                                                                                                               |       |                                          |                |                           |
| Thermocouple                        | <table> <tr> <td>Range</td><td>8types(R/S/K/E/J/T/B/N/L/U)</td></tr> <tr> <td>Basic accuracy</td><td><math>\pm 0.7^{\circ}\text{C}</math></td></tr> </table>                                                                                                                                                                               | Range | 8types(R/S/K/E/J/T/B/N/L/U)              | Basic accuracy | $\pm 0.7^{\circ}\text{C}$ |
| Range                               | 8types(R/S/K/E/J/T/B/N/L/U)                                                                                                                                                                                                                                                                                                                |       |                                          |                |                           |
| Basic accuracy                      | $\pm 0.7^{\circ}\text{C}$                                                                                                                                                                                                                                                                                                                  |       |                                          |                |                           |
| RTD                                 | <table> <tr> <td>Range</td><td>2types(Pt100/PT1000)</td></tr> <tr> <td>Basic accuracy</td><td><math>\pm 0.7^{\circ}\text{C}</math></td></tr> </table>                                                                                                                                                                                      | Range | 2types(Pt100/PT1000)                     | Basic accuracy | $\pm 0.7^{\circ}\text{C}$ |
| Range                               | 2types(Pt100/PT1000)                                                                                                                                                                                                                                                                                                                       |       |                                          |                |                           |
| Basic accuracy                      | $\pm 0.7^{\circ}\text{C}$                                                                                                                                                                                                                                                                                                                  |       |                                          |                |                           |
| Display words                       | 1000000                                                                                                                                                                                                                                                                                                                                    |       |                                          |                |                           |
| Automatic / manual range            | √                                                                                                                                                                                                                                                                                                                                          |       |                                          |                |                           |
| True RMS                            | √                                                                                                                                                                                                                                                                                                                                          |       |                                          |                |                           |
| Bandwidth                           | 20Hz~100kHz                                                                                                                                                                                                                                                                                                                                |       |                                          |                |                           |
| Diode test                          | √                                                                                                                                                                                                                                                                                                                                          |       |                                          |                |                           |
| Continuity beeper                   | √                                                                                                                                                                                                                                                                                                                                          |       |                                          |                |                           |
| Four wire resistance measurements   | √                                                                                                                                                                                                                                                                                                                                          |       |                                          |                |                           |
| dBm                                 | √                                                                                                                                                                                                                                                                                                                                          |       |                                          |                |                           |
| MAX/MIN                             | √                                                                                                                                                                                                                                                                                                                                          |       |                                          |                |                           |
| Relative value measurement          | √                                                                                                                                                                                                                                                                                                                                          |       |                                          |                |                           |
| Data Hold                           | √                                                                                                                                                                                                                                                                                                                                          |       |                                          |                |                           |
| The reference junction compensation | √                                                                                                                                                                                                                                                                                                                                          |       |                                          |                |                           |
| °C/°F conversion                    | √                                                                                                                                                                                                                                                                                                                                          |       |                                          |                |                           |
| Input impedance                     | 100mV/1V/10V: 10MΩ or > 10GΩ 100V/1000V: 10MΩ                                                                                                                                                                                                                                                                                              |       |                                          |                |                           |
| Communication interface             | Configurable isolation USB, isolated RS232 communication                                                                                                                                                                                                                                                                                   |       |                                          |                |                           |
| Online communication                | Support the SCPI command, can realize remote control instrument by the device driver software. The powerful function, friendly man-machine interface, the user can conveniently obtain multiple data parameters of instrument, and the data storage, processing, management, access to data is displayed in the graphical or tabular form. |       |                                          |                |                           |
| Auto power-off                      | √                                                                                                                                                                                                                                                                                                                                          |       |                                          |                |                           |
| Display type                        | VFD                                                                                                                                                                                                                                                                                                                                        |       |                                          |                |                           |
| Power Supply                        | 250V $\pm$ 10%AC, 50Hz or 60Hz                                                                                                                                                                                                                                                                                                             |       |                                          |                |                           |
| Power                               | About 15W                                                                                                                                                                                                                                                                                                                                  |       |                                          |                |                           |
| Safety                              | CAT. III, 1000V; CAT. IV, 600V                                                                                                                                                                                                                                                                                                             |       |                                          |                |                           |
| Electromagnetic compatibility       | IEC61010.1-2001                                                                                                                                                                                                                                                                                                                            |       |                                          |                |                           |
| Size                                | 245 × 220 × 82 (mm)                                                                                                                                                                                                                                                                                                                        |       |                                          |                |                           |
| Weight                              | About 5100g                                                                                                                                                                                                                                                                                                                                |       |                                          |                |                           |
| Standard Quantity Per Carton        | 4pcs                                                                                                                                                                                                                                                                                                                                       |       |                                          |                |                           |
| Standard Carton Measurement         | 650mm×410mm×365mm                                                                                                                                                                                                                                                                                                                          |       |                                          |                |                           |
| Standard Carton Gross Weight        | 21.6kg                                                                                                                                                                                                                                                                                                                                     |       |                                          |                |                           |



