MegaControls

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TC610
Electronic On-Off Room Thermostat

Features
- Aesthetic styling
- Constant temperature differential provided by NTC sensor
- No heat anticipators required
- SPDT relay output contacts of 250 VAC 16 A rating
- 20~60°C set point range
- External sensor capability
- Easy to wire to numbered terminals

General
The TC610 electronic room thermostat is designed for line-voltage control of cooling coils, fan heaters, fans and DX-cooling and especially for control of ventilation fans in elevator motor rooms and transformer rooms in commercial, industrial and residential buildings.

The thermostat operates an on/off controlled device to maintain room temperature at the desired set point. The thermostat switches the cooling controlled device ON at the set point value and switches OFF when the room temperature drops to a value of the set point minus the differential. For example, if the set point value is 35°C and the differential setting is 10 K, the relay switches ON at 35°C and OFF at 25°C. For heating application, the actions are reversed.

External temperature sensor is available as standard feature.

Mounting
The TC610 electronic room thermostat can be surface mounted or secured to a standard European 75x75x35 mm electrical box. Two mounting screws are included.

Ordering Instruction
To order, specify complete product model number.

Specifications

Model Numbers	TC610 SPDT relay output
Power Requirements	230 V ±10%, 50/60 Hz
Operating Differential (Sometimes Called Hysteresis)	Adjustable 1~10 K by a potentiometer, non-graduated, with minimum to maximum scale Factory setting, approx. 1 K
Set Point Range	20~60°C by non-linear scale dial
LED Indicator	ON display when cooling contact closed
Sensing Element	NTC thermistor, 10 kΩ@ 25°C
Body Material	Self-extinguishing, molded ABS
Finish	Off white color
Protection Class	IP20
Electrical Ratings	Relay output SPDT, 250 V, 16 A, 50/60 Hz
Ambient / Storage Temperature Limits	0~60ºC / -40~60ºC, 10% to 90% RH non-condensing
Wire Connections	Non-removable terminal block, wire size 1 mm^2 or 18 AWG solid copper recommended
Accessories and Options	See Figure 1: Accessories
Agency Approval	CE Mark compliant to EMC standards CENELEC EN 61000-6-1 and EN61000-6-3 and LVD standard IEC 60 730-2.9 pending
Shipping Weight	0.24 kg (0.53 lb)
Dimensions	See Figure 4: Dimensions in mm

The performance specifications above are nominal and subject to tolerances and application variables of generally acceptable industry standards. The manufacturer shall not be liable for damages resulting from misapplication or misuse of its products.

Figure 1: Accessories

Description	Part No.
Probe-type temperature sensor	TE10-1
Duct –mount temperature sensor	TE10-2

Figure 2: Wiring Notes

1. 22 or 24 AWG twisted shielded pair double-insulated cable is recommended as external sensor wiring and its length must not exceed 25 m.
2. Do not bundle and run power wiring and external sensor wiring in the same conduit.
3. Run the external sensor wiring away from any electric motors or power wiring. Failure to do so may result in poor thermostat performance due to electrical noise.

Figure 3: Wiring Diagram

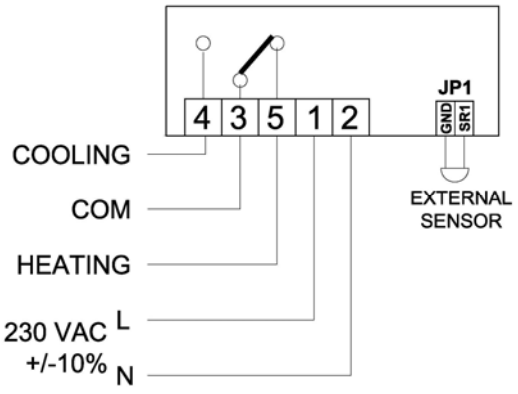


Figure 4: Dimensions in mm

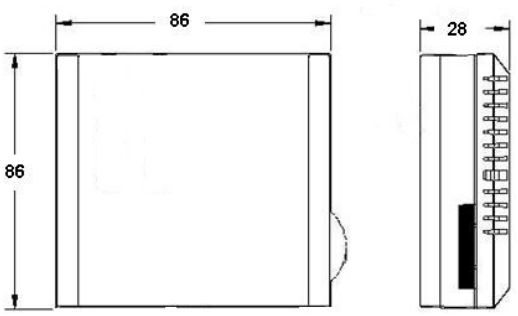
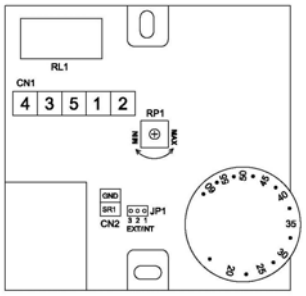


Figure 5: Jumper Setting and Temperature Differential Adjustment



When external sensor is connected, insert jumper JP1 to positions 2 and 3. Factory setting of JP1 is at positions 1 and 2 for built-in sensor.

Temperature differential can be adjusted between 1 and 10 K by rotating RP1 pot from minimum to maximum setting.

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