



GREYSTONE ENERGY SYSTEMS INC

ROOM TEMPERATURE SENSOR TSPC Series

The TSPC room temperature sensor with resistive setpoint control is available in an attractive wall mount enclosure and can be configured with various options. It is available with various curve-matched thermistors or RTD sensors to measure temperature.

A back-lit LCD displays room temperature, setpoint on demand and occupancy. Several operating parameters can be programmed using a keypad and on-board jumpers configure the °C/F display or disable the backlight.

Available options include a dry-contact override switch, a five position fan speed switch and a jack for a network connection.



SPECIFICATION:

Power Supply.....24 Vac/dc $\pm 10\%$
(non-isolated half-wave rectified)
Consumption.....20 mA max.
Operating Conditions.....0 - 50°C (32 - 122°F),
0-95% RH non-condensing
Enclosure.....White ABS - IP30 (NEMA 1)
84 w x 119 h x 29 d mm
(3.3" x 4.7" x 1.15")
Wiring Connections.....Screw terminal block (14 to 22 AWG)

Temperature Signal

Sensor.....Several thermistors or RTD's available
See ordering information
Sensor Accuracy.....Thermistors: $\pm 0.2^\circ\text{C}$, 0 to 70°C
($\pm 0.36^\circ\text{F}$, 32 to 158°F)
Platinum RTD's: $\pm 0.3^\circ\text{C}$ @ 0°C
($\pm 0.54^\circ\text{F}$ @ 32°F)
Nickel RTD's: $\pm 0.4^\circ\text{C}$ @ 0°C
($\pm 0.72^\circ\text{F}$ @ 32°F)

Setpoint Adjustment

Range.....Up/Down pushbuttons for
 ± 10 resistive steps
Signal.....Several resistive ranges available
See ordering information
Midpoint.....Programmable, 20-23 °C or 68-73 °F
LCD Increment.....Setpoint step size is 0.5 °C or 1.0 °F
Action.....Programmable, direct or
reverse acting

LCD Display

Display Range.....0.0 - 35.0 °C or 32.0 - 95.0 °F
selectable via jumper
Display Resolution.....0.5° C/F
Display Size.....38.1 w x 16.5 h mm H (1.5" x 0.65")
Digit Height.....11.43 mm (0.45")
Symbols.....°C, °F, OCC
Backlight.....Enable or disable via jumper

Optional Override Switch (S)

Momentary pushbutton.....N.O., SPST, 50 mA @12 Vdc

Occupied Input

Signal type.....Digital input, 0/5 Vdc standard,
active low
Action.....Causes "OCC" segment to light on LCD

Optional Communication Jack (E)

4 pin.....4 Pin header. Requires HHTA -
Hand Held Adapter

Optional Fan Speed Switch (F)

Range.....5 Position-Off, Auto, Low, Medium, High
Signal.....Resistive - 0, 2, 4, 6, 8 K Ω

PART NUMBER SELECTED

PRODUCT SELECTION INFORMATION:

| MODEL | Product Description |
|-------|--|
| TSPC | Room Temperature Sensor w/ Setpoint Adjustment & LCD |

| CODE | Sensor |
|------|--|
| 2 | 100 Ω Plat. IEC 751, 385 Alpha, thin film |
| 5 | 1801 Ω , NTC Thermistor, $\pm 0.2^\circ\text{C}$ |
| 6 | 3000 Ω , NTC Thermistor, $\pm 0.2^\circ\text{C}$ |
| 7 | 10,000 Ω , type 3, NTC Thermistor, $\pm 0.2^\circ\text{C}$ |
| 8 | 2.252K Ω , NTC Thermistor, $\pm 0.2^\circ\text{C}$ |
| 12 | 1000 Ω Platinum, IEC 751, 385 Alpha, thin film |
| 13 | 1000 Ω Nickel, Class B, DIN 43760 |
| 14 | 10,000 Ω , type 3, NTC Thermistor, $\pm 0.2^\circ\text{C}$ c/w 11K shunt resistor |
| 20 | 20,000 Ω , NTC Thermistor, $\pm 0.2^\circ\text{C}$ |
| 24 | 10,000 Ω , type 2, NTC Thermistor, $\pm 0.2^\circ\text{C}$ |

| CODE | Resistance Output (Range 16-26°C in 0.5°C Increments or 60-80°F in 1°F Increments) |
|------|--|
| P | 0 - 10,000 ohms |
| P1 | 20,000 - 30,000 ohms |
| P2 | 2000 - 3000 ohms |
| P3 | 0 - 20,000 ohms |
| P4 | 4000 - 2000 ohms |
| P5 | 0 - 2000 ohms |
| P6 | 8000.7 - 3107.3 ohms |

| CODE | Options (Multiple selections can be made) |
|------|--|
| E | 4 Pin molex external jack for communications |
| S | Exposed override switch with LCD indication option (OCC) |
| F | 5 position fan switch Off/Auto/Low/Med/High |

Greystone Energy Systems, Inc. reserves the right to make design modifications without prior notice.

