



CMP-48N



CMP-72N



CMP-72TN

Description

- Digital Preset Counter: CMP-48N / CMP-72N / CMP-72TN Series is a digital counting device.
- Operates as both a preset counter and a totalizer all in one.
- Multiplier and divider values can be set for both the preset counter and the totalizer, and the initial value after reset can also be defined.
- CMP-48N and CMP-72N provide 2 relay outputs for the preset counter.
- CMP-72TN provides 2 relay outputs for the preset counter and 1 relay output for the totalizer.
- Operation modes: Normal, Sum Up, Sum Down, And Up, And Down, Hold Up.
- Up to 7 relay output modes selectable for the preset counter.
- Up to 3 relay output modes selectable for the totalizer (for CMP-72TN).
- Digital inputs provided for count reset, total reset, and total display.
- Communication with a computer via RS-485 Modbus RTU.
- CMP-48N is a preset counter with a 48×48 mm display.
- CMP-72N is a preset counter with a 72×72 mm display.
- CMP-72TN is a preset counter with totalizer and a 72×72 mm display.
- Accepts inputs from various devices such as photoelectric sensors, proximity sensors, encoders, contacts, NPN, and PNP.
- Built-in DC source 24 VDC, 100 mA for supplying power to sensors.
- Timer input function provided to improve counting performance.

Operation

Digital Preset Counter: CMP-48N / CMP-72N / CMP-72TN Series is a digital counting device suitable for industrial production applications. It displays real-time values using a 7-segment display and is used to control production to meet target goals.

It can accept inputs from photoelectric sensors, proximity sensors (NPN/PNP), and encoder inputs, making it suitable for high-speed applications.

Contact inputs are suitable for low-speed applications (with a timer input function to improve counting performance).

Operation Mode refers to the operation of Input A and Input B. The operation is divided into 5 modes as follows:

Normal (In A+, In B-), Sum Up (In A+, In B+), Sum Down (In A-, In B-), And Up (In A and In B = Count +), And Down (In A and In B = Count -), Hold Up (Hold In A and Trig In B = Count +).

Operation(Continue)

Preset Counter refers to counting up to a preset setpoint, then activating the relay output or resetting the count value.

It is suitable for controlling production quantities.

Totalizer Counter (only Relay Output 3 of the CMP-72TN model) refers to cumulative counting of the preset counter values, continuously increasing.

It is suitable for statistical collection or total production summation.

Relay output modes selectable: up to 7 modes for the preset counter.

Relay output modes selectable: up to 3 modes for the totalizer counter.

Digital inputs (dry contact) are provided for reset count, reset total and show total, allowing easy operation without the need to press buttons or enter parameter settings.

RS-485 Modbus RTU port is provided for data communication with computers, PLCs, SCADA systems, etc.

Relay Output 1 and Relay Output 2 for the preset counter offer 7 selectable operating modes.

Mode 1: Count Up: Counts upward until Setpoint 1 is reached, then Relay Output 1 is activated. Counting continues until Setpoint 2 is reached, then Relay Output 2 is activated, and counting can continue further.

Count Down: Counts downward until Setpoint 1 is reached then Relay Output 1 is activated. Counting continues until Setpoint 2 is reached then Relay Output 2 is activated, and counting can continue further.

Mode 2: Count Up / Reset Count: Counts upward until Setpoint 1 is reached then Relay Output 1 is activated. Counting continues until Setpoint 2

is reached, then Relay Output 2 is activated for the preset time, and the count value is reset.

Count Down / Reset Count: Counts downward until Setpoint 1 is reached then Relay Output 1 is activated. Counting continues until Setpoint 2 is reached, then Relay Output 2 is activated for the preset time, and the count value is reset.

Mode 3: Count Up / One-Shot: Counts upward until Setpoint 1 is reached then Relay Output 1 is activated for the preset time. Counting continues until Setpoint 2 is reached, then Relay Output 2 is activated, and counting can continue further.

Count Down / One-Shot: Counts downward until Setpoint 1 is reached, then Relay Output 1 is activated for the preset time. Counting continues until Setpoint 2 is reached, then Relay Output 2 is activated, and counting can continue further.

Mode 4: Count Up / One-Shot / Reset Count: Counts upward until Setpoint 1 is reached, then Relay Output 1 is activated for the preset time. Counting continues until Setpoint 2 is reached, then Relay Output 2 is activated for the preset time, and the count value is reset.

Operation(Continue)

Count Down / One-Shot / Reset Count: Counts downward until Setpoint 1 is reached, then Relay Output 1 is activated for the preset time. Counting continues until Setpoint 2 is reached then Relay Output 2 is activated for the preset time, and the count value is reset.

