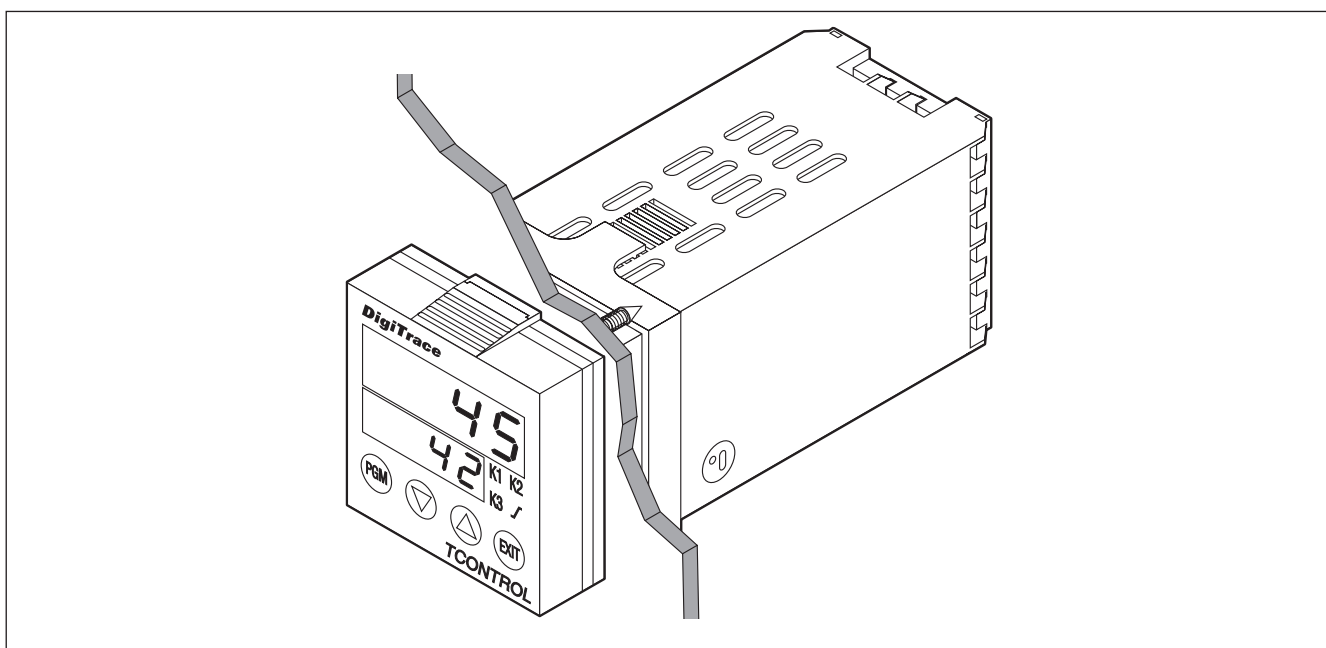


Single-circuit electronic controller

The Raychem TCONTROL-CONT-02 microprocessor based electronic controller provides accurate control and monitoring for individual trace-heating circuits. The compact panel mounted temperature controller has two 4-digit 7 segment displays for process value (red) and set point (green). During programming the displays are providing comments and visual aid to simplify set-up.

All configuration is done via the 4 front panel touch keys. The unit is factory configured as an ON/OFF controller suitable for most trace-heating applications. Other type of control algorithm such as Proportional control (P) and PID can be selected by simply changing the configuration code. Upon arrival the controller is configured for PT100 input (3 wire) with two output relays from which one is used

as the controller output and the other for alarm. Solid state outputs can be controlled via one of the logic outputs. The PT100 resistance sensor and the connection cable are monitored for break and short circuit. In the event of a fault the output switches to a defined state (ON or OFF) depending on the users preference.



