

Programmable Digital Counters / Timers

CT Series INSTRUCTION MANUAL

TCD220014AC



Thank you for choosing our Autonics product.

Read and understand the instruction manual and manual thoroughly before using the product.

For your safety, read and follow the below safety considerations before using.

For your safety, read and follow the considerations written in the instruction manual, other manuals and Autonics website.

Keep this instruction manual in a place where you can find easily.

The specifications, dimensions, etc. are subject to change without notice for product improvement. Some models may be discontinued without notice.

Follow Autonics website for the latest information.

Safety Considerations

- Observe all 'Safety Considerations' for safe and proper operation to avoid hazards.
- ⚠ symbol indicates caution due to special circumstances in which hazards may occur.

Warning Failure to follow instructions may result in serious injury or death.

01. Fail-safe device must be installed when using the unit with machinery that may cause serious injury or substantial economic loss. (e.g. nuclear power control, medical equipment, ships, vehicles, railways, aircraft, combustion apparatus, safety equipment, crime / disaster prevention devices, etc.)
Failure to follow this instruction may result in personal injury, economic loss or fire.

02. Do not use the unit in the place where flammable / explosive / corrosive gas, humidity, direct sunlight, radiant heat, vibration, impact, or salinity may be present.
Failure to follow this instruction may result in explosion or fire.

03. Install on a device panel to use.
Failure to follow this instruction may result in fire or electric shock.

04. Do not connect, repair, or inspect the unit while connected to a power source.
Failure to follow this instruction may result in fire or electric shock.

05. Check 'Connections' before wiring.
Failure to follow this instruction may result in fire.

06. Do not disassemble or modify the unit.
Failure to follow this instruction may result in fire or electric shock.

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Caution Failure to follow instructions may result in injury or product damage.

01. When connecting the power / sensor input, relay output and communication, use AWG 20 (0.50 mm²) cable or over, and tighten the terminal screw with a tightening torque of 0.74 to 0.90 N m.
Failure to follow this instruction may result in fire or malfunction due to contact failure.

02. Use the unit within the rated specifications.
Failure to follow this instruction may result in fire or product damage.

03. Use a dry cloth to clean the unit, and do not use water or organic solvent.
Failure to follow this instruction may result in fire or electric shock.

04. Keep the product away from metal chip, dust, and wire residue which flow into the unit.
Failure to follow this instruction may result in fire or product damage.

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Cautions during Use

- Follow instructions in 'Cautions during Use'. Otherwise, it may cause unexpected accidents.
- Power supply should be insulated and limited voltage / current or Class 2, SELV power supply device.
- Use the product, 0.1 sec after supplying power.
- When supplying or turning off the power, use a switch or etc. to avoid chattering.
- Install a power switch or circuit breaker in the easily accessible place for supplying or disconnecting the power.
- When the counter is operating, in case of contact input, set count speed to low speed mode (1 cps or 30 cps) to operate. If set to high speed mode (1 k, 5 k, 10 kcps), counting error occurs due to chattering.
- Use twisted pair wire for communication line.
- Keep away from high voltage lines or power lines to prevent inductive noise. In case installing power line and input signal line closely, use line filter or varistor at power line and shielded wire at input signal line. Do not use near the equipment which generates strong magnetic force or high frequency noise.
- This unit may be used in the following environments.
 - Indoors (in the environment condition rated in 'Specifications')
 - Altitude max. 2,000 m
 - Pollution degree 2
 - Installation category II

Ordering Information

This is only for reference, the actual product does not support all combinations. For selecting the specified model, follow the Autonics website.

CT ① ② - ③ ④ ⑤

① Display digits

- 4: 4-digit
- 6: 6-digit

② Size

- S: DIN W 48 × H 48 mm
- Y: DIN W 72 × H 36 mm
- M: DIN W 72 × H 72 mm

③ Output

- 1P: 1-stage preset
- 2P: 2-stage preset
- I: indicator

④ Power supply

- 2: 24 VAC ± 10% 50 / 60 Hz, 24 - 48 VDC ± 10%
- 4: 100 - 240 VAC ± 10% 50 / 60 Hz

⑤ Communication

- No mark: none
- T: RS485 communication output

Sold Separately

- Terminal protection cover: M6P / M7P-COVER

Manual

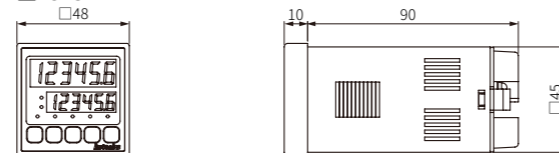
For proper use of the product, refer to the manuals and be sure to follow the safety considerations in the manuals.

