

Description

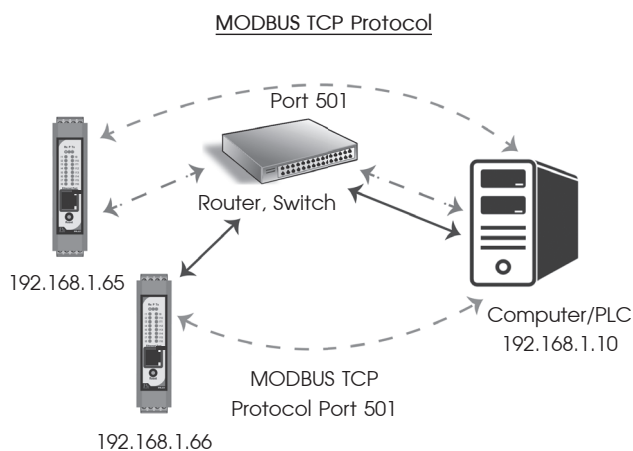
- I/O module device with 8 digital inputs and 8 digital outputs.
- The inputs can accept NPN or PNP signals as well as contact signals.
- The counter operating mode can be selected in 3 modes: Disable, Count Up, and Count Up and Down.
- Controlled via the MODBUS TCP protocol (RTU mode).
- The operation can be configured via a web browser.
- NPN open-collector outputs, isolated.

Specification

Model		PB-01	PB-01-4	PB-01-2
Power Supply		15-30 VDC		
Power Consumption		2 VA		
Display		LED		
Input	Inputs Points	8	4	2
	Input Voltage Range	12-24 VDC		
	Input Current Per Input	5 mA @12 VDC, 11 mA @ 24 VDC		
	Isolation	1500 Vrms Between Field And Logic		
Output	Output Points	8	4	2
	Maximum Voltage	36 VDC		
	Maximum Current	100 mA Per Output		
	Isolation	1500 Vrms Between Field And Logic		
Communication	Protocol	MODBUS TCP/IP		
	Ethernet	10/100Mbps/s		
	Parity	None, Even, Odd		
	Stop Bits	1, 2		
	Data Bits	8		
	Maximum Support Node	255		
Ambient Operation	Temperature	-10 °C to 60 °C		
	Humidity	<85% RH Non-Condensing		
Ambient Storage	Temperature	-20 °C to 80 °C		
	Humidity	<85% RH Non-Condensing		
Protection Degree		IP20		
Installation		DIN RAIL		
Enclosure		ABS-V0		
Size (mm.)		23 x 113 x 100		
Weight		150 g.		

Operation

An I/O module with 8 digital inputs and 8 digital outputs, suitable for applications that require expanding the number of I/O points. It can be used with a PLC or PC via MODBUS TCP (RTU mode) communication over Ethernet or LAN. The inputs and outputs are designed to be isolated using bi-directional opto-couplers. In addition, the inputs include built-in counters within the communication system. (the pattern of pattern of communication.



This is MODBUS TCP protocol communication between a computer and a MODBUS TCP I/O module. The computer can write or read data from the MODBUS TCP I/O module using communication port 501.

Operation of the digital input

The inputs of the PB-01 can be used with proximity switches, photo switches, encoders, contacts, etc., supporting both NPN and PNP types. The counter function offers three selectable modes:

Mode 0: Operates as a digital input, reading only the ON/OFF status, with no counting.

Mode 1: Operates as a digital input, reading the ON/OFF status, and the counter up function of each input is active. The counted values are stored in 32-bit registers from Counter 1 to Counter 8.

Mode 2: Operates as both a digital input, reading the ON/OFF status, and a counter up/down function. In this mode, two inputs are used for counting, as follows:

Input 1 is used for counting up and Input 2 for counting down; the resulting value is stored in Counter 1 register.

Input 3 is used for counting up and Input 4 for counting down; the resulting value is stored in Counter 2 register.

Input 5 is used for counting up and Input 6 for counting down; the resulting value is stored in Counter 3 register.

Input 7 is used for counting up and Input 8 for counting down; the resulting value is stored in Counter 4 register.

Input Filter (Input filter operation characteristics)

0: Can read an input frequency with a maximum count rate of 1 kHz.

1: Can read an input frequency with a maximum count rate of 10 Hz. If the input frequency is higher than 10 Hz, the device cannot count correctly. This mode is suitable for counting switch-type inputs.

Input type selection

- NPN: The input counts when the signal changes from +12V to +24V to 0V (Active Low).

