

# Refrigeration Temperature Controllers



## TC3YT Series CATALOG

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

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

### Features

- Display method : 3-digit 7-segment LED
- Control method : ON/OFF control, P control
- Input specification : Thermocouple: K (CA), J (IC)
- RTD: DPt100 Ω
- Sampling cycle : 500 ms
- Control output : Relay (3 A)
- Power supply : 100-240 VAC~ 50/60 Hz
- Protection structure : IP65 (front panel)

### Ordering Information

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

**T C 3 Y T - B 4 R ①**

#### ① Relay type

- 3: 250 VAC~ 3 A 1c
- 16: 250 VAC~ 16 A 1c

### Product Components

- Product
- Instruction manual
- Bracket ×2

### Specifications

Series	TC3YF Series
Power supply	100 - 240 VAC~ 50/60 Hz ±10%
Power consumption	≤ 4 VA
Sampling period	500 ms
Input specification	Refer to 'Input Type and Using Range'.
Control output	250 VAC~ 3 A 1c / 250 VAC~ 16 A 1c (model)
Display type	7 segment (red), LED type
Control type	ON/OFF, Proportional control
Hysteresis	1 ~ 100 °C
Proportional band	0 ~ 100%
Offset correction	0 ~ 100%
Control period	1 ~ 120 sec
Relay life cycle	Mechanical ≥ 10,000,000 operations
	Electrical ≥ 100,000 operations (250 VAC~ 3 A load resistance) ≥ 100,000 operations (250 VAC~ 16 A load resistance)
Dielectric strength	Between all external terminals and case: 2,000 VAC~ 60 Hz for 1 min
Vibration	0.75 mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direction for 1 hours
Insulation resistance	≥ 100 MΩ (500 VDC= megger)
Noise immunity	±2 kV square shaped noise (pulse width 1 μs) by noise simulator R-phase, S-phase
Memory retention	≈ 10 years (non-volatile semiconductor memory type)
Ambient temperature	-10 to 50 °C, storage: -20 to 60 °C (no freezing or condensation)
Ambient humidity	35 to 85%RH (no freezing or condensation)
Protection structure	IP65 (IEC standards)
Approval	
Unit weight	• TC3YT-B4R3: ≈ 99 g • TC3YT-B4R16: ≈ 103 g

### Input Type and Using Range

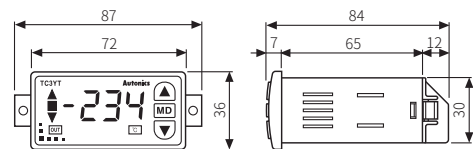
Input type	Display	Using range (°C)	Using range (°F)
Thermocouple	K (CA)	KCA	0 ~ 999
	J (IC)	JIC	0 ~ 400
RTD	Pt H	PT.H	0 ~ 400
	Pt L	PT.L	-99 ~ 199

#### ■ Display accuracy

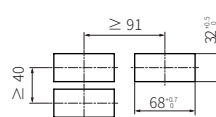
(PV ±0.5% or ±1°C higher one) rdg ±1digit

### Dimensions

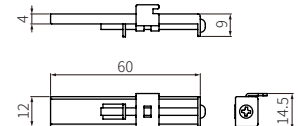
• Unit: mm, For the detailed drawings, follow the Autonics website.



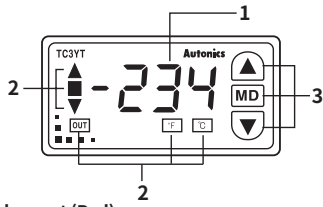
#### ■ Panel cut-out



#### ■ Bracket



## Unit Descriptions



### 1. Temperature display part (Red)

- Run mode: Displays PV (Present value)
- Setting mode: Displays parameter name

### 2. Indicator

Display	Name	Description
■ (green)	Deviation	The difference between PV and SV is less than 2°C
▲/▼ (red)		The difference between PV and SV is greater than 2°C
OUT (red)	Control output	Control output is ON
°C, °F (yellow)	Temperature unit	Set temperature unit is ON (parameter)

### 3. Input key

Display	Name
[MD]	Mode key
[▲], [▼]	Setting value control key