71A/71B/71C

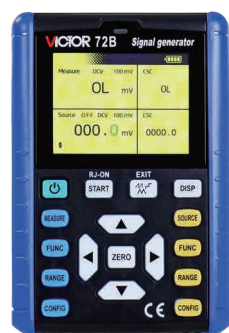
## Technical data

| Project         | 71A                                             | 71B                         | 71C                         |
|-----------------|-------------------------------------------------|-----------------------------|-----------------------------|
| SOURCE"         | DC millivolt                                    | 110mV                       | 110mV                       |
|                 | Basic accuracy                                  | 0.2%+4dgt                   | 0.2%+4dgt                   |
|                 | Resolution                                      | 100uV                       | 100uV                       |
|                 | DC voltage                                      | 10V                         | 10V                         |
|                 | Basic accuracy                                  | 0.2%+4dgt                   | 0.2%+4dgt                   |
|                 | Resolution                                      | 10mV                        | 10mV                        |
|                 | DC current                                      | 0~22mA                      | 0~22mA                      |
|                 | Basic accuracy                                  | 0.2%+4                      | 0.2%+4                      |
|                 | Resolution                                      | 0.01mA                      | 0.01mA                      |
|                 | Sink current                                    | 0~22mA                      | 0~22mA                      |
|                 | Basic accuracy                                  | 0.2%+4                      | 0.2%+4                      |
|                 | Resolution                                      | 0.01mA                      | 0.01mA                      |
| MEASURE         | External power supply                           | 5 ~ 28V                     | 5 ~ 28V                     |
|                 | Thermocouple                                    | Range                       | 8 types(R/S/K/E/J/T/B/N)    |
|                 | Basic accuracy                                  |                             | 0.2%+4                      |
|                 | Resolution                                      |                             | 1°C                         |
|                 | DC millivolt                                    | Range                       | -10~110mV                   |
|                 | Basic accuracy                                  | 0.2%+4                      | 0.2%+4                      |
|                 | Resolution                                      | 100uV                       | 100uV                       |
|                 | DC voltage                                      | Range                       | -5~30V                      |
|                 | Basic accuracy                                  | 0.2%+4                      | 0.2%+4                      |
|                 | Resolution                                      | 10mV                        | 10mV                        |
|                 | DC current                                      | Range                       | 0~22mA                      |
|                 | Basic accuracy                                  | 0.2%+4                      | 0.2%+4                      |
| Other functions | Resolution                                      | 0.01mA                      | 0.01mA                      |
|                 | Loop power                                      | Range                       | 24V                         |
|                 | Basic accuracy                                  | 10%                         | 10%                         |
|                 | Limit current                                   | 25mA                        | 25mA                        |
|                 | Thermocouple                                    | Range                       | 8 types(R/S/K/E/J/T/B/N)    |
|                 | Basic accuracy                                  |                             | 0.2%+4                      |
|                 | Resolution                                      |                             | 1°C                         |
|                 | Manual Step Output                              | √                           | √                           |
|                 | Automatic Waveform Output                       | √                           | √                           |
|                 | Flash Light                                     | √                           | √                           |
|                 | Magnetic suspension cord (Optional accessories) | √                           | √                           |
|                 | Display                                         | LCD                         | LCD                         |
| Display         | Power supply                                    | 4×1.5V AAA alkaline battery | 4×1.5V AAA alkaline battery |
|                 | Size                                            | 151(L)×75(W)×42(D)mm        | 151(L)×75(W)×42(D)mm        |
|                 | Weight                                          | 0.5KG                       | 0.5KG                       |
|                 | Standard Quantity Per Carton                    | 12pcs                       | 12pcs                       |
|                 | Standard Carton Measurement                     | 430×350×225mm               | 430×350×225mm               |
|                 | Standard Carton Gross Weight                    | 7.2KG                       | 7.2KG                       |

\* Notice: table range for the maximum range, precision is the highest accuracy (reading%), the resolution is the highest resolution.



