TC300 Series
Electronic Room Thermostats

Features
■ Aesthetic styling
■ Constant and close temperature differential provided by NTC sensor
■ No heat anticipators required
■ Output relays to achieve high performance
■ Remote sensor capability
■ System "OFF" position breaks all circuits
■ All slide switches for ease of operation
■ Easy to wire to numbered terminals

General
The TC300 Series electronic room thermostats are available in 6 basic models for line voltage control of valves, relays and fan motors in fan coil units, heat pumps and packaged units for commercial, industrial and residential installations.

The thermostat operates an on/off controlled device to maintain room temperature at the desired set point.

The TC300 Series thermostats are designed for different HVAC control applications incorporating on-off system control, 3-speed fan, manual cooling/heating changeover, for 2-pipe or 4-pipe systems, depending on the selected models.

Remote temperature sensor is available to all models as standard feature.

Mounting
The TC300 Series electronic room thermostats 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	TC301	On-off, 3-speed fan, single output, cooling only or heating only, 2-pipe system
	TC302	Cool-off-heat, 3-speed fan, single output, manual cooling/heating changeover, for 2-pipe system
	TC303	Cool-off-heat, 3-speed fan, dual outputs, manual cooling/heating changeover, for 4-pipe system
	TC310	Single output, general purpose thermostat
	TC311	Single output, general purpose thermostat, with on-off system switch
	TC312	Single output, 1-speed fan, with on-off system switch
Power Requirements	220 V ±10%, 50/60 Hz	
Nominal Operating Differential	Approximately 1 K	
Deadband	Fixed at 1 K (for Model TC304 only)	
Range	0-30 ^{o}C linear	
Sensing Element	NTC thermistor, 10 kΩ @ 25 ^{o}C	
Fan Output	Continuous, selectable at high, medium or low Speed	
Body Material	Self-extinguishing, molded ABS	
Finish	Off white color	
Electrical Ratings	Thermostat	SPDT relay, 250 V, 3 A resistive, 1 A inductive, 50/60 Hz
	Switches	3 A resistive, 1 A inductive, up to 250 V 50/60 Hz
Ambient / Storage Temperature Limits	0 to 50 ^{o}C / -30 to 50 ^{o}C, 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 and Low Voltage Directives 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.
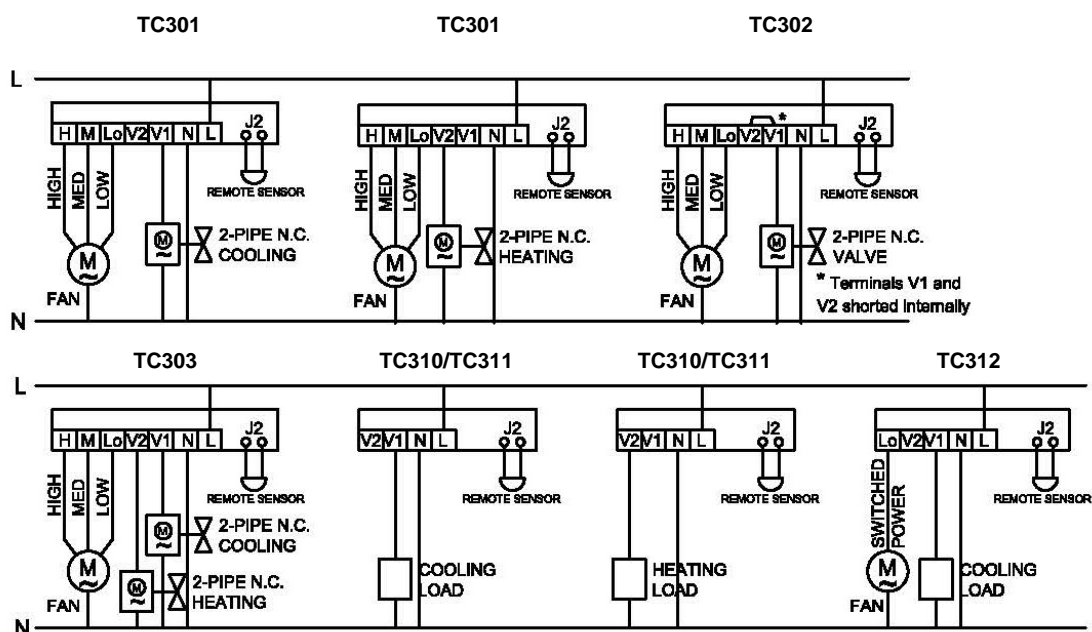
Figure 1: Accessories

Description	Part No.
Probe-type temperature sensor	TE10-1
Duct –mount temperature sensor	TE10-2
Wire leads with plug for remote sensor connection	RSL

Figure 2: Wiring Notes

1. 22 or 24 AWG twisted shielded pair double-insulated cable is recommended as remote sensor wiring and its length must not exceed 50 m.
2. Do not bundle and run power wiring and remote sensor wiring in the same conduit.
3. Run the remote 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 Diagrams

All valves are 2-wire spring-return valves.   **N.C. = Normally-closed**

Warning! Disconnect power before equipment connection or servicing to prevent electric shock.
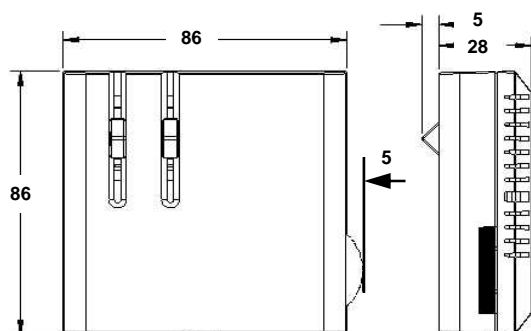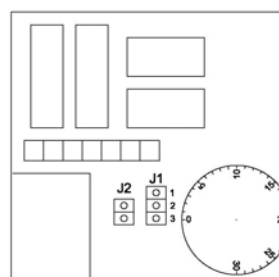
Figure 4: Dimensions in mm

Figure 5: Jumper Settings

When remote sensor is connected to connector J2 by means of wire leads RSL, insert jumper J1 to positions 2 and 3. Factory setting of J1 is at positions 1 and 2 for built-in sensor.