- PNP: The input counts when the signal changes from 0V to +12V to +24V (Active High).

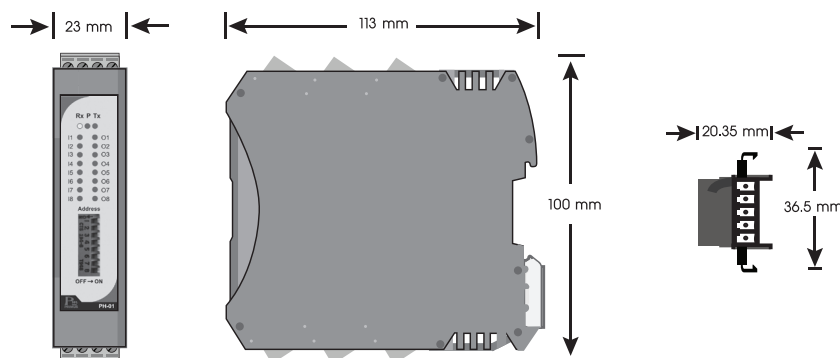
Operation of the digital output.

The PB-01 has 8 NPN outputs.

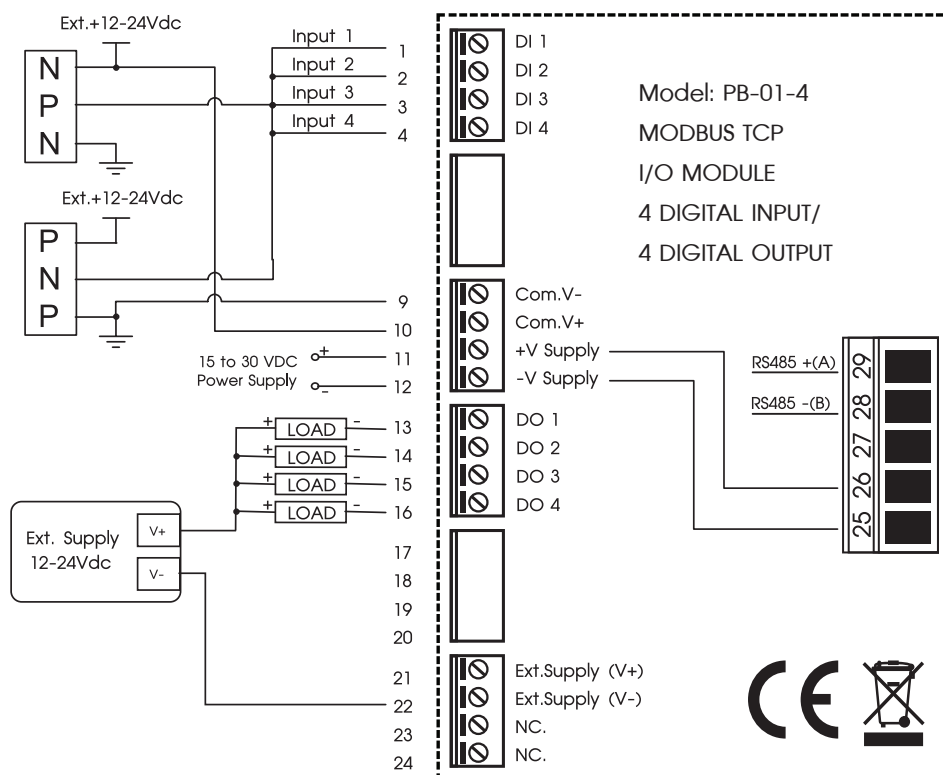
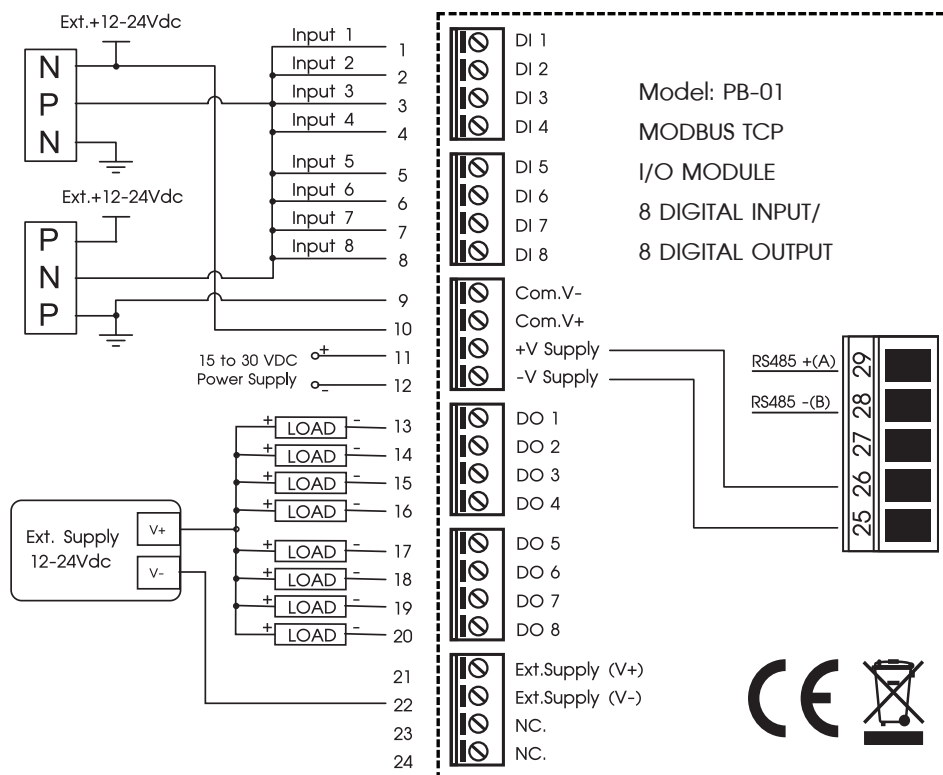
The PB-01-4 has 4 NPN outputs.