72A



72B

## Technical data

| Input measurement function                                                                                                                                                                              |        |                     |            |          |     |     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|---------------------|------------|----------|-----|-----|
| Function                                                                                                                                                                                                | Range  | Measurement range   | Resolution | Accuracy | 72A | 72B |
| DCV                                                                                                                                                                                                     | 100 mV | -10.0mV~110.0mV     | 100uV      | 0.2%+4   | Yes | Yes |
|                                                                                                                                                                                                         | 30V    | -5.00V~30.00V       | 10mV       | 0.2%+4   | Yes | Yes |
| DCA                                                                                                                                                                                                     | 20mA   | 0.00mA~22.00mA      | 0.01mA     | 0.2%+4   | Yes | Yes |
| LOOP                                                                                                                                                                                                    | 24V    | /                   | ±10%       | /        | Yes | Yes |
| On/off                                                                                                                                                                                                  | /      | OPEN/CLOSE          | /          | /        | Yes | Yes |
| TC                                                                                                                                                                                                      | R      | 0℃~1760℃            | 1℃         | 0.2%+4   | No  | Yes |
|                                                                                                                                                                                                         | S      | 0℃~1760℃            | 1℃         | 0.2%+4   |     |     |
|                                                                                                                                                                                                         | B      | 600℃~1820℃          | 1℃         | 0.2%+4   |     |     |
|                                                                                                                                                                                                         | K      | -200℃~1370℃         | 1℃         | 0.2%+4   |     |     |
|                                                                                                                                                                                                         | E      | -200℃~1000℃         | 1℃         | 0.2%+4   |     |     |
|                                                                                                                                                                                                         | J      | -200℃~1200℃         | 1℃         | 0.2%+4   |     |     |
|                                                                                                                                                                                                         | T      | -200℃~400℃          | 1℃         | 0.2%+4   |     |     |
|                                                                                                                                                                                                         | N      | -200℃~1300℃         | 1℃         | 0.2%+4   |     |     |
| ★DCV characteristics: Input impedance: 30V: 300kΩ mV: > 1MΩ                                                                                                                                             |        |                     |            |          |     |     |
| ★DCI characteristics: Overload protection: 50mA/30V; Load voltage: approximately 18mV/mA                                                                                                                |        |                     |            |          |     |     |
| ★TC description: The thermocouple measurement adopts the ITS-90 temperature scale. The accuracy does not include the error of cold junction compensation and the influence of thermoelectric potential. |        |                     |            |          |     |     |
| Analog output function                                                                                                                                                                                  |        |                     |            |          |     |     |
| Function                                                                                                                                                                                                | Range  | Measurement range   | Resolution | Accuracy | 72A | 72B |
| DCV                                                                                                                                                                                                     | 100mV  | 0.0mV~110.0mV       | 100uV      | 0.2%+4   | Yes | Yes |
|                                                                                                                                                                                                         | 20V    | 0.00V~24.00V        | 10mV       | 0.2%+4   | Yes | Yes |
| DCA(Active)                                                                                                                                                                                             | 20mA   | 0.00mA~22.00mA      | 0.01mA     | 0.2%+4   | Yes | Yes |
| DCA(Passive)                                                                                                                                                                                            | -20mA  | 0.00 ~ -22.00mA     | 0.01mA     | 0.2%+4   | Yes | Yes |
| On/off                                                                                                                                                                                                  | 100Hz  | 1.0Hz ~ 110.0Hz     | 0.1Hz      | 0.2%+2   | No  | Yes |
|                                                                                                                                                                                                         | 1kHz   | 0.100kHz ~ 1.100kHz | 1Hz        | 0.2%+2   |     |     |
|                                                                                                                                                                                                         | 5kHz   | 1.00kHz ~ 6.00kHz   | 10Hz       | 0.2%+2   |     |     |
|                                                                                                                                                                                                         | 10kHz  | 6.0kHz ~ 11.0kHz    | 100Hz      | 0.2%+2   |     |     |
|                                                                                                                                                                                                         | 100kHz | 10kHz ~ 100kHz      | 3KHz       | 0.2%+2   |     |     |
| TC                                                                                                                                                                                                      | R      | 0℃~1760℃            | 1℃         | 0.2%+4   | No  | Yes |
|                                                                                                                                                                                                         | S      | 0℃~1760℃            | 1℃         | 0.2%+4   |     |     |
|                                                                                                                                                                                                         | B      | 600℃~1800℃          | 1℃         | 0.2%+4   |     |     |
|                                                                                                                                                                                                         | K      | 0℃~1350℃            | 1℃         | 0.2%+4   |     |     |
|                                                                                                                                                                                                         | E      | 0℃~1000℃            | 1℃         | 0.2%+4   |     |     |
|                                                                                                                                                                                                         | J      | 0℃~1200℃            | 1℃         | 0.2%+4   |     |     |
|                                                                                                                                                                                                         | T      | 0℃~400℃             | 1℃         | 0.2%+4   |     |     |
|                                                                                                                                                                                                         | N      | 0℃~1300℃            | 1℃         | 0.2%+4   |     |     |
| ★DCI feature: 20mA maximum load 1KΩ                                                                                                                                                                     |        |                     |            |          |     |     |
| ★FREQ characteristics: Rectangular wave 60% duty cycle, 1 to 20 VP-p                                                                                                                                    |        |                     |            |          |     |     |
| ★TC description: The thermocouple measurement adopts the ITS-90 temperature scale. The accuracy does not include the error of cold junction compensation and the influence of thermoelectric potential. |        |                     |            |          |     |     |



