



## 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

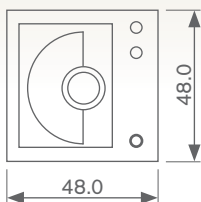
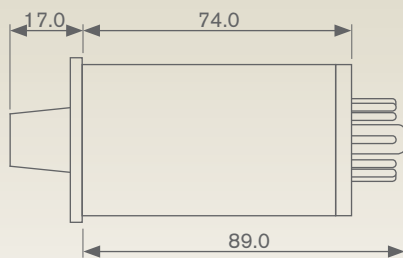
- On/Off, PD or latching control action
- Reverse or direct action
- Relay or SSR output
- J, K, T or R type thermocouple inputs
- PT100 or 4-20mA inputs
- 24Vac/dc or 110/230Vac
- Deviation LEDs and meter output
- Standard DIN48 square size
- Plug-in socket or panel mounting
- Lockable dial to prevent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

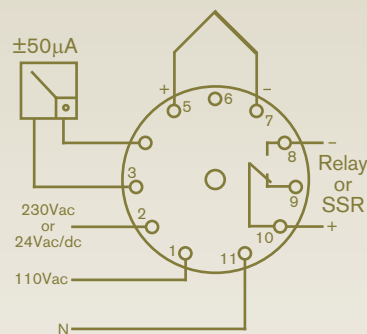


Panel cutout 45mm square (-0.0/+0.5)

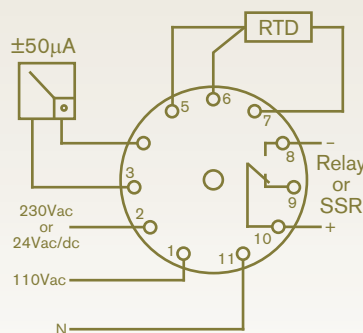
All dimensions in mm

### Connections

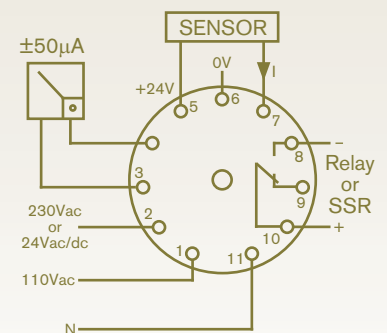
#### Thermocouple Input



#### 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:**

- $\pm 2\%$  of full scale

**Power Supply Voltage:**

- 24Vac/dc ( $\pm 15\%$ )
- 110Vac and 230Vac ( $\pm 15\%$ )

**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:**

- $\pm 50\mu A$

**Operating Temperature:**

- $-10^{\circ}C$  to  $50^{\circ}C$

**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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# TEMPATRON

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