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TC4800 Temperature Controllers

Models Available

TC481 On/Off Temperature Controller
TC483 PD Temperature Controller
TC485 Latching Temperature Controller
TC486 4-20mA Process Controller

Product Features

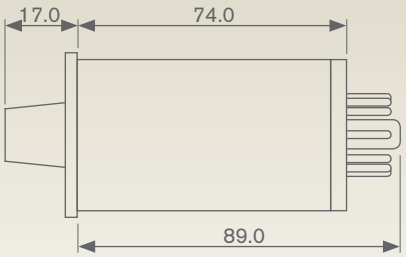
- On/Off, PD or latching control action
- Reverse or direct action
- Relay or SSR output
- J, K, T or R type thermocouple inputs
- PT100 or 4-20mA inputs
- 24Vac/dc or 110/230Vac
- Deviation LEDs and meter output
- Standard DIN48 square size
- Plug-in socket or panel mounting
- Lockable dial to prevent tampering
- Matching timers and tachometer relays
- Plug-in sockets also available

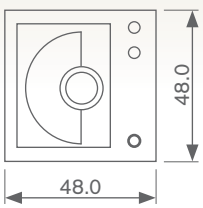
The Tempatron TC4800 series temperature controllers are available in On/Off, PD (proportional and derivative) and latching versions, and are designed for simple control of temperature or processes in a wide range of industrial applications. The controllers operate from a range of thermocouple or 3 wire PT100 (RTD) input sensors or from a 4-20mA process signal.

The temperature controllers are housed in a compact DIN48 square enclosure which can either panel mount or surface/DIN rail mount to a socket and they are auxiliary powered from either 24Vac/dc or 110/230Vac. The 5 Amp rated single pole changeover relay output contact is isolated from the supply voltage, and the temperature controllers have two LEDs to indicate both power and relay status.

For temperature control in machinery, systems and operational processes

Dimensions



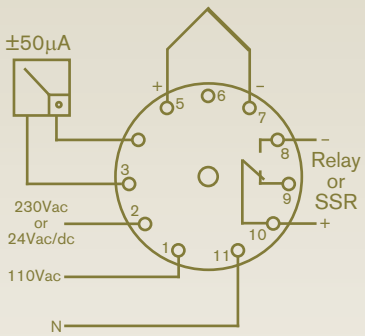


Panel cutout 45mm square (-0.0/+0.5)

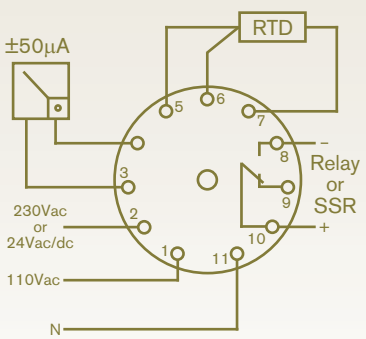
All dimensions in mm

Connections

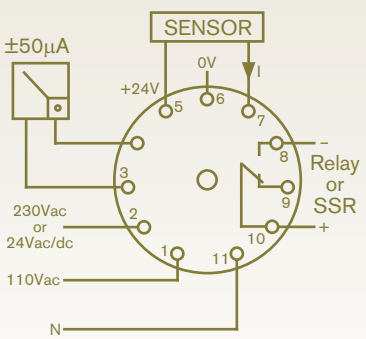
Thermocouple Input



PT100 RTD Input



4-20mA Input



Note:
The 24Vac/dc auxiliary powered models do not have isolation between the power supply and sensor so an isolated or non-earthed sensor must be used.

Ordering information

Model	Code	Description
	TC481	On/Off Temperature Controller
	TC483	PD Temperature Controller
	TC485	Latching Temperature Controller
	TC486	4-20mA Input Process Controller

Control Action/Output	Code	Description
	0	Reverse Action (Heating) / Relay Output
	1	Direct Action (Cooling) / Relay Output
	2	Reverse Action (Heating) / SSR Output
	3	Direct Action (Cooling) / SSR Output

Sensor Input	Code	Description
	0	K Type Thermocouple
	1	J Type Thermocouple
	2	T Type Thermocouple
	3	R Type Thermocouple
	5	PT100 3 Wire
	6	4-20mA Input

Scale Range	Code	Description
	1	0 to 200°C (J, K Type Thermocouples)
	2	0 to 400°C (J, K Type Thermocouples)
	3	0 to 600°C (K Type Thermocouple)
	4	0 to 800°C (K Type Thermocouple)
	5	0 to 1200°C (K Type Thermocouple)
	0	-100 to 200°C (T Type Thermocouple)
	6	-170 to 30°C (T Type Thermocouple)
	0	0 to 1600°C (R Type Thermocouple)
	0	-100 to 200°C (PT100)
	1	-50 to 150°C (PT100)
	2	0 to 100°C (PT100)
	3	0 to 200°C (PT100)
	4	-50 to 100°C (PT100)

Auxiliary Power	Code	Description
	24VAC/DC	24Vac/dc
	110/230VAC	110Vac and 230Vac

Plug-in Bases	Code	Description
	CDSR11	11 Pin Rear Screw Panel Socket
	AZ611	11 Pin DIN Rail/Panel Mount Socket
	S11P	11 Pin DIN Rail/Panel Mount Socket

Example **TC4810-03-110/230VAC**

Specification

Repeat Accuracy:
- ±2% of full scale

Power Supply Voltage:
- 24Vac/dc (±15%)
- 110Vac and 230Vac (±15%)

Burden:
- <4VA

Frequency:
- 50/60Hz

Input Sensor:
- J, K, R or T type thermocouple
- 3 wire PT100
- 4-20mA

External Sensor Resistance:
- Thermocouple input: 100ohms maximum
- PT100 input: 5 ohms per wire maximum

Hysteresis:
- On/Off controller: 0.5% of full scale
- 4-20mA input: 1% of full scale

Control Band for PD Controller:
- Proportional band 4 to 10% of full scale
- 20 second cycle time

Relay Output:
- Single pole changeover contact
- 5A at 240Vac/30Vdc (resistive)

SSR Output:
- 30mA/24Vdc

Electrical Contact Life:
- 100,000 operations at rated output

Deviation Meter Output:
- ±50µA

Operating Temperature:
- -10°C to 50°C

Enclosure Code:
- Case IP40

Weight:
- 230g

Markings:
- CE marked (meets EN61010-1 low voltage and EN50081-1/50082-1 EMC directives)

Specification subject to change without notice.

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