3801M



3803M



3824M

## Product Basic Function

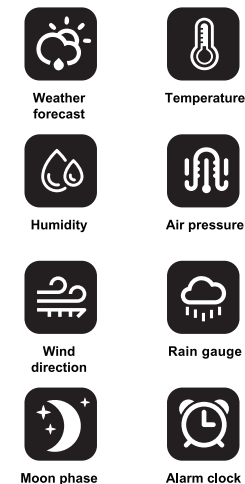
- ◆ It has key lock function to prevent misoperation;
- ◆ Provide CC, CV, CR, CP and CC+CV, CR+CV multiple basic measurement modes; Provide professional battery test;
- ◆ Provide professional LED test;
- ◆ Dynamic test mode, which can test the dynamic output performance of powersupply;
- ◆ Scanning test mode, which can test the continuity of power output within ascertain range;
- ◆ List mode, which can simulate various load state changes;
- ◆ Short circuit test, used to simulate load short circuit;
- ◆ Support external trigger input;
- ◆ Built in buzzer alarm;
- ◆ Keep data storage function in case of power failure;
- ◆ Remote operation can be carried out through USB, RS-232 (optional) or 485(optional) interfaces;
- ◆ It has overvoltage, overcurrent, overpower and over temperature protection functions, and can flexibly set overvoltage and Over current parameter, which can effectively protect the load;
- ◆ With intelligent fan speed control function, it can effectively reduce fan noise during operation;
- ◆ It has input polarity reverse connection prompt.
- ◆ Power supply voltage: 100Vac±10%~240Vac±10%, 50/60Hz
- ◆ Display: 2.8-inch TFT LCD screen with resolution of 320×240
- ◆ Operating temperature: 0℃ to 40℃
- ◆ Storage temperature: -10℃ to 70℃
- ◆ Relative humidity: < 80%
- ◆ Interface: standard USB, optional RS232(or 485)
- ◆ Size: 90mm×190mm×300mm (width × height × depth)



## Technical indicators

| Basic function        |               | 3801M                      | 3803M                      | 3824M                      |
|-----------------------|---------------|----------------------------|----------------------------|----------------------------|
| Rated input           | Power         | 400W                       | 400W                       | Dual channel, 200W*2       |
|                       | Input voltage | 0-150V                     | 0-500V                     | 0-150V                     |
|                       | Input current | 0-40A                      | 0-15A                      | 0-40A(20A/channel)         |
| Constant voltage      | Range         | 0.1~19,999V<br>0.1~150.00V | 0.1~19,999V<br>0.1~500.00V | 0.1~19,999V<br>0.1~150.00V |
|                       | Resolving     |                            | 1mV, 10mV                  |                            |
|                       | Accuracy      |                            | ±(0.05%+0.02%FS)           |                            |
| Constant current      | Range         | 0~3,000A<br>0~40.00A       | 0~3,000A<br>0~15.00A       | 0~3,000A<br>0~20.00A       |
|                       | Resolving     |                            | 1mA, 10mA                  |                            |
|                       | Accuracy      |                            | ±(0.05%+0.05%FS)           |                            |
| Constant resistance   | Range         |                            | 0.05Ω~1 kΩ, 1 kΩ~4.5kΩ     |                            |
|                       | Resolving     |                            | 10mΩ, 100mΩ                |                            |
|                       | Accuracy      |                            | ±(0.1%+0.5%FS)             |                            |
| Constant power        | Range         | 0~400W                     |                            | 0~200W                     |
|                       | Resolving     |                            | 10mW                       |                            |
|                       | Accuracy      |                            | ±(0.1%+0.5%FS)             |                            |
| Dynamic test function | Pattern       |                            | CC, CV                     |                            |
|                       | T1&T2         |                            | 50ms~60s                   |                            |
| Battery test function | Discharge     |                            | CC, CR                     |                            |
|                       | Max discharge |                            | 9999Ah                     |                            |
|                       | Resolving     |                            | 1mA, 10mA, 10mΩ, 100mΩ     |                            |

