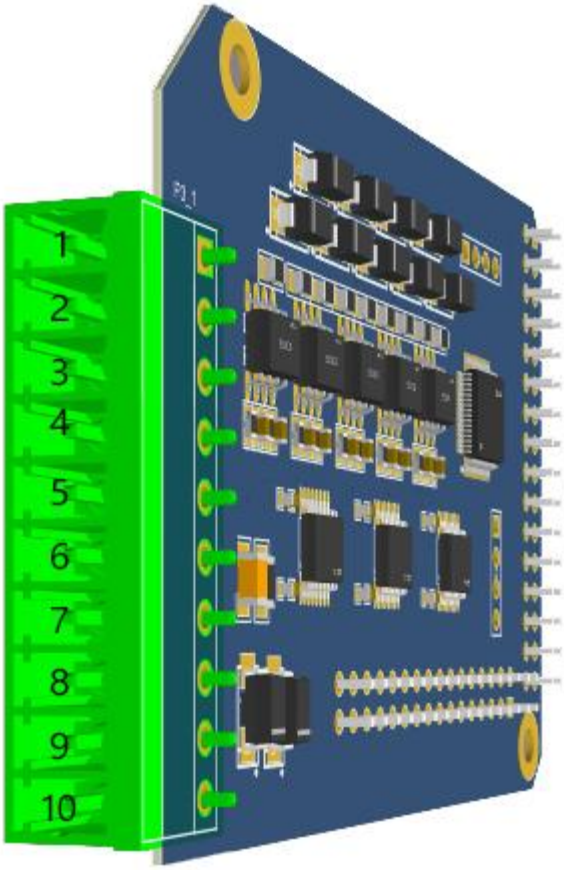
Y Series I/O Modules

Pulse Output and Counting Module Y96



BLIIOT®

MAKE IIOT EASIER

Y96
User Manual

Version: V1.0

Date: 2025-12-11

Shenzhen Beilai Technology Co.,Ltd

Website: https://www.bliiot.com

Preface

Thanks for choosing BLIIOT Y series I/O modules. These operating instructions contain all the information you need for operation of Y series I/O modules.

Copyright

Disclaimer

This document is designed for assisting user to better understand the device. As the described device is under continuous improvement, this manual may be updated or revised from time to time without prior notice. Please follow the instructions in the manual. Any damages caused by wrong operation will be beyond warranty.

Revision History

Revision Date	Version	Description	Owner
2024/12/20	V1.0	Initial Release	HYQ
2025/12/11	V1.0	Update Parameters	PH

Table of Contents

1 Introduction

1.1 Overview

The Y96 Pulse Output and Counting Module is one of the optional Y-series I/O modules available for products such as the IOy series and ARMxy series.

The module features 4 pulse outputs and 4 counters, labeled PWM1…PWM4 and C1…C4. The pulse output supports a maximum frequency of 40 kHz, while the pulse counting supports up to 100 kHz. It is widely used in industrial automation and control systems.

To enhance system reliability and stability, the module employs effective isolation technology, which prevents interference between different signals and protects both the device and data integrity.

1.2 Technical Specifications

Name	Parameter	Description
Power Supply	Operating Voltage	External Supply Voltage
	Required Voltage (VCC)	24V
	Maximum Power Consumption	9.6W
Pulse Output Parameters	Channel	4 Channels
	Output Type	PNP
	Output Delay	< 1ms
	Duty Cycle	0%–99.9%, customization, step 0.1%
	Maximum Switching Frequency	40kHz
	PWM Maximum Output Voltage	22V
	PWM Minimum Output Voltage	400mV
	Rise Time	50μs
	Fall Time	78μs
	Maximum Output Current	100mA
	Maximum Withstand Voltage	25V
	Isolation protection	2KVrms

