TE150H MODULATING 0/2-10 VDC
High Temperature Dual Output Thermostat 24Vac

Description

Dual output modulating proportional plus integral (P+I) 0/2-10 Vdc electronic room thermostat with digital display and set point adjustment. It is suitable for controlling one heating and one cooling, two heating, or two cooling modulating valves or other devices like electric duct heaters, to accurately maintain the room temperature with its P+I control loop. Optional external 10K NTC sensor can be used to control discharge or return air in duct or special applications. External summer/winter changeover thermostat or a wire jumper can be connected to the room thermostat terminals 2 & 3 to select heating or cooling mode. Economy mode can be implemented by grounding terminal number 4 - hand icon will be displayed. Pressing the hand button for 2 seconds will override to regular mode for a 2 hour period.

Quality, affordable electronic room thermostat with digital display from Spartan

SPECIFICATIONS

Operating voltage: 24Vac, 50/60Hz, +/- 20%

Power consumption: Maximum 3Va

Control output: 0/2-10VDC, 5mA

Proportional Band: 4°F or 2°C

Sensing Element: 10K NTC Thermistor internal or external

Optional Remote Sensor: Use 10KΩ Type 3 NTC thermistor in terminals 7 & 8. Contact Spartan for many other types of sensors.

Connection terminals: Use solid wire 22 AWG to 14 AWG

Digital Display: Temperature and set point in °C or °F, heating, cooling or economy mode symbols

Measureable range: -4°F-140°F; -20°C-60°C

Controllable range: 50°F-130°F; 10°C-55°C

Full Set point range: 50°F-130°F; 10°C-55°C

Limited Set point range: 65°F-75°F; 18°C-24°C

Ambient temperature: 32°F-122 °F or 0°C-50°C, < 95% RH

Housing cover/base color: Cover white, base grey

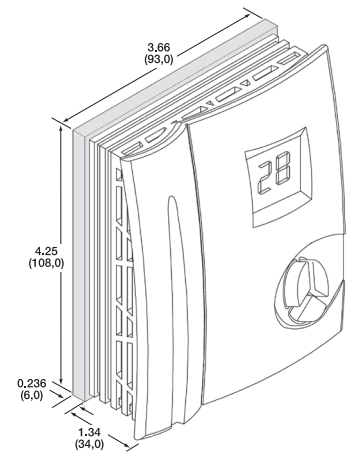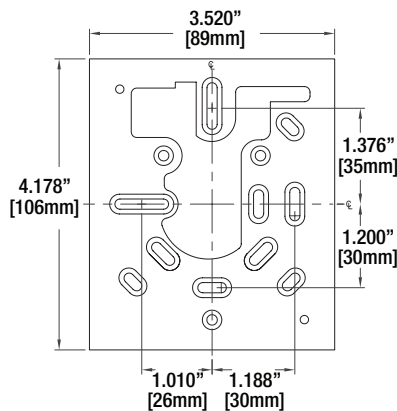**Wall mounting plate:** Color white, mounting holes for European and North American standards

Shipping weight: 0.5Lbs (0.225 Kg)

Agency approval: Conforms to CE/ROHS requirements Class 2 as per UL/CSA

MOUNTING DIMENSIONS

3.520" [89mm]
4.178" [106mm]
1.376" [35mm]
1.200" [30mm]
1.010" [26mm]
1.188" [30mm]
3.66 (93,0)
4.25 (108,0)
0.236 (6,0)
1.34 (34,0)

DIP SWITCHES

ON
1 2 3 4 5 6 7

Internal DIP switches selects the following features

Pole	OFF	ON
1	°C Scale	°F Scale
2	On demand 10Vdc	On demand 0 /2 Vdc
3	Internal sensor	External sensor
4	0-10Vdc	2-10Vdc
5	Limited set-point range	Full set-point range
6	*Single output AO1	Dual output AO1, AO2
7	Two heating or two cooling outputs	One heating, one cooling output

*N.B. If only single output (AO1) is used, DIP switch 6 & 7 must be in off position. Repower the thermostat for any changes to the DIP switch settings to take effect.

Changing the Set Point

To change set point use the increase or decrease keys.

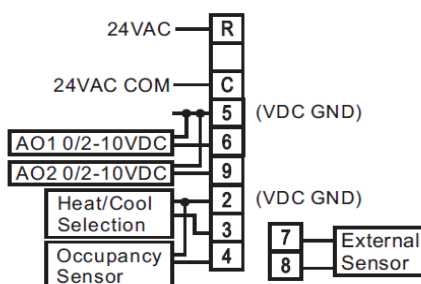LCD display will illuminate after pressing hand key.

When the thermostat is in heating mode a thermometer will appear in the display. It will flash when there is a demand for heat.

❄ When the thermostat is in cooling mode a snow flake will appear in the display. It will flash when there is a demand for cooling.

Selectable by jumper on terminal 2 and 3

On Power Failure

The set-point will remain in the memory.

TE150H Cover Removal Instructions

To remove the cover simply remove the screws at the bottom of the unit with a screwdriver (1 and 2). The cover then is removed by pulling it out and then up.

Installation: Thermostats can be installed on a standard 20-20 2X4 electric box, or directly on the flat wall surface, and away from the heat source.

Do not expose to water.

WIRING DIAGRAM

24VAC — R
24VAC COM — C
5 (VDC GND)
AO1 0/2-10VDC — 6
AO2 0/2-10VDC — 9
2 (VDC GND)
Heat/Cool Selection — 3
Occupancy Sensor — 4
7 8 External Sensor

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