| Measuring range             |           | 3801M                                            | 3803M                    | 3824M                    |
|-----------------------------|-----------|--------------------------------------------------|--------------------------|--------------------------|
| Voltage read back value     | Range     | 0~19,999V<br>0~150.00V                           | 0~19,999V<br>0~500.00V   | 0~19,999V<br>0~150.00V   |
|                             | Resolving |                                                  | 1mV, 10mV                |                          |
|                             | Accuracy  |                                                  | ±(0.05%+0.1%FS)          |                          |
| Current read back value     | Range     | 0~3,000A<br>0~40.00A                             | 0~3,000A<br>0~15.00A     | 0~3,000A<br>0~20.00A     |
|                             | Resolving |                                                  | 1mA, 10mA                |                          |
|                             | Accuracy  |                                                  | ±(0.05%+0.1%FS)          |                          |
| Power read back value       | Range     | 0~400W                                           |                          | 0~200W                   |
|                             | Resolving |                                                  | 10mW                     |                          |
|                             | Accuracy  |                                                  | ±(0.1%+0.5%FS)           |                          |
| Scope of protection         |           |                                                  |                          |                          |
| Overvoltage protection      |           | Greater than 21V or 155V                         | Greater than 21V or 510V | Greater than 21V or 155V |
| Overcurrent protection      |           | Greater than 3.1A or 42A                         | Greater than 3.1A or 16A | Greater than 3.1A or 22A |
| Overpower protection        |           | 410W                                             |                          | 210W                     |
| Over temperature protection |           |                                                  | 85°C                     |                          |
| Basic parameters            |           |                                                  |                          |                          |
| Power Supply                |           | 100Vac±10%~240Vac±10%, 50/60Hz                   |                          |                          |
| Display Size                |           | 2.8 inch TFT LCD screen, Resolving power 320*240 |                          |                          |
| Body color                  |           | Pale                                             |                          |                          |
| Body weight                 |           | About 3.8KG                                      |                          |                          |
| Body size                   |           | 90mm × 190mm × 300mm                             |                          |                          |
| Standard accessories        |           | Power cord, fuse * 2, manual, certificate        |                          |                          |



## Technical indicators

|                                          |                                                     |           |
|------------------------------------------|-----------------------------------------------------|-----------|
| Special function                         | 0366 RF                                             | 0366 wifi |
| WiFi cloud data                          | NO                                                  | YES       |
| Outdoor temperature range                | -40°C to +60°C/°F                                   |           |
| Indoor temperature range                 | 0°C to +60°C/°F                                     |           |
| Temperature accuracy                     | ±1°C                                                |           |
| Humidity range and accuracy              | 10% to 99% (1% resolution); accuracy: ±5%           |           |
| Air pressure range and accuracy          | 300 to 1100hpa; ±3hpa                               |           |
| Rainfall display                         | 0 – 9999mm                                          |           |
| Resolution                               | 0.3mm (< 1000mm) 1mm (> 1000mm)                     |           |
| Rainfall accuracy                        | < 15 mm: ± 1 mm 15 mm to 9999 mm: ±7%               |           |
| Wind speed range and accuracy            | 0~50m/s<br>2 m/s ~ 10 m/s: ±3 m/s<br>> 10 m/s: ±10% |           |
| Wind direction accuracy                  | 8 points                                            |           |
| Sampling time                            | 60s                                                 |           |
| Wifi standard                            | 802.11 b/g/n                                        |           |
| Wireless frequency                       | 2.4GHZ                                              |           |
| WiFi transmission distance               | 20m                                                 |           |
| Power supply: (shipping without battery) |                                                     |           |
| Receiver                                 | AA batteries or 5.9V/500mA power adapter            |           |
| Transmitter                              | AA alkaline batteries                               |           |
| Product Size                             |                                                     |           |
| Frame size (LxHxW)                       | 165×135×18mm                                        |           |
| LCD size (LxW)                           | 130×80mm                                            |           |
| Product gross weight                     | 2.0KG                                               |           |

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## Launcher

Integrated Outdoor Transmitter  
(330\*150\*280mm)  
Mounting Pole:  
(76\*76\*25mm)  
Foot Mounting (with pole insert):  
(84\*152\*216mm)  
Mounting Bracket Back Plate:  
(76\*102\*38mm)



