

Thumbwheel Switch Temperature Controllers



T3 / T4 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

- Various control output options : relay, SSR drive, current
- 2 independent set points and control outputs for heating and cooling control (T4LP)
- Various sizes (W48×H48, W48×H96, W72×H72, W96×H96 mm)

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 ① ② ③ - B 4 ④ ⑤ C - N

① Digit

3: 3 digit
4: 4 digit

② Size

S: DIN W 48 × H 48 mm (8 pin plug type)
M: DIN W 72 × H 72 mm
H: DIN W 48 × H 96 mm
L: DIN W 96 × H 96 mm

⑤ Option output

PN	Option output	T3S	T3H	T4M	T4L
No mark	No output	○	○	○	○
A	Alarm	-	○	○	○
S	Option	-	○	-	-
P	Dual setting	-	-	-	○

④ Control output

R: Relay
S: SSR drive
C: Current

⑥ Input type and using range

PN	Input type	Using range	T3S	T3H	T3HA	T3HS	T4M T4MA	T4L T4LA	T4LP
K4	Thermocouple K(CA)	0 to 400 °C	○	○	○	○	○	○	○
K8		0 to 800 °C	○	○	○	-	○	○	○
KA		0 to 999 °C	-	○	○	-	-	-	-
KC		0 to 1200 °C	-	-	-	-	○	○	○
J2		0 to 200 °C	○	-	-	-	-	-	-
J4	J(IC)	0 to 400 °C	○	○	○	○	○	○	○
J8		0 to 800 °F	-	○	-	-	-	-	-
RF	R(PR)	600 to 1600 °C	-	-	-	-	○	○	○
P0	RTD DPt 100Ω	-99.9 to 199.9 °C	-	-	-	-	○	○	-
P0		-99 to 199 °C	-	○	○	-	-	-	-
P1		0 to 99.9 °C	○	○	-	-	-	-	-
P2		0 to 200.0 °C	-	-	-	-	-	-	○
P2		0 to 200 °C	○	-	-	-	-	-	-
P4		0 to 400 °C	○	○	○	○	○	○	○

• Contact us for temperature unit °F model.

Product Components

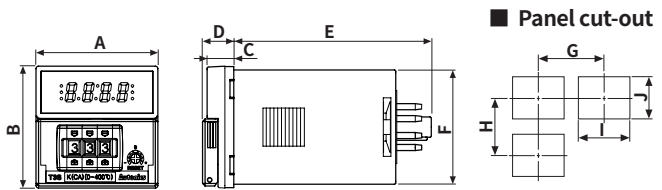
- Product (+ bracket)
- Instruction manual

Specifications		
Series	T3, T4 Series	
Power supply	100 - 240 VAC ~ 50/60 Hz ± 10%	
Power consumption	≤ 5 VA	
Sampling period	100 ms	
Input specification	Refer to 'Ordering Information: Input type and using range'.	
Display accuracy ⁰¹⁾	<ul style="list-style-type: none"> At room temperature (23 °C ± 5 °C): (PV ± 0.5% or ± 1 °C higher one) ± 1 digit Out of room temperature range: (PV ± 0.5% or ± 2 °C higher one) ± 1 digit 	
Control output	Relay ⁰²⁾	OUT1: 250 VAC ~ 5 A / 30 VDC = 5A 1c, OUT2: 250 VAC ~ 2 A / 30 VDC = 2A 1c
	SSR	12 VDC = ± 2 V, ≤ 20 mA
	Current	DC 4-20 mA, Load resistance: ≤ 500 Ω
Option output	250 VAC ~ 2 A 1c	
Alarm output setting range	F.S. 0 to 10% (volume switch)	
Option output setting range	0 to 50 °C (volume switch)	
Reset range	F.S. -3 to 3% (volume switch)	
Display type	7 segment (red), LED type	
Control type	ON/OFF, Proportional control	
Hysteresis	F.S. 0.2 to 3% (T3S: F.S. 0.5%) (volume switch)	
Proportional band	F.S. 1 to 10% (T3S: F.S. 3%) (volume switch)	
Proportional cycle	20 sec	
Relay life cycle	Mechanical	≥ 5,000,000 operations
	Electrical	OUT1: ≥ 100,000 operations, OUT2: ≥ 200,000 operations
Dielectric strength	Between input terminal and power terminal: 2,000 VAC ~ 50/60 Hz for 1 min	
Vibration	0.75 mm amplitude at frequency of 10 to 55 Hz (for 1 min) in each X, Y, Z direction for 2 hours	
Insulation resistance	≥ 100 MΩ (500 VDC = megger)	
Noise immunity	± 2 kV square shaped noise by noise simulator (pulse width 1 μs) 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, storage: 35 to 85%RH (no freezing or condensation)	
Approval	ERC	
Unit weight (packaged)	T3S: ≈ 95 g (≈ 135 g)	T3H, T3HA, T3HS: ≈ 176 g (≈ 239 g)
	T4M, T4MA: ≈ 180 g (≈ 246 g)	T4L, T4LA, T4LP: ≈ 222 g (≈ 310 g)

