GREYSTONE
ACCURACY BY DESIGN

Space Temperature Sensor With Display Installation Instructions

LCD Display

LED Display

Space Temperature Sensor

Designed for temperature measurement of occupied spaces. Featuring a digital temperature display and optional setpoint, override switch and external jack.

Installation

Space sensors can be mounted directly on a wall or to a wall box. For the most accurate results, units should be mounted on an inside wall to a wall box, away from any supply air exhausts and other sources of heat or cold.

Display Selection – The LED display can be field configured for ºC or ºF by removing power to the board and placing the jumper on the desired display. The device will select ºC or ºF on power up. The LCD is configured at the factory and is not field configurable.

Specifications

Display Type	LCD	LED
Operating Temperature Range	0 to 70 ºC (32 to 158 ºF)	
Power Supply	12-30 Vac/dc @ 2mA	12-30 Vac/dc @ 30mA
Display Range	0.0-35.0 ºC 32.0-95.0 ºF	10.0-35.5 ºC 50.0-96.0 ºF
Wiring Connections	Screw Connectors, 18 – 24 awg	
Sensor Types	100 Ω, 1K RTD's, 1801 Ω, 3K, 10K (type 2 & 3), 20K & 100K	

Typical Wire Resistance Values

When using low resistance sensors (i.e. 100 ohm RTD), long wire runs can add significant error to the readings. Use the following chart to determine errors due to wire resistance or consider using a 1000 ohm sensor or a transmitter for better accuracy. Locate the type of wire being used. Multiply the total length of the wire (distance from the controller to the sensor and back) by the number found in the following chart for total resistance.

GAUGE WIRE TYPE	18 AWG	22 AWG	24 AWG
STRANDED (OHMS/FOOT)	5.85 mΩ	14.75 mΩ	23.29 mΩ
SOLID (OHMS/FOOT)	6.4 mΩ	15.85 mΩ	25.72 mΩ

Wiring

All terminals are marked on the board as to their function. For the LCD, power is connected to the terminals marked + LCD –. For the LED, power is connected to the terminals marked PWR COM.

Other available terminals are:

SENSOR – sensor resistance output
POT – set-point resistance output
SWITCH – override switch output (NO)
1,2,3,4 – external jack connection

REV001 01/99