Pulse Counting Parameters	Channels	4
	Dry Contact	High-Level Voltage Range: 4V–5V Low-Level Voltage Range: 0V–1V
	Wet Contact	High-Level Voltage Range: ≥ 15V Low-Level Voltage Range: ≤ 5V
	Counter 1	Maximum Counting Frequency: 150kHz Counting Method: Hardware counting Trigger Mode: Rising edge Falling Edge Detection Time: < 50μs Counting Range: 16-bit unsigned
	Counter 2	Maximum Counting Frequency: 10kHz Counting Method: Software counting Trigger Mode: Rising edge Falling Edge Detection Time: < 50μs Counting Range: 32-bit unsigned
	Counter 3	Maximum Counting Frequency: 10kHz Counting Method: Software counting Trigger Mode: Rising edge Falling Edge Detection Time: < 50 μs Counting Range: 32-bit unsigned
	Counter 4	Maximum Counting Frequency: 10kHz Counting Method: Software counting Trigger Mode: Rising edge Falling Edge Detection Time: < 50μs Counting Range: 32-bit unsigned
	Isolation protection	2KVrms
Certifications	EMC	IEC 61000-4-2 (ESD) Level 3
		IEC 61000-4-4 (EFT) Level 3
		IEC 61000-4-5 (Surge) Level 3

1.3 Model Selection

No.	Name	Model	Channel	Signal Type
1	PWM Output Counter Input	Y96	8	Duty cycle output Pulse input

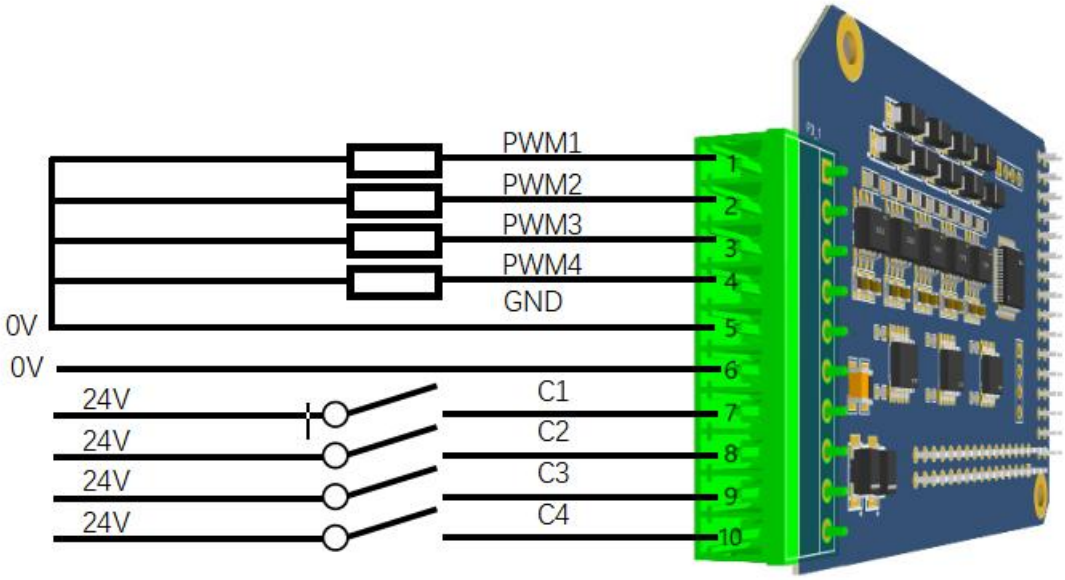
2 Wiring

2.1 Terminal Definitions

Notice: Please refer to the product's label for the specific terminal numbering sequence.

Terminal NO.	Definition	Description	Terminal NO.	Definition	Description
1	PWM1	PWM Output 1	6	DICOM	DI Common ground
2	PWM2	PWM Output 2	7	C1	Pulse Counter 1
3	PWM3	PWM Output 3	8	C2	Pulse Counter 2
4	PWM4	PWM Output 4	9	C3	Pulse Counter 3
5	GND	Common Terminal	10	C4	Pulse Counter 4

2.2 Connection Example



3 Warranty Terms

1) This equipment will be repaired free of charge for any material or quality problems within one year from the date of purchase.
2) This one-year warranty does not cover any product failure caused by man-made damage, improper operation, etc

4 Technical Support

Shenzhen Beilai Technology Co., Ltd
Website: https://www.bliiot.com