

Programmable Digital Counters / Timers

CT Series



Features

- Communication function supported
(communication model): RS485 (Modbus RTU)
- One-shot output time setting range:
0.01 sec to 99.99 sec by setting per 10ms

[Counter]

- Prescale value setting range: 6-digit model:
0.00001 to 99999.9 / 4-digit model:
0.001 to 999.9
- Various input / output modes
(9 input / 11 output modes)
- BATCH counter, count Start Point
(counting initial value) setting function

[Timer]

- Various output modes (13 modes)
- Various time setting range:
6-digit model: 0.001 sec to 99999.9 hour /
4-digit model: 0.001 sec to 9999 hour
- '0' time setting function
- Selectable timer memory retention
function for indicator model.

Specifications

Model	CTS□-□□□	CTY□-□□□	CTM□-□□□
Display digits	4-digit	6-digit	6-digit
Display method	7-segment (counting value: red, setting value: green) LED		
Character size	W × H (unit: mm)		
Counting value	6.5 × 10	4.5 × 10	4.2 × 9.5
Setting value	4.5 × 8	3.5 × 7	3.5 × 7
Counter	Count up, count down, count up / down		
Counting range ⁰¹⁾	-999 to 9999 -99999 to 999999		
Timer	Count up, count down		
Error	Repeat / SET / voltage / Temp. - Power ON Start: ≤ ± 0.01 % ± 0.05 sec Signal ON Start: ≤ ± 0.01 % ± 0.03 sec		
Input logic	Voltage input (PNP) - input impedance: 5.4 kΩ, [H]: 5 - 30 VDC≡, [L]: 0 - 2 VDC≡ No-voltage input (NPN) - short-circuit impedance: ≤ 1 kΩ, short-circuit residual voltage: ≤ 2 VDC≡		
One-shot output time	0.01 to 99.99 s		
Product components	Product, instruction manual		
Bracket	Mounted	× 2	× 2
Unit weight (packaged)	≈ 159 g (≈ 212 g)	≈ 140 g (≈ 228 g)	≈ 252 g (≈ 322 g)
Approval	CE cULus ENEC		

01) It varies depending on the setting of decimal points.

Model	CTS□-□□□	CTY□-□□□	CTM□-□□□
Contact control output	Relay		
Type (1-stage)	SPDT (1c) × 1	SPDT (1c) × 1	SPDT (1c) × 1
Type (2-stage)	SPST (1a) × 2	Standard: SPST (1a) × 1, SPDT (1c) × 1 Communication: SPST (1a) × 2	SPST (1a) × 1, SPDT (1c) × 1
Capacity	250 VAC~ 5 A, 30 VDC≡ 5 A resistive load	250 VAC~ 3 A, 30 VDC≡ 3 A resistive load	250 VAC~ 5 A, 30 VDC≡ 5 A resistive load
Solid-state control output	NPN open collector		
Type (1-stage)	Standard: × 1, Communication: -	Standard: × 1, Communication: × 1	Standard: × 2, Communication: × 2
Type (2-stage)	Standard: × 1, Communication: -	Standard: × 1, Communication: -	Standard: × 3, Communication: × 2
Capacity	≤ 30 VDCT, 100 mA	≤ 30 VDC≡, 100 mA	≤ 30 VDC≡, 100 mA



View product detail

Voltage	AC voltage type	AC / DC voltage type
Power supply	100 - 240 VAC ~ ± 10 % 50 / 60 Hz	24 VAC ~ ± 10 % 50 / 60 Hz, 24 - 48 VDC ~ ± 10 %
Power consumption	≤ 12 VA	AC: ≤ 10 VA, DC: ≤ 8 W
External power supply	≤ 12 VDC ~ ± 10 % 100 mA	
Memory retention	≈ 10 years (non-volatile semiconductor memory type)	
Insulation resistance	≥ 100 MΩ (500 VDC ~ megger)	
Dielectric strength	2,000 VAC ~ 50 / 60 Hz for 1 minute	
Noise immunity	± 2 kV square wave noise (pulse width: 1 μs) by the noise simulator	± 500 V square wave noise (pulse width: 1 μs) by the noise simulator
Vibration	0.75 mm double amplitude at frequency of 10 to 55 Hz (for 1 minute) in each X, Y, Z direction for 1 hour	
Vibration (malfunction)	0.5 mm double amplitude at frequency of 10 to 55 Hz (for 1 minute) in each X, Y, Z direction for 10 min	
Shock	300 m/s ² (≈ 30 G) in each X, Y, Z direction for 3 times	
Shock (malfunction)	100 m/s ² (≈ 10 G) in each X, Y, Z direction for 3 times	
Relay life cycle	Mechanical: ≥ 1,000,000 operations, Electrical: ≥ 100,000 operations	
Ambient temperature	-10 to 55 °C, storage: -25 to 65 °C (no freezing or condensation)	
Ambient humidity	35 to 85 %RH, storage: 35 to 85 %RH (no freezing or condensation)	
Protection rating	IP65 (front part, IEC standard)	
Comm. protocol	Modbus RTU (16-bit CRC)	