GREYSTONE
ACCURACY BY DESIGN

TE200IT
Intelligent Thermostat
Installation Instructions

Intelligent Thermostat

The TE200-IT is a unique room thermostat which offers the user setpoint control, digital status display and one digital output for control of a fan or other device. Three user membrane switches are used to increase or decrease the setpoint and to toggle the digital output. The device is factory configured for either °C or °F operation.

Typical Operation (assuming °C and 0 to 5 Vdc configuration)

On power up the device defaults to the pre-programmed setpoint (22.0 °C) and outputs (22 - 10) / (35.5 – 10.0) * 5 Vdc = 2.35 Vdc on the AO terminal. The controller reads the temperature sensor resistance and sends the 0 to 5 Vdc signal back to the IT to control the temperature display. For example, if the controller sends 2.74 Vdc to the IT, it will display 2.74 / 5 * 25.5 + 10 = 24.0 on the LED display.

If the user presses the UP or DOWN switches on the device, the display will immediately change to display the setpoint and will count up or down to change the setpoint. The AO is also changed accordingly. When the UP or DOWN switch is released, the display will revert to the temperature display after a few seconds.

If the ON/OFF switch is activated the display will immediately change to display the output status (ON or OFF) and the DO state will toggle. When the switch is released the display will revert to the temperature display after a few seconds.

Terminals

AO **Analog Output, a proportional voltage signal that represents the setpoint as set by the UP and DOWN buttons. This signal is either 0 to 5 or 0 to 10 Vdc (factory set) and is scaled from 10.0 to 35.5 °C (45.0 to 96.0 °F). The setpoint has pre-programmed limits of 17.0 to 25.0 °C (60.0 to 78.0 °F) and defaults to 22.0 °C (70.0 °F) on power up. These limits may be factory customized.**

DO **Digital Output, an open-collector output that toggles with each activation of the center ON/OFF button. May be used to indicate an over-ride condition or to control a fan. Defaults to the OFF state on power up.**

AIN **Analog Input, accepts a proportional voltage signal from the controller to control the three digit LED display. This signal is either 0 to 5 or 0 to 10 Vdc (factory set) and is scaled 10.0 to 35.5 °C (45.0 to 96.0 ° F).**

SEN **Sensor, the raw resistance temperature sensor output from either a thermistor or platinum RTD element.**

PWR **Power, 24 Vac/dc (nominal).**

COM **Common, the power supply and signal common.**

Wiring

"IT"	CONTROLLER
AO . . . . . Setpoint (0-5 Vdc)	AI
DO . . . . . Digital ON/OFF	DI
SEN . . . .Temperature Signal	AI
PWR . . . . . 24 V ac/dc	PWR
COM . . . . . Common	COM
AIN . . . Display (space temp). . . .	AO