Due to the many possible configurations, special part numbers may be required. Please contact Greystone for more information

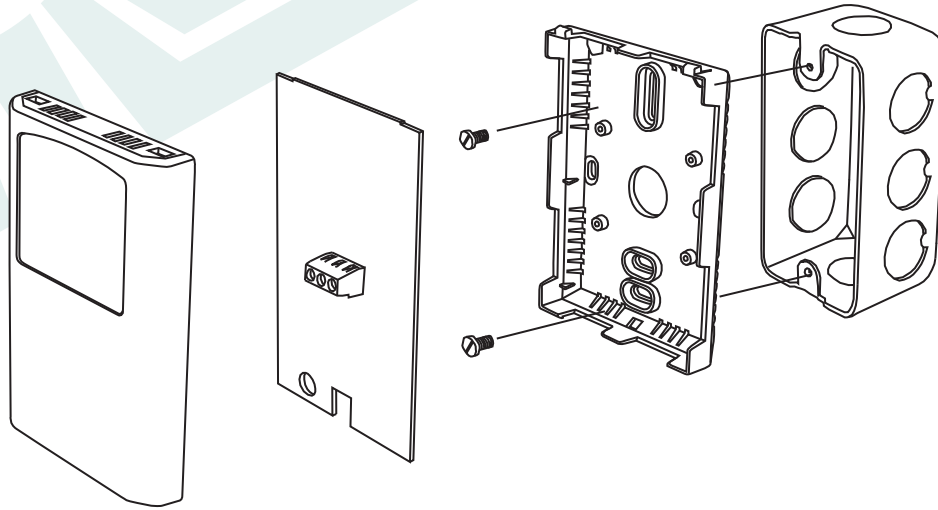
TSPC*GS*** Description:

TYPICAL INSTALLATION:

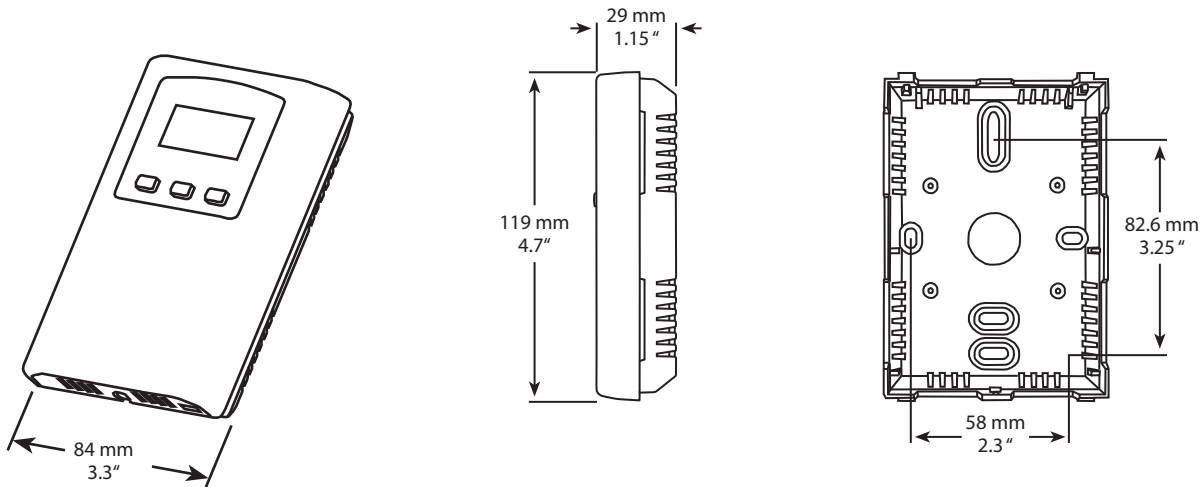
For complete installation and wiring details, please refer to the product installation instructions.

The TSPC series can be mounted directly to a single gang electrical box or directly to a wall. Insulating foam is adhered to the back of the enclosure to provide a thermal barrier from internal wall temperatures.

A terminal block connection is provided for connection to the Building Automation System. There are several wiring configurations depending on the options selected.



DIMENSIONS:



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RoHS
COMPLIANT



Greystone Energy Systems Inc. is one of North America's largest manufacturers of HVAC sensors and transmitters for Building Automation Management Systems. We have conscientiously established a worldwidereputation as an industry leader by maintaining leading-edge design technology, prompt technical support, and a commitment to on-time deliveries. We take pride in our Quality Management System, assuring our customers of consistent product reliability.