Mode 5: Counts up and down. Relay Output 1 operates when the count value is greater than Setpoint 1, and Relay Output 2 stops operating when the count value is less than Setpoint 2.

Mode 6: Counts up and down. Relay Output 1 operates when the count value is greater than Setpoint 1, and Relay Output 2 operates when the count value is greater than Setpoint 2.

Mode 7: Counts up and down. Relay Output 1 operates when the count value is less than Setpoint 1, and Relay Output 2 operates when the count value is greater than Setpoint 1 and less than Setpoint 2.

Totalizer Counter operation provides up to 3 selectable modes.

***Applicable only to Relay Output 3 of the CMP-72TN.

Mode 1: Total count increases until Setpoint 3 is reached then Relay Output 3 is activated, and counting can continue further.

Total count decreases: Counts downward until Setpoint 3 is reached then Relay Output 3 is activated, and counting can continue further.

Mode 2: Total count increases until Setpoint 3 is reached then Relay Output 3 is activated for the preset time, and counting can continue further.

Total count decreases: Counts downward until Setpoint 3 is reached then Relay Output 3 is activated for the preset time, and counting can continue further.

Mode 3: Total count increases until Setpoint 3 is reached then Relay Output 3 is activated for the preset time and the total value is reset.

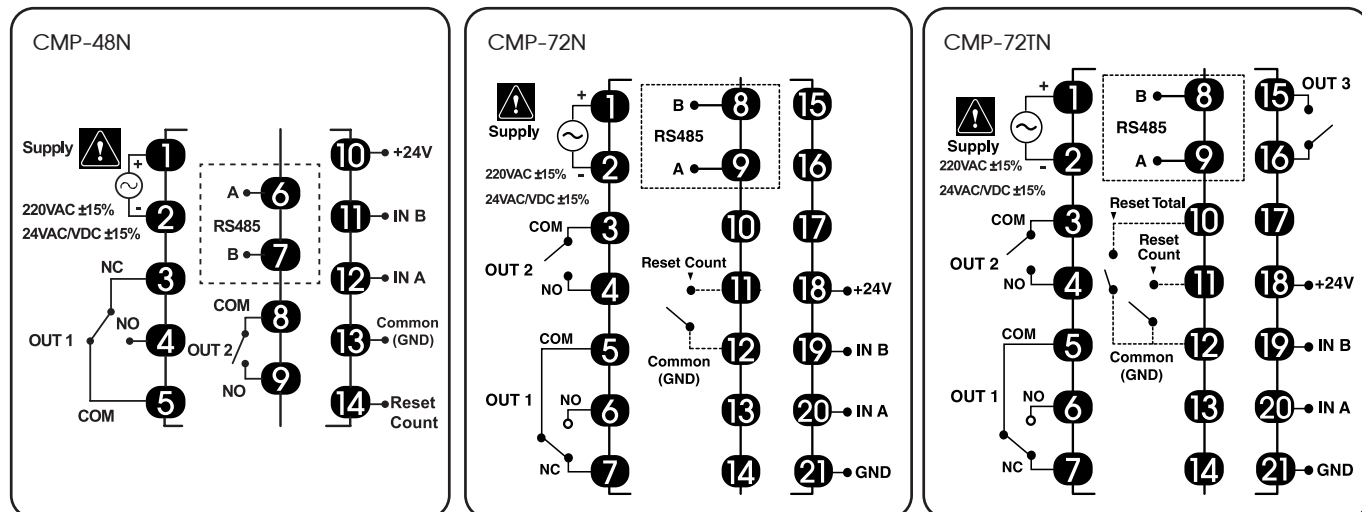
Total count decreases: Counts downward until Setpoint 3 is reached, then Relay Output 3 is activated for the preset time and the total value is reset.

Model / Mode Count	CMP-48N	CMP-472N	CMP-72TN
Preset Counter	✓	✓	✓
Totalizer	✗	✗	✓

