# GREYSTONE
## E N E R G Y   S Y S T E M S   I N C

The TESPRC 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. Custom logos or enclosure engraving are also available.

## SPECIFICATION:

Power Supply ................................24 Vac/dc ±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: ±0.2˚C @ 25˚C
(±0.36˚F @ 77˚F)
Platinum RTD's: ±0.3˚C @ 0˚C
(±0.54˚F @ 32˚F)
Nickel RTD's: ±0.4˚C @ 0˚C
(±0.72˚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 ......................0.1˚ 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 (BS)**
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 (AE)**
4 pin ................................................4 Pin header.  Requires HHTA -
Hand Held Adapter

**Optional Fan Speed Switch (FS)**
Range ...............................................5 Position-Off, Auto, Low, Medium, High
Signal ...............................................Resistive  - 0, 2, 4, 6, 8 KΩ

## PART NUMBER SELECTED

## PRODUCT SELECTION INFORMATION:

| MODEL | Product Description |
|---|---|
| **TESPRC** | Space  Temperature Sensor w/ Setpoint Adjustment & LCD |

| CODE | Sensor |
|---|---|
| **2** | 100 Ω  Plat. IEC 751, 385 Alpha, thin film |
| **5** | 1801 Ω, NTC Thermistor, ±0.2 C |
| **6** | 3000 Ω, NTC Thermistor, ±0.2 C |
| **7** | 10,000 Ω, type 3, NTC Thermistor, ±0.2 C |
| **8** | 2.252K Ω, NTC Thermistor, ±0.2 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, ±0.2 C c/w 11K shunt resistor |
| **20** | 20,000 Ω, NTC Thermistor, ±0.2 C |
| **24** | 10,000 Ω, type 2, NTC Thermistor, ±0.2 C |

| CODE | Resistance Output (Range 16-26˚C in 0.5˚C Increments or 60-80˚F in 1˚F Increments) |
|---|---|
| **A** | 0 - 2000 ohms |
| **B** | 0 - 10,000 ohms |
| **C** | 475 - 10475 ohms |
| **D** | 500 - 1500 ohms |
| **E** | 2000 - 3000 ohms |
| **F** | 4104 - 3152 ohms |
| **G** | 8000.7 - 3107.3 ohms |
| **H** | 20,000 - 30,000 ohms |

| CODE | Options |
|---|---|
| **AE** | 4 Pin molex extrenal jack for communications |
| **BS** | Exposed override switch with LCD indication option (OCC) |
| **FS** | 5 position fan switch Off/Auto/Low/Med/High |

| TESPRC | 7 | A | BS | - |
|---|---|---|---|---|

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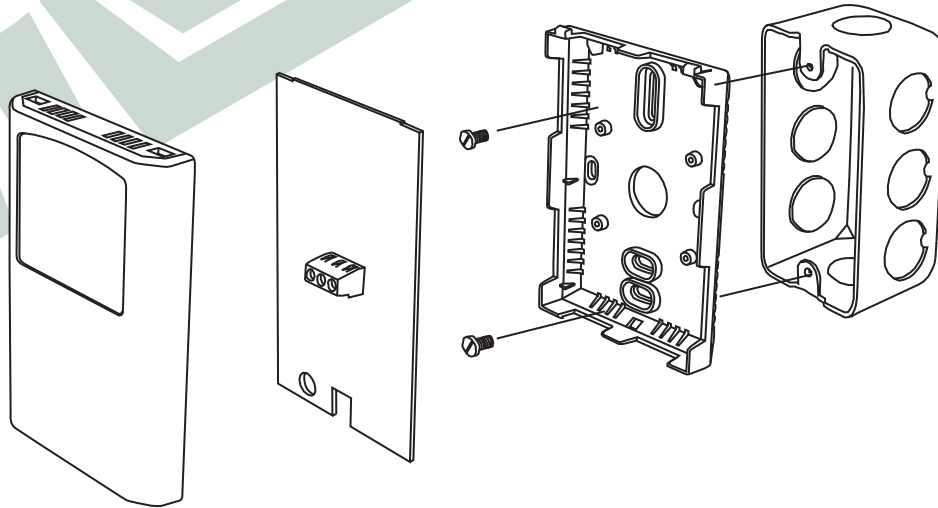
Due to the many possible configurations, special part numbers may be required.   Please contact Greytsone for more information

## GREYSTONE  ENERGY SYSTEMS, INC.

**RoHS** COMPLIANT
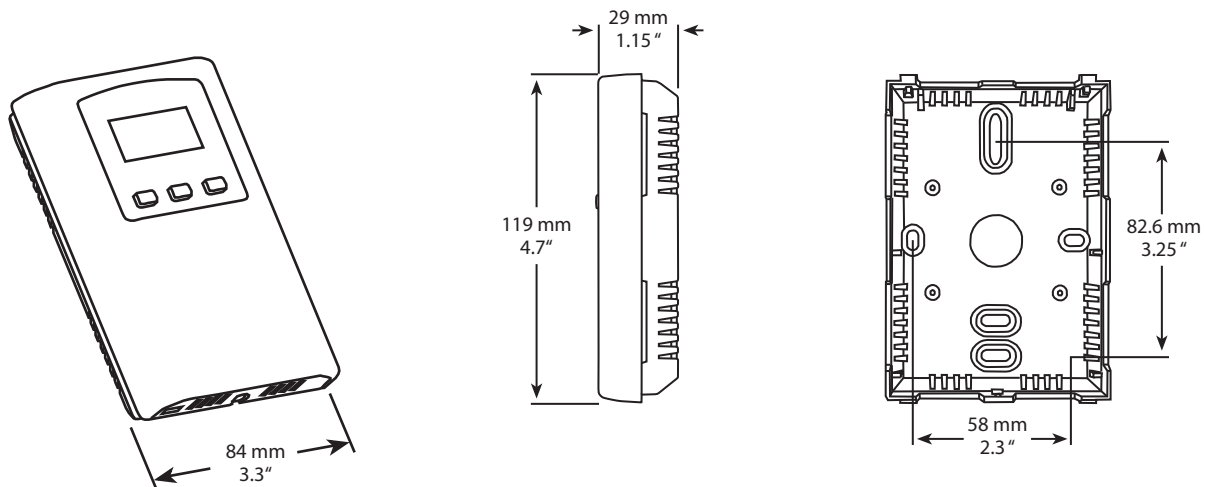
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## TYPICAL INSTALLATION:

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

The TESPRC 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:

29 mm
1.15 "

119 mm
4.7"

84 mm
3.3"

82.6 mm
3.25 "

58 mm
2.3 "

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*Greystone Energy Systems Inc. is one of North America's largest manufacturers of HVAC sensors and transducers for Building Automation Management Systems. We have conscientiously established a worldwide reputation 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.*