

Temperature Controller TC48

- ◆ Low price
- ◆ 48x48 DIN-sized front panel
- ◆ Thermocouple or Pt100 RTD input
- ◆ Independent set-point observation
- ◆ Sensor break indication
- ◆ Panel, DIN-rail, and in-socket mounting

The TC48 temperature controller has no temperature value indication and thus is applicable in cases, in which the low price is one of the major requirements, especially in food industry and household applications. With its 48x48 mm DIN-sized front panel, TC48 is best suited for applications, in which small size is important too. The device works with either an RTD temperature sensor or a thermocouple type "J" or "K" and can be used for controlling various temperature processes and driving electrical actuators by the means of a relay control output and through ON/OFF algorithm. A potentiometer and a dial on the front panel enable easy set-point adjustment, and a red LED – a clear sensor break indication. The controller can be mounted on a panel, on a rail, and in a socket. Inexpensive, compact, and easy-to-use, the TC48 temperature controller is one versatile general-purpose control device.



Technical specifications

Input

Pt100 (w=1.385); 3-wire	0...100 °C, 0...200 °C, 0...400 °C ⁽¹⁾
Thermocouple "J"	0...100 °C, 0...200 °C, 0...400 °C, 0...800 °C ⁽¹⁾
Thermocouple "K"	0...400 °C, 0...800 °C, 0...1000 °C, 0...1200 °C ⁽¹⁾

Output

Relay electromechanical	5A/250V w/ NO/NC contact
Solid state relay ⁽²⁾	1A/250VAC
MOS gate ⁽²⁾	0.1A/60V, optically isolated
Output for external SSR	5...24 V, 30 mA
Control algorithm	ON/OFF
Set point	within input range limits

Accuracy

Measurement error	0.5% from span
Temperature drift	0.007% from span for 1 °C
Cold junction compensation	± 1 °C

⁽¹⁾ Specify range when ordering.

⁽²⁾ Ask for availability!

⁽³⁾ Ordered separately (see 'Accessories')

Power supply

Mains supply voltage	230 VAC or 115 VAC
Isolated low voltage ⁽²⁾	24 VAC
Consumption	max. 3 VA

Indication and controls

LEDs	LED for relay state, LED for sensor break for set-point adjustment
Front-panel potentiometer	

Operating conditions

Ambient temperature	-10...65 °C
Ambient humidity	0...85 %RH

Design and materials

Case material	plastic
Mounting	in 45x45 mm panel cut-out or on 35 mm DIN rail socket OCTAL ⁽³⁾
Wiring	
Dimensions	48x48(front)x95 mm
Mounting depth	103 mm (w/ socket)
Weight	max. 250 g
Protection, front/terminals	IP40 / IP20

Ordering code TC48 - G1.G5.G6'6"

Code	Feature or option	Code values
G1	Power supply	A - 230 VAC, B - 115 VAC, R - 24 VAC ⁽²⁾
G5	Relay output	X - none, C - relay NO/NC, D - SSR ⁽²⁾ , J - for external SSR, M - isolated MOS gate ⁽²⁾
G6'6"	Input ⁽¹⁾	BD - Pt100, CJ - thermocouple "J", CK - thermocouple "K"