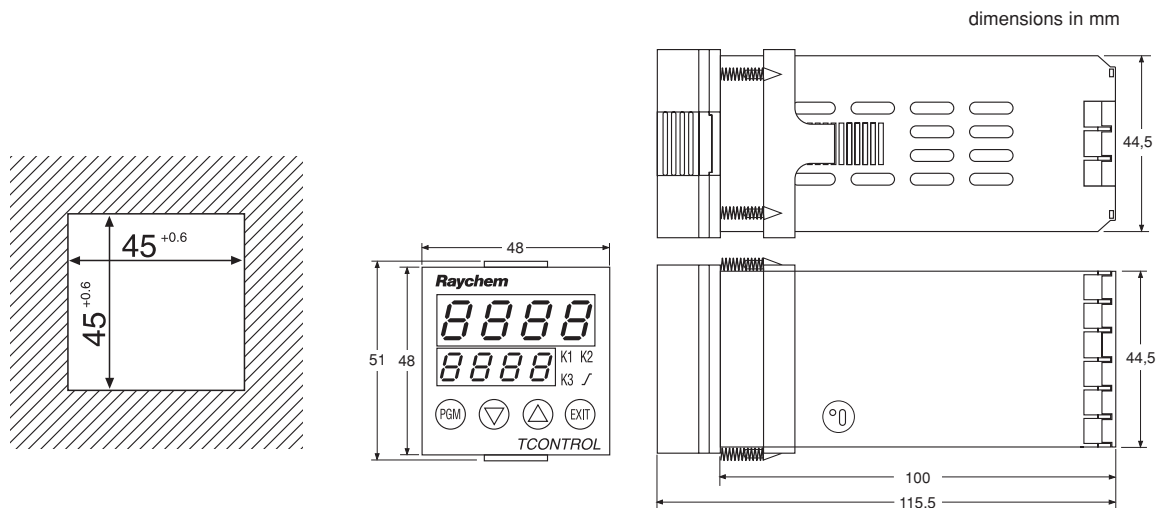
General

Area of use	Ordinary area (indoors, panel mounted)
Supply voltage	110 to 240 Vac, +10% / -15%, 50/60 Hz
Power consumption	6 VA
Electrical connection	Screw terminals (1.5 mm ²)
Data back-up	Non volatile memory; no data loss on power outage
Display	2 temperature displays; actual value (red) and set point (green); 4 keys for setting changes LED for status indication

Enclosure

Protection	Front IP65, rear IP20
Ambient operating temperature	0°C to +55°C
Ambient storage temperature	-40°C to +70°C
Relative humidity	75% max., no condensation
Casing material	ABS

Mounting and dimensions



Inputs and Outputs

Input	Pt 100, Pt 1000, 0/4...20mA, 0/2...10V, common thermocouples
Output	2 Mechanical, single throw contacts (SPST), 3 A at 250 Vac, life >5 x 10 ⁵ cycles (alarm and control output relay)

Alarms High, low, band and sensor break / sensor short

Parameters and factory settings

Parameter	Factory settings
Control modes	On/Off (selectable PID with auto tuning)
Control set point	5°C (selectable -199.9°C to 999.9°C)
Hysteresis	2°C (selectable 0°C to 999.9°C)
Band alarm	±3°C (selectable -199.9°C to 999.9°C)
Input	Pt 100, 3 wire (selectable; see list above)
Display format	XXXX (Selectable: XXX.X, XX.XX)

Electromagnetic compatibility (EMC) Conform to EN 50 082-2 (heavy industrial) and EN 50 081-1 (light industrial)

Mounting Panel mount (through the panel)

Accessory selection table

Select the appropriate accessories based on the specifics of the application. More details about the accessories can be found in the accessories section of this databook.

Input sensors	Ordinary area	Hazardous area
Pt 100, 3 wire (Note 1)	<ul style="list-style-type: none"> MONI-PT100-NH JB-SB-26 	<ul style="list-style-type: none"> MONI-PT100-EXE (Note 2) JB-SB-26
Pt 100 with 4...20 mA transmitter (EEx i) (Note 3)	<ul style="list-style-type: none"> TCONTROL-CONT-02 MONI-RMC-PS24 MONI-PT100-4/20MA JB-SB-26 	<ul style="list-style-type: none"> TCONTROL-CONT-02 (Note 4) TCONTROL-ISOL-01 (Note 4) MONI-RMC-PS24 (Note 4) MONI-PT100-4/20MA JB-SB-26

Note 1: Sensor can be extended with a 3-wire shielded cable of max 20 Ohms per conductor (max. 150 m with a 1.5 mm² cable).

