

C&I Energy Storage Inverter Series

Three-phase hybrid inverter

R50KH3



KEY STRENGTHS

- Max. PV input power: 75kW, wide MPPT voltage range of 150–850V.
- Supports dual battery ports with 80A current each, compatible with mainstream 314Ah large-format cells.
- IP66 protection rating, suitable for outdoor environments from -35°C to +60°C.
- Peak power output up to 1.5 times rated power for 10 seconds.
- 4 MPPTs with support for multiple PV strings; Max. input current of 20A, compatible with all high-power PV modules.
- Supports 100% unbalanced three-phase loads, ensuring flexibility for asymmetric C&I power demands.

Model	R30KH3	R40KH3	R50KH3
Battery data			
Max. charging/discharging power (kW)	33	44	55
Battery voltage range (V)	150~800		
Max. charging/discharging current(A)	80*2		
No. of battery input	2		
Battery type	Lithium-ion		

Model	R30KH3	R40KH3	R50KH3
DC input data			
Max. PV input power (kW)	45	60	75
Max. PV voltage (V)	1,000		
MPPT voltage range (V)	150~850		
Start-up voltage (V)	180		
Max. input current per MPPT (A)	40		
Max. short-circuit current (A)	60		
No. of MPPT trackers	4		
No. of PV strings per MPPT	2		
Rated input voltage (V)	600		
AC output data (on-grid)			
Rated AC output active power (kW)	30	40	50
Max. AC output apparent power (kVA)	33	44	55
Rated AC output current (A)	45.6	60.8	76
Max. AC output current (A)	50.1	66.9	83.6
Max. continuous AC passthrough(grid to load) (A)	200		
Rated grid voltage (V)	380/400		
Power factor	> 0.99 (0.8 Leading ~ 0.8 Lagging)		
Grid type	3W+N+PE		
Rated grid frequency (Hz)	50/60		
THDi	< 3%		
AC output data (off-grid)			
Rated output power (kW)	30	40	50
Max. apparent power (kVA)	33	44	55
Rated output voltage (V)	380/400,0.85Un-1.1Un		
Peak power (off-grid)	1.6 Times of rated power 2s		
Back-up switch time (ms)	<10		
Grid type	3W+N+PE		
Rated frequency(Hz)	50/60		
THDu	< 2%		
Protection			
Island protection	Supported		
PV reverse polarity protection	Supported		
Battery reverse polarity protection	Supported		
Insulation monitoring	Supported		
Residual current monitoring	Supported		
AC over current protection	Supported		
AC over power protection	Supported		
Back-up output short protection	Supported		
Short circuit protection	Supported		
Interface			
HMI	APP; touch screen		
BMS	RS485,CAN		
EMS	RS485		
Meter	RS485		
Supported communication interface	WIFI or 4G or GPRS		
General data			
Dimensions W*D*H (mm)	530*280*850		
Weight (kg)	73		
Ingress protection	IP66		
Operating temperature range (°C)	-35~60°C		
Topology	Non-isolated		
Relative humidity	0~100%		
Operating altitude (m)	4,000(>2,000 Power derating)		
Cooling	Fan cooling		
Noise emission (dB)	≤ 65		
Installation	Wall mounted type		