Fastened to the Mounting Pole Bracket

Fixed on the wall

## Technical parameter

| Measurement                                                                                                                                             | Range          | Accuracy                                                               | Resolution |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|------------------------------------------------------------------------|------------|
| Indoor Temperature                                                                                                                                      | 0 to 60 °C     | ±1 °C                                                                  | 0.1 °C     |
| Outdoor Temperature                                                                                                                                     | -40 to 60 °C   | ±1 °C                                                                  | 0.1 °C     |
| Indoor Humidity                                                                                                                                         | 10 to 99 %     | ±5% (only between 20 to 90%)                                           | 1 %        |
| Outdoor Humidity                                                                                                                                        | 10 to 99 %     | ±5% (only between 20 to 90%)                                           | 1 %        |
| UV Index                                                                                                                                                | 1 to 15+       | ±1                                                                     | ±1         |
| Sunlight                                                                                                                                                | 0 to 200klux   | ±15%                                                                   | ±15%       |
| Rain                                                                                                                                                    | 0 to 9999mm    | <15mm:±1 mm ; >15mm:±7%                                                | 1mm        |
| Wind Direction                                                                                                                                          | 0 - 360 °      | ±10°(16 point compass)                                                 | ±1°        |
| Wind Speed                                                                                                                                              | 0 to 50 m/s    | 2 m/s ~10 m/s: ±3m/s,<br>10m/s ~50 m/s: ±10%<br>(whichever is greater) | 0.1 m/s    |
| Barometric Pressure                                                                                                                                     | 300 to 1100hpa | ±3 hpa                                                                 | 0.1 hpa    |
| <b>Wireless Specifications</b>                                                                                                                          |                |                                                                        |            |
| • Line of sight wireless transmission (in open air): 100m.                                                                                              |                |                                                                        |            |
| • Frequency: 433 MHz                                                                                                                                    |                |                                                                        |            |
| • Integrated Outdoor transmitter interval: 16seconds                                                                                                    |                |                                                                        |            |
| <b>Power Consumption</b>                                                                                                                                |                |                                                                        |            |
| • Base station : 3 x AAA 1.5V Alkaline or Lithium batteries (not included)                                                                              |                |                                                                        |            |
| • Adaptor: 6V~ 500mA (included)                                                                                                                         |                |                                                                        |            |
| • Integrated Outdoor Transmitter: 3xAA alkaline batteries or Lithium                                                                                    |                |                                                                        |            |
| <b>WiFi Specifications</b>                                                                                                                              |                |                                                                        |            |
| 1. WIFI Standard: 802.11 b/g/n                                                                                                                          |                |                                                                        |            |
| 2. WiFi Console RF Frequency: 2.4 GHz                                                                                                                   |                |                                                                        |            |
| 3. Setup User Interface (UI) support setup device: Build-in WiFi with WAP mode smart device, including laptops, computers, smart phones and smart pads. |                |                                                                        |            |
| 4. Recommend web browser for setup UI: Web browser support of HTML 5                                                                                    |                |                                                                        |            |
| 5. Line of sight WiFi RF transmission (in open air): 20meter (80 feet)batteries (not included)                                                          |                |                                                                        |            |



## 9-IN-1 INTEGRATED OUTDOOR SENSOR



Weather forecast



Temperature



Humidity



Air pressure



Wind speed



Illuminance/UV



Rain gauge



Moon phase



Alarm clock

0345



## Technical indicators

| Measurement                                   | Range                                                                                                                              | Accuracy                                                       | Resolution                 |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|----------------------------|
| Indoor Temperature                            | 0 to 60°C (32 to 140°F)                                                                                                            | ±1°C (±2°F)                                                    | 0.1°C (°F)                 |
| Outdoor Temperature                           | -40 to 60°C (-40 to 140°F)                                                                                                         | ±1°C (±2°F)                                                    | 0.1°C (°F)                 |
| Indoor Humidity                               | 10 to 99%                                                                                                                          | ±5%(only guaranteed between 20 to 90%)                         | 1%                         |
| Outdoor Humidity                              | 10 to 99%                                                                                                                          | ±5%(only guaranteed between 20 to 90%)                         | 1%                         |
| Rain                                          | 0 to 9999mm                                                                                                                        | <15mm:±1mm, 15mm to 9999mm:±7%                                 | <1000mm(0.3mm)>1000mm(1mm) |
| Wind Direction                                | 0 - 360°                                                                                                                           | ±10°(8 point compass)                                          | ±1°(8 point compass)       |
| Wind Speed                                    | 0 to 50m/s                                                                                                                         | 2m/s~10m/s:±0.3m/s, 10m/s~50m/s:±10%<br>(whichever is greater) | 0.1m/s                     |
| Barometric Pressure                           | 300 to 1100 hpa                                                                                                                    | ±3hpa                                                          | 0.1hpa                     |
| Wireless Specifications                       |                                                                                                                                    |                                                                |                            |
| Wireless Transmit Range(In open air):         |                                                                                                                                    | 330ft(100m)                                                    |                            |
| Frequency:                                    |                                                                                                                                    | 433MHz                                                         |                            |
| Integrated Outdoor Sensor Data Update Period: |                                                                                                                                    | 16s                                                            |                            |
| Power Consumption                             |                                                                                                                                    |                                                                |                            |
| Display Console                               | 3×AAA 1.5V Alkaline or Lithium batteries(not included)                                                                             |                                                                |                            |
| Integrated                                    | 3×AA alkaline batteries or Lithium batteries(not included), the batteries provide backup power when there is limited solar energy. |                                                                |                            |
| Outdoor Sensor                                | Note:Solar panel doesn't charge the battery and it is an auxiliary power supply                                                    |                                                                |                            |
| Adapter                                       | 5.9V~500mA(included)                                                                                                               |                                                                |                            |
| Battery life                                  | Minimum 12 months for sensors(use Lithium batteries in cold weather climates less than -20°C (-4°F))                               |                                                                |                            |