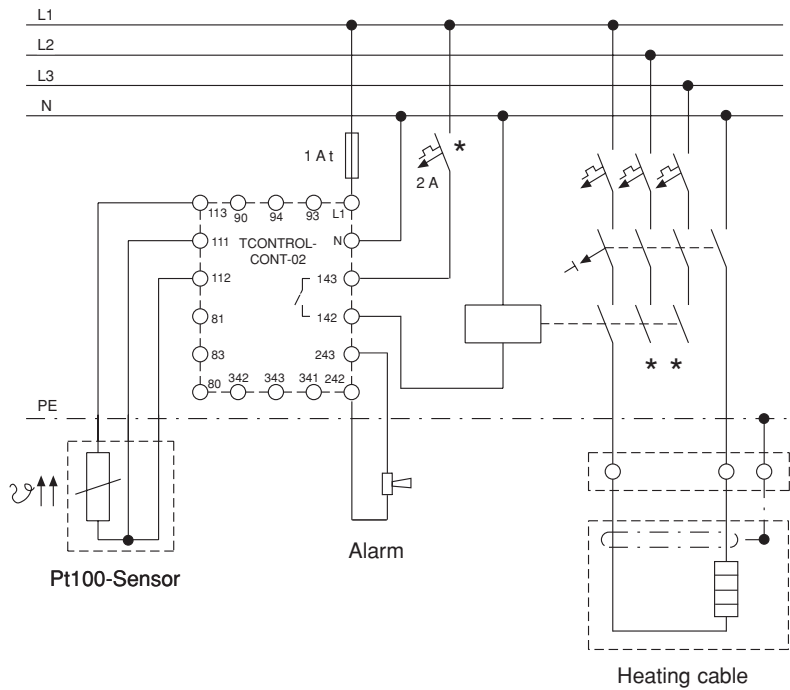
The sensor cable should be shielded if it is laid in cable ducts or in the vicinity of high-voltage carrying cables. The shield of the extension cable should be grounded at the controller end only.

Note 2: The MONI-PT100-EXE temperature sensor can be directly connected to the TCONTROL-CONT-02. There is no need to use current limiting devices such as zener barriers or isolators.

Note 3: For connection details see TCONTROL-ISOL-01 in accessories section.

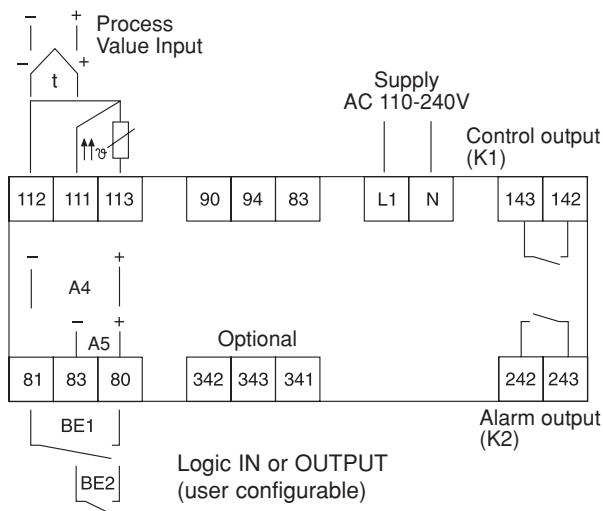
Note 4: Installed in ordinary area.

Wiring diagram



* Two- or four-pole electrical protection by circuit-breaker may be needed for local circumstances, standards and regulations.
 ** Depending on the application, one- or three-pole circuit-breakers or contactors may be used.

Connection details



Control and Monitoring

Ordering details	Part description	PN	Weight
Temperature controller	TCONTROL-CONT-02	330714-000	0.4 kg
Isolator	TCONTROL-ISOL-01	670021-000	0.1 kg
24 Vdc Power supply	MONI-RMC-PS24	972049-000	0.7 kg
Temperature sensors			
Pt 100, ordinary area	MONI-PT100-NH	140910-000	0.2 kg
Pt 100, hazardous area (EEx e)	MONI-PT100-EXE	967094-000	0.6 kg
Pt 100 with 4-20mA transmitter, hazardous area (EEx i)	MONI-PT100-4/20MA	704058-000	0.6 kg
Pt 100, hazardous area sensor without enclosure	MONI-PT100-EXE-SENSOR	529022-000	0.2 kg
Support bracket for sensor	JB-SB-26	338265-000	0.2 kg