Specification

		CMP-48N	CMP-72N	CMP-72TN	
Power Supply		220VAC ±15% 50/60Hz			
		24VAC/VDC ±15%			
Power Consumption		3VA			
Display		7 Segment, 4 Digit, Size 0.56 Inch, 2 Rows	7 Segment, 6 Digit, Size 0.36 Inch, 2 Rows	TV	7 Segment, 8 Digit, Size 0.32 Inch, 1 Row
				PV and SV	7 Segment, 6 Digit, Size 0.36 Inch, 2 Rows
Input	Range Display and Setting	Measurement Range -1999 to 9999	Measurement Range -199999 to 999999		
	Input Frequency	0 to 10 kHz			
	Input Type	Photoelectric Sensor, Proximity Sensor, Encoder, Contact, NPN, PNP			
	DC Source for Sensor	24VDC 100mA			
	Decimal Point Setting	0 to 0.000	0 to 0.00000		
	Timer (Input Filter)	0.00 to 10.00 Sec	0.00 to 10.00 Sec		
	Timer Accuracy	±10 ms			
	Input Resistance	Dry Contact			
Output	Relay Output	2 Relay Output 5A/250VAC		3 Relay Output 5A/250VAC	
Communi- cation	Protocol	Modbus RTU			
	Baud Rate	4800, 9600, 19200, 38400, 57600 bps			
	Parity	None, Even, Odd			
	Stop Bits	1, 2			
	Data Bits	8 Bits			
	Support Device Node	1-255			
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	Front Protection Rating	IP52			
	Case Protection Rating	IP30			
Installation		Panel Mounting			
Material		ABS-V0			
Size (mm.)		48 x 48 x 80	72 x 72 x 80		
Wieght (kg.)		148	230	240	

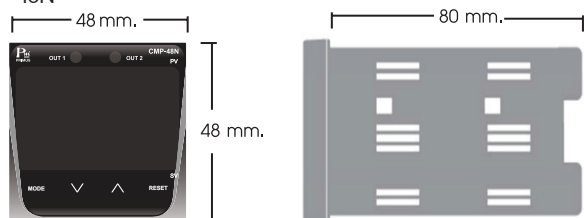
Wiring Diagram



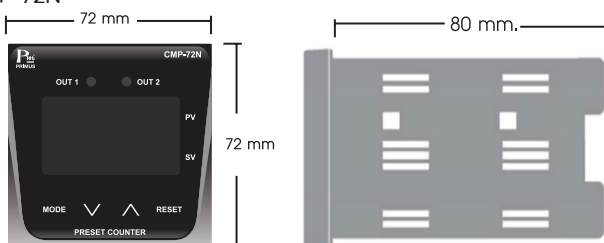
Dimension

Input Wiring Example (Continue)

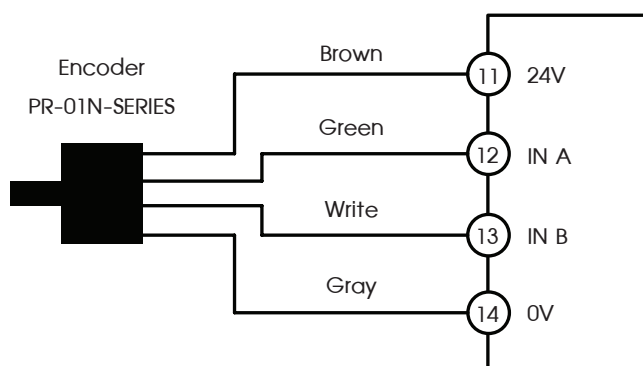
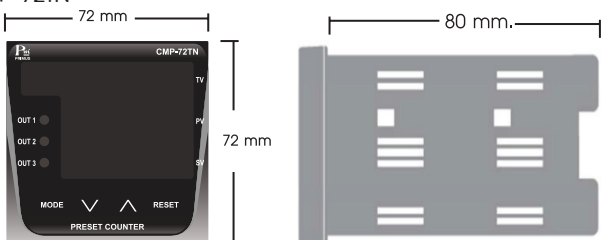
CMP-48N



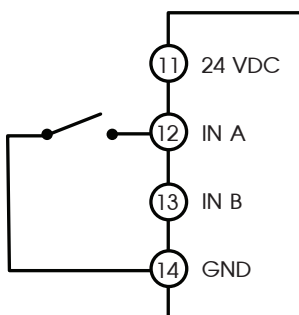
CMP-72N



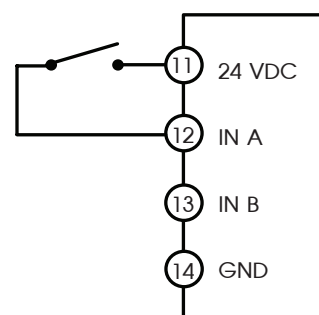
CMP-72TN



Active Low (NPN)



Active High (PNP)



Ordering Code

Size		Type		Output		Option		Power Supply	
CMP-				N -					
Size		Type		Output		Option		Power Supply	
48	48 x 48mm.	None	Preset Counter	R	1 Relay Output	None	None	220	220VAC ±15%
72	72 x 72mm.	T*	Totalizer Counter	RR	2 Relay Output	M	RS-485	24	24VAC/VDC ±15%
		*Available for CMP-72		*CMP-72TN Free 3 Relay Output					