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## PACKAGING ACCESSORIES



- 1—Display console
- 2—Integrated outdoor transmitter
- 3—Installation accessories
- 4—Power adapter
- 5—Product Manual
- 6—Screwdriver
- 7—Carton packaging

## CALCT temperature probe

- Type: A000019
- applicable products : process calibrations of VC25, VC11+, VC14+ of this Company
- function : can measure environmental temperature and capture cold-end compensation temperature faster and more accurate.
- accuracy :  $\pm 0.2$  degree
- feature : MINI\_USB interface (connected with the meter)
- weight : about 17g



## CA communication convertor module

- type: A000022
- applicable products: the calibration meters of VC25, VC11+, VC14+, VC15+ of this company
- functions: to fulfill the data communication between the meter and the PC;
- features: MINI\_USB plug in the end(connected with meter), standard USB plug in the other end (connected with PC)
- weight : about 50g



## CA pressure module convertor

- type: A000018
- applicable products: VC25, VC15+ calibration meters of this company
- functions: to finish pressure measurement by connecting the meter and the pressure module
- features: MINI\_USB plug in the end(connected with meter), standard LEMO USB plug in the other end (connected with PC)
- weight : about 20g



## USB serial communication line

- Standard USB interface
- A type 4P RP-SMA Male/ MINI
- USB A type 5P insert
- Type: H100000



## Technical indicators

| Measurement                                   | Range                      | Accuracy                                                                                                                                                                                                            | Resolution                 |
|-----------------------------------------------|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| Indoor Temperature                            | 0 to 60°C (32 to 140°F)    | ±1°C (±2°F)                                                                                                                                                                                                         | 0.1°C (°F)                 |
| Outdoor Temperature                           | -40 to 60°C (-40 to 140°F) | ±1°C (±2°F)                                                                                                                                                                                                         | 0.1°C (°F)                 |
| Indoor Humidity                               | 10 to 99%                  | ±5% (only guaranteed between 20 to 90%)                                                                                                                                                                             | 1%                         |
| Outdoor Humidity                              | 10 to 99%                  | ±5% (only guaranteed between 20 to 90%)                                                                                                                                                                             | 1%                         |
| Rain                                          | 0 to 9999mm                | <15mm:±1mm, 15mm to 9999mm:±7%                                                                                                                                                                                      | <1000mm(0.3mm)>1000mm(1mm) |
| Wind Direction                                | 0 - 360°                   | ±10° (8 point compass)                                                                                                                                                                                              | ±1° (8 point compass)      |
| Wind Speed                                    | 0 to 50m/s                 | 2m/s~10m/s:±0.3m/s, 10m/s~50m/s:±10% (whichever is greater)                                                                                                                                                         | 0.1m/s                     |
| Barometric Presure                            | 300 to 1100 hpa            | ±3hpa                                                                                                                                                                                                               | 0.1hpa                     |
| UV Index                                      | 1 to 15+                   | ±1                                                                                                                                                                                                                  | ±1                         |
| Sunlight                                      | 0 to 200klux               | ±15%                                                                                                                                                                                                                | ±15%                       |
| Wireless Specifications                       |                            |                                                                                                                                                                                                                     |                            |
| Wireless Transmit Range(in open air):         |                            | 330ft(100m)                                                                                                                                                                                                         |                            |
| Frequency:                                    |                            | 433MHz                                                                                                                                                                                                              |                            |
| Integrated Outdoor Sensor Data Update Period: |                            | 16s                                                                                                                                                                                                                 |                            |
| Power Consumption                             |                            |                                                                                                                                                                                                                     |                            |
| Display Console                               |                            | 3×AAA 1.5V Alkaline or Lithium batteries(not included)                                                                                                                                                              |                            |
| Integrated                                    |                            | 3×AA alkaline batteries or Lithium batteries(not included), the batteries provide backup power when there is limited solar energy. Note: Solar panel doesn't charge the battery and it is an auxiliary power supply |                            |
| Outdoor Sensor                                |                            | limited solar energy. Note: Solar panel doesn't charge the battery and it is an auxiliary power supply                                                                                                              |                            |
| Adapter                                       |                            | 5.9V~500mA(included)                                                                                                                                                                                                |                            |
| Battery life                                  |                            | Minimum 12 months for sensors(use Lithium batteries in cold weather climates less than -20°C (-4°F))                                                                                                                |                            |



