

# TEMPERATURE CONTROLLERS

## TRC200, TRC200-T

### DIGITAL DISPLAY, ANALOGUE SETTING TEMPERATURE CONTROLLERS

The TRC200 range combines accurate temperature control with a continual display of process temperature, in a front of panel mounted 96 x 48 mm case.

At power up, the TRC displays the actual process temperature on a red, 3 digit LED display. The required control temperature can be displayed by pressing and holding the 'SET' button, and adjusted by keeping the button depressed and turning the 'CONTROL' potentiometer until the correct control temperature is displayed.

After the SET button is released, the TRC reverts to displaying the actual process temperature and begins to control power to the process heaters through its SPCO 'control' relay. Two red LEDs display the relay status: 'O' lights when the relay is de-energised (process cooling); 'I' lights when the relay is energised (process calling for heat).

A front facia 'duty ratio' potentiometer allows the operator to adjust the control characteristic to give the best balance between process accuracy and relay life. When this is turned to 0, the controller works in on/off mode (giving a slower switching rate); as the pot. is turned clockwise the relay cycle rate increases. (Normal usage would require the relay to cycle at 1 or 2 times a minute.)

The TRC200-T has an additional trip relay output which may be used to signal that the process has fallen outside of a preset temperature limit. This limit is adjusted using the separate TRIP potentiometer and SET button on the front facia. The TRC200-T is normally supplied with its trip relay set to de-energise when the actual temperature falls below the trip level, but can be set using switches at the side to de-energise on high temperature.

Electrical connection is by 1/4" blade terminals at the rear; separate terminals are provided for connection to either 110V or 230V AC supply voltages. Each unit is supplied pre-calibrated for use with one of several sensor types, such as a J or K type thermocouple or RT (Pt100) probe. Thermocouple break protection and cold junction compensation are fitted as standard.

Variations on the standard units are also available, including special supply voltages, solid state relay driver outputs and 'dual' units (two units in a single 96 x 96 mm case). Please contact Modex with details of your requirements.

#### When ordering, please specify:

- Product type number (TRC200 or TRC200-T)
- Sensor type (J or K type thermocouple, or RT probe)

#### Accessories:

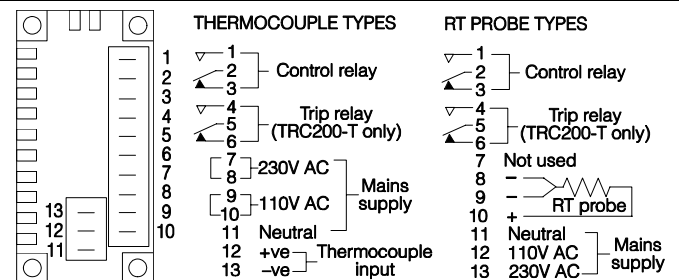
- Thermocouples** Please call for details of our custom thermocouple service, or refer to section 10 in our catalogue.
- Varnish Coating** PCB varnish coating. Recommended for tropical, humid or freezing conditions.



### Specification

<b>Power supply:</b>	
operating voltages	dual supply (pin selectable): 230V AC (200 - 250V AC) and 110V AC (100 - 125V AC)
power consumption	< 7 VA
<b>Control:</b>	
standard sensor types	J(Fe/Con) or K(Cr/Al) thermocouples RT (Pt100) resistance probes
standard adjustment ranges	0 - 999°C (thermocouple types), or 0 - 99.9°C (RT probe types)
operating differential	< 40µV (typ. <1°C)
<b>Relay outputs:</b>	
control relay	(all ratings for resistive load) SPCO contacts, rated 10A @ 240V AC, 2 x 10 <sup>5</sup> operations
trip relay (TRC200-T only)	SPCO contacts, rated 5A @ 240V AC, 2 x 10 <sup>5</sup> operations
<b>Physical:</b>	
operating temperature	-10 to +55°C
weight	< 550 g

### Connection



### Dimensions (mm)