01) In case of the T3S Series and the decimal point display models
 At room temperature (23 °C ± 5 °C): (PV ± 0.5% or ± 2 °C higher one) ± 1 digit
 Out of room temperature range: (PV ± 0.5% or ± 3 °C higher one) ± 1 digit
 02) Dual setting output of the T4LP is fixed as relay output and, it is also available as alarm output.

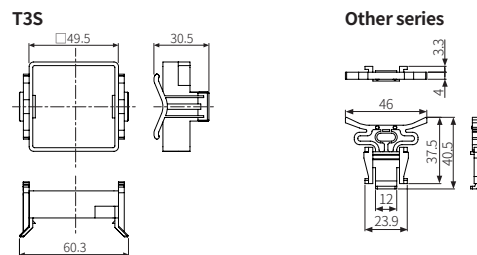
Dimensions

- Unit: mm, For the detailed drawings, follow the Autonics website.
- Below is based on T3S Series.

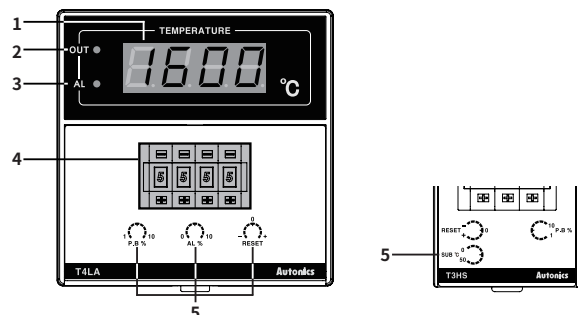


	Body						Panel cut-out			
	A	B	C	D	E	F	G	H	I	J
T3S	48	48	10.5	12.3	77.8	□45	≥ 65	≥ 65	45 ^{+0.6} ₀	45 ^{+0.6} ₀
T3H	48	96	13	-	70	91.5	≥ 65	≥ 115	45 ^{+0.6} ₀	92 ^{+0.8} ₀
T4M	72	72	11.8	14.3	75	□67.5	≥ 90	≥ 90	68 ^{+0.7} ₀	68 ^{+0.7} ₀
T4L	96	96	12.5	-	70	□91.5	≥ 115	≥ 115	92 ^{+0.8} ₀	92 ^{+0.8} ₀

Bracket



Unit Descriptions



1. PV (Present value) display part (Red)

2. Control output (OUT) Indicator

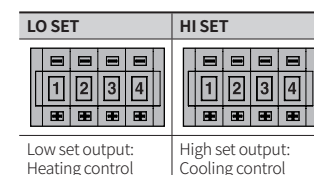
- Turns ON when control output is ON.
- In case of the T3S, the upper DOT of last digit flashes.

3. Alarm/Option output (AL / SUB) Indicator

- Turns ON when alarm/option output is ON.
- (only for alarm output model)

4. SV (Setting value) thumbwheel switch

- [-]: Decreases number, [+]: Increases number
- The models which temperature range is 0 (-99.9 to 199.9 °C, -99 to 199 °C) of temperature sensor DPT100 are only set 1 ↔ 0 ↔ (-).
- The dual setting output model (T4LP) has two thumbwheel switches.



Low set output:
Heating control

High set output:
Cooling control

5. Volume switch

Display	Name	Description
P.B %	Hysteresis / Proportional band	ON/OFF control: Setting for hysteresis Proportional control: Setting for proportional band • Except T3S
AL %	Alarm output	Setting for alarm output
RESET	Reset	In case of proportional control, it sets offset.
SUB	Option output SV	Setting for deviation low limit alarm temperature

Sold Separately

- 8 pin socket: PG-8, PS-8 (N)
- Terminal protection cover: RMA / RHA / RLA Cover