Download the manuals from the Autonics website.

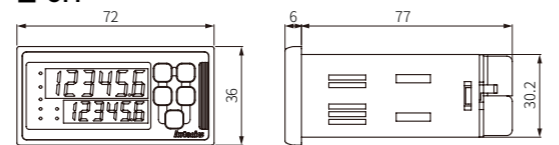
Dimensions

- Unit: mm, For the detailed drawings, follow the Autonics website.

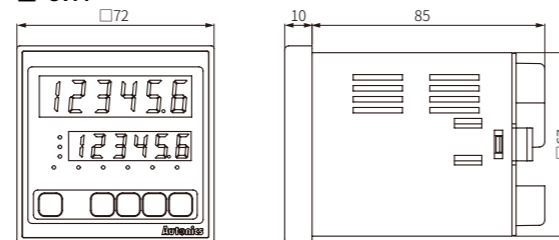
■ CTS



■ CTY

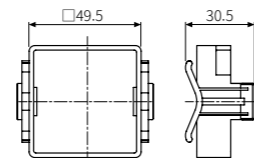


■ CTM

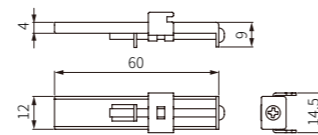


■ Bracket

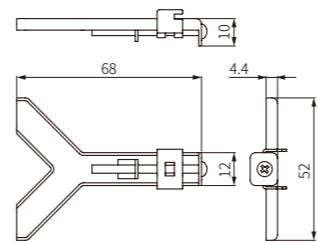
• CTS



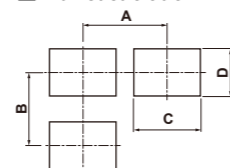
• CTY



• CTM



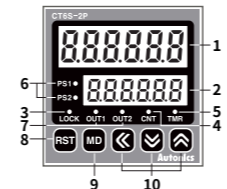
■ Panel cut-out



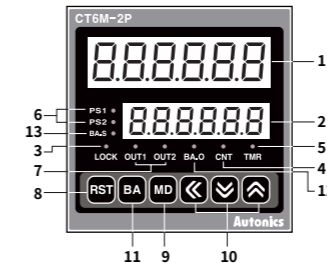
	A	B	C	D
CTS	≥ 65	≥ 65	45 ^{±0.4}	45 ^{±0.4}
CTY	≥ 91	≥ 40	68 ^{±0.7}	31.5 ^{±0.5}
CTM	≥ 91	≥ 91	68 ^{±0.7}	68 ^{±0.7}

Unit Descriptions

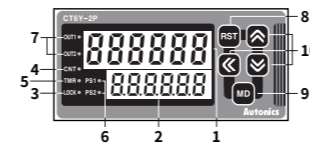
• CTS



• CTM



• CTY



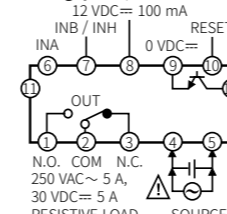
No.	Part name	Name plate	Function
1	Counting value display part (red)	-	RUN mode: Displays counting value, time progress value Parameter 1, 2 group: Displays setting item
2	Setting value display part (green)	-	RUN mode: Displays setting value Parameter 1, 2 group: Displays setting content
3	Key LOCK indicator	LOCK	Turns ON for key LOCK setting
4	Counter indicator	CNT	Turns ON for counter operation
5	Timer indicator	TMR	In timer operation - Flashes: time progress / turns ON: stopping time
6	Preset value checking, changing indicator	PS1, PS2	Turns ON when checking and changing preset value
7	Output indicator	OUT1, OUT2	Turns ON for the dedicated control output ON
8	RESET key	[RST]	Counting value RESET, BATCH counting value RESET
9	MODE key	[MD]	RUN mode ↔ Parameter 1, 2 group Move to the next when the parameter setting
10	Setting key	[◀], [▶], [▼], [▲]	Enter preset value change mode and move digits Preset value of preset value change mode and setting content of parameter 1, 2 group Enter function setting check mod and move check items
11	BATCH key	[BA]	Enter BATCH counter indication mode
12	BATCH output indicator (red)	BA.O	Turns ON when BATCH output ON
13	BATCH setting value checking, changing indicator (green)	BAS	Turns ON when checking and changing BATCH setting value