### USB serial communication line

Standard USB interface  
USB A type 4P RP-SMA Male/  
USB B type 4P insert/ with  
shielding layer  
type: H100000



### Testing probe

Product catalogue: General accessories  
Standard banana-typed interface adapted to varieties of probes  
Bar length: 115mm ; length of valid needles: 18mm  
CATIII 1000V 16A  
type : H000000



### Testing probe

Product catalogue: General accessories  
Bar length: 145mm ; line length:1000mm ; length of valid needles: 18mm  
CATIII 1000V 20A  
type : H000003



### Testing probe

Product catalogue: General accessories  
Standard banana-typed interface adapted to varieties of probes  
Bar length: 145mm ; line length:1000mm ; length of valid needles: 18mm  
CATIII 1000V 10A  
type : H000005



### Testing probe

Product catalogue: General accessories  
Bar length: 145mm ; line length:1000mm ; length of valid needles: 18mm  
CATIII 1000V 10A  
type : H000013

### Alligator clipper test lead

- alligator clipper in one end
- 4mm banana plug in the other end (with insulation pipe sleeve)
- highly flexible connective leads to meet different needs of tests
- comply with criterion: EN61010, IEC61010, DIN VDE0411
- type: H000010B

|               |             |
|---------------|-------------|
| rated voltage | CATIII 600V |
| rated current | 10A         |
| standard lead | 1000mm;PVC  |



### Alligator clipper test lead

- alligator clipper in one end
- two 4mm banana plugs in the other end (with insulation pipe sleeve)
- highly flexible connective leads to meet different needs of tests
- comply with criterion: EN61010, IEC61010, DIN VDE0411
- type: H000011

|               |             |
|---------------|-------------|
| rated voltage | CATIII 600V |
| rated current | 10A         |
| standard lead | 1000mm;PVC  |



### Alligator clipper test lead

- alligator clipper in one end
- 4mm banana plug in the other end (with insulation pipe sleeve)
- highly flexible connective leads to meet different needs of tests
- comply with criterion: EN61010, IEC61010, DIN VDE0411
- type: H000010G

|               |             |
|---------------|-------------|
| rated voltage | CATIII 600V |
| rated current | 10A         |
| standard lead | 1000mm;PVC  |



### Main indicator of adaptor

type: P070000

|               |         |
|---------------|---------|
| rated voltage | 15V     |
| output range  | 15V±5%  |
| current value | 0A~2.0A |



### Main indicator of lined adaptor

type: P070003

|                           |           |
|---------------------------|-----------|
| input voltage/ frequency  | 220V/50Hz |
| no-load current           | ≤45mA     |
| input power               | 5W        |
| output DC no-load voltage | 5V±5%     |
| load current              | 1000mA    |
| output DC load voltage    | 4.7V±0.5% |







## Alligator clipper

- Product catalogue: alligator clipper
- Insulation direct plug-in alligator clipper
- Alligator clipper: 80\*36mm
- Maximum dehiscence: 20mm
- CAT III 1000V 10A
- Type: H010000



## Industrial test lead

- Product catalogue: general accessories
- Length of probe bar: 136mm, length of probe line: 1000mm
- Valid length of probe needle :18mm
- CAT III 1000V 10A
- Type: H000001



## Industrial test lead

- Product catalogue: general accessories
- Standard banana head to adapt to varieties of probes to make test easy
- Banana head: 56mm, length of probe line: 1000mm
- CAT III 1000V 10A
- Type: H000002



## Hooked test probe

- Product catalogue: general accessories
- With safe handle and smart, scalable, exploratory trench with compression spring to make test easy
- Standard banana head to adapt to varieties of probes to make test easy
- CAT III 1000V 10A
- Type: H000004



## TC convertor

- Product catalogue: TC convertor
- Adapted conversion test of all kinds of graduations
- Type: H200000



## Pressure module communication cable

- type: A000046
- applicable products: the calibration meters of VICTOR 25, VICTOR15+ of this company
- functions: to fulfill the data communication between the meter and the pressure module
- features: Binder 5-pole female to LEMO 5\_pole male
- length : about 60mm