The PB-01-2 has 2 NPN outputs.

Dimension

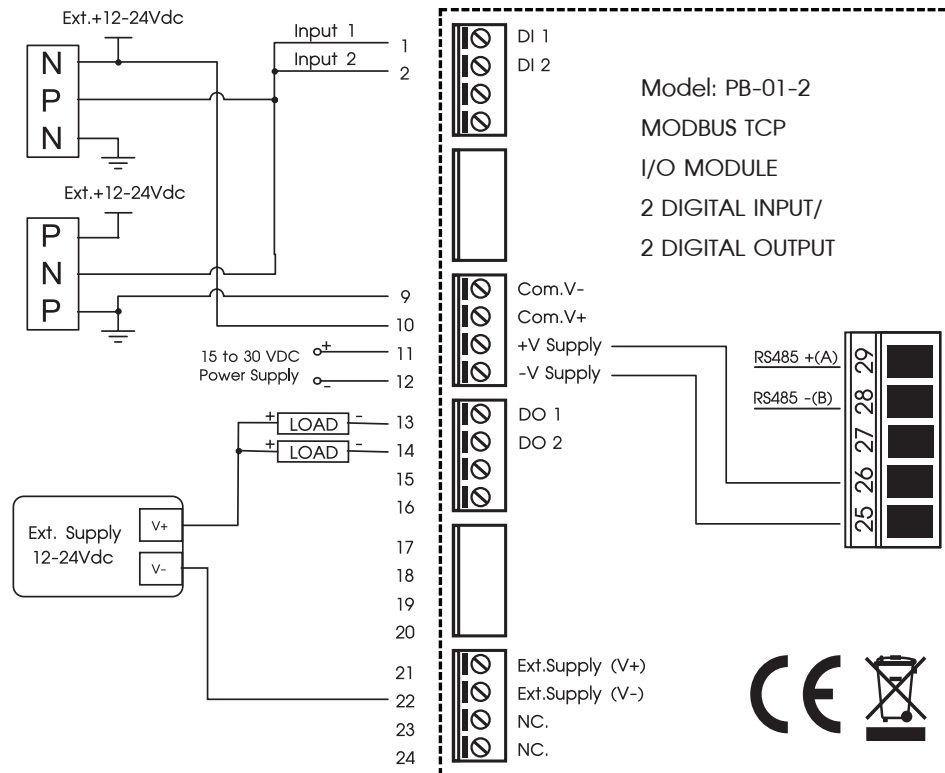


Wiring Diagram



• Make sure the correct wiring connection before turning on electricity. Mis-wiring may cause malfunction of the unit and fire.
• Never modify the unit to prevent damage or incident such as malfunction and fire etc.

Wiring Diagram(Con)



WARNING

- Make sure the correct wiring connection before turning on electricity. Mis-wiring may cause malfunction of the unit and fire.
- Never modify the unit to prevent damage or incident such as malfunction and fire etc.

Ordering Code

PB -01-

Input/Output Signal	
	8DI & 8DO
4	4DI & 4DO
2	2DI & 2DO