Connections

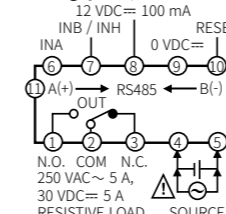
- Counter operation: If INHIBIT signal is applied, count input will be prohibited.
- Timer operation: If INHIBIT signal is applied, time progressing will stop.(HOLD)
- SOURCE: 100 - 240 VAC ~ 50 / 60 Hz 12 VA
24 VAC ~ 50 / 60 Hz 10 VA, 24 - 48 VDC = 8 W

■ CTS

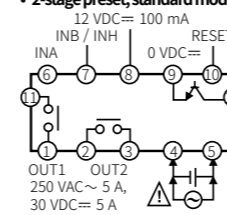
• 1-stage preset, standard model (CT□S-1P□)



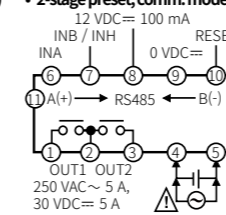
• 1-stage preset, comm. model (CT□S-1P□T)



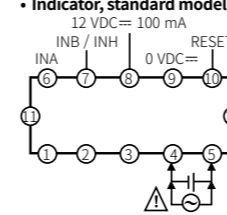
• 2-stage preset, standard model (CT□S-2P□)



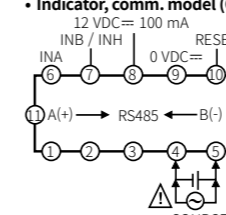
• 2-stage preset, comm. model (CT□S-2P□T)



• Indicator, standard model (CT6S-□)

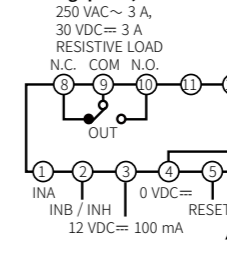


• Indicator, comm. model (CT6S-□T)

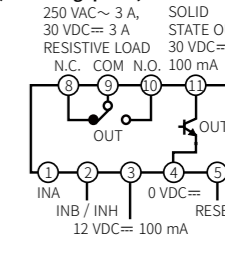


■ CTY

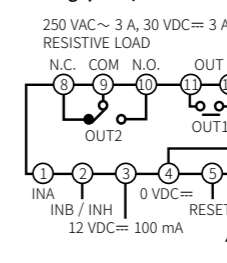
• 1-stage preset, standard model (CT6Y-1P□)



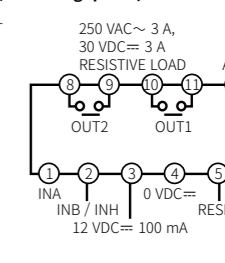
• 1-stage preset, comm. model (CT6Y-1P□T)



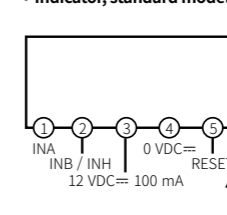
• 2-stage preset, standard model (CT6Y-2P□)



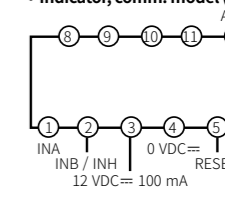
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• Indicator, standard model (CT6Y-□)

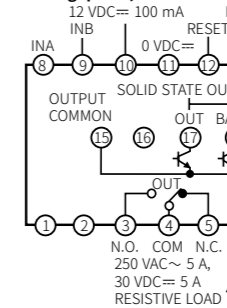


• Indicator, comm. model (CT6Y-□T)

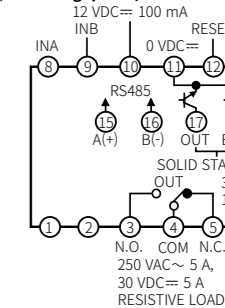


■ CTM

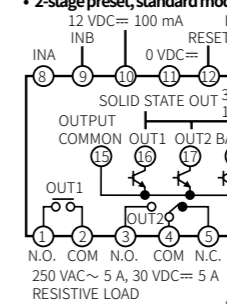
• 1-stage preset, standard model (CT6M-1P□)



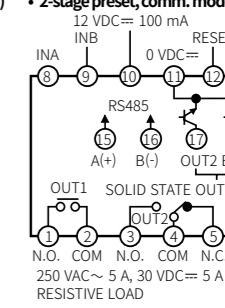
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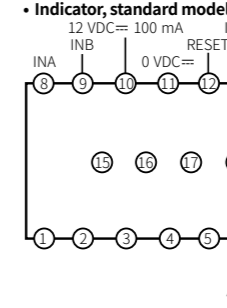
• 2-stage preset, standard model (CT6M-2P□)



• 2-stage preset, comm. model (CT6M-2P□T)



• Indicator, standard model (CT6M-□)



• Indicator, comm. model (CT6M-□T)

