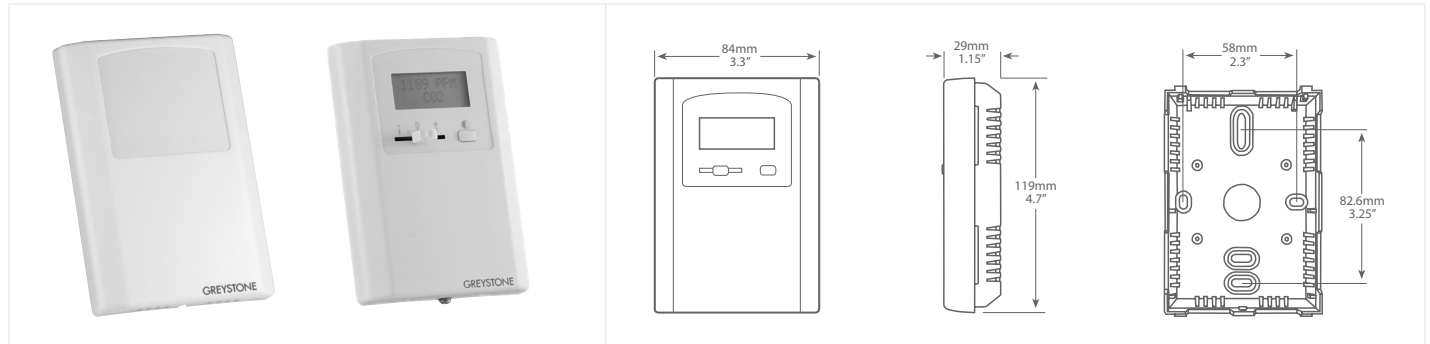# GREYSTONE
ENERGY SYSTEMS INC

ROOM TEMPERATURE SENSOR
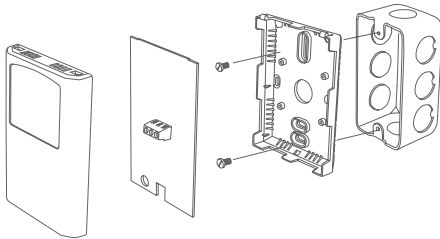

TSRC SERIES

PRODUCT DESCRIPTION

The TSRC series is an attractive, low profile enclosure that incorporates a precision temperature sensor used to monitor room temperatures. Additional options are available that include setpoint adjustment, manual override, fan speed and LCD.

TYPICAL INSTALLATION

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

The TSRC 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.
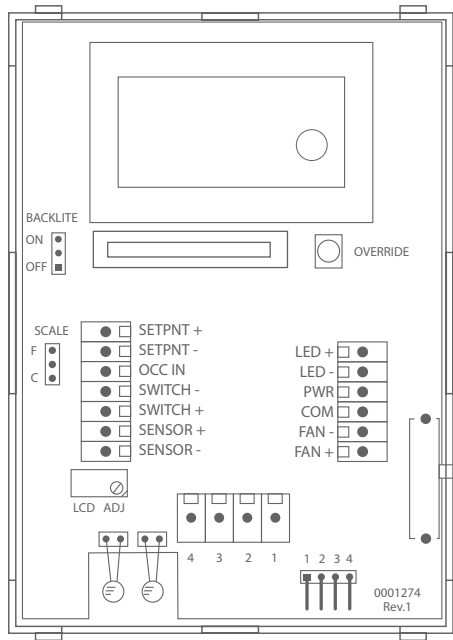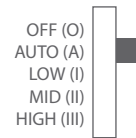

SPECIFICATIONS

SENSING ELEMENT	Thermistor or RTD (see ordering chart)
SENSOR ACCURACY	**Thermistors:** ±0.2°C (±0.36°F) @ 25°C (77°F) **Platinum RTD's:** ±0.3°C (±0.54°F) @ 0°C (32°F) **Nickel RTD's:** ±0.4°C (±0.72°F) @ 0°C (32°F)
AMBIENT OPERATING RANGE	0 to 50°C (32 to 122°F), 5 to 95 %RH non-condensing
ENCLOSURE	White ABS, IP30 (NEMA 1) 84mm W x 119mm H x 29mm D (3.3" x 4.7" x 1.15")
WIRING CONNECTIONS	Sensor Only: Pigtail, 2 or 3 wire With Options: Terminal block (14 to 22 AWG)
OPTIONAL OVERRIDE SWITCH	Front panel, momentary pushbutton, N.O., SPST, 50 mA @ 12 Vdc
OPTIONAL SETPOINT SLIDE POT	**Range:** Front panel pot as resistive output, 0-10,000Ω standard **Custom Spans Available:** 1K, 2K, 5K, 10K, 20 KΩ
OPTIONAL FAN SPEED SWITCH	**Range:** Off, Auto, Low, Medium, High **Signal:** Resistive - 0, 2, 4, 6 & 8 KΩ (custom ranges available) **Type:** Side mounted, 5 position slide switch **Designators:** Off, Auto, Low, Medium, High
OPTIONAL LED INPUT	**Signal Type:** Active high, low or 2 wire, 5V current limit standard **Colors:** Red (R), Green (G), or Yellow (Y) **Power Supply:** 5 Vdc standard, 10 Vdc or 24 Vdc optional
OPTIONAL COMMUNICATION JACKS	4 pin header to 4 pin terminal block
OPTIONAL LCD DISPLAY	**Power Supply:** 12-24 Vdc / 24 Vac ±10% **Protection Circuitry:** Reverse voltage protected **Consumption @ 24 Vdc:** 13 mA max (no backlight) 23 mA max (with backlight) **Range:** 0.0 - 35.0°C or 32.0 - 95.0°F selectable via jumper **Resolution:** 0.1°C/°F **Size:** 38.1mm W x 16.5mm H (1.5" x 0.65") **Digit Height:** 11.43mm (0.45") **Symbols:** °C, °F, OCC **Backlight:** Enable or disable via jumper
OPTIONAL OCCUPIED INPUT	**Signal Input:** Digital input, 0-5 Vdc standard, active low **Action:** Causes "OCC" segment to light on LCD
COUNTRY OF ORIGIN	Canada

WIRING INFORMATION

TERMINAL	FUNCTION
SETPNT	Resistance Output
OCC IN	Digital Input
SWITCH	Digital Output
SENSOR	Resistance Output
LED	Power Input
PWR	Power Input
COM	Common
FAN	Resistance Output

OFF (O)
AUTO (A)
LOW (I)
MID (II)
HIGH (III)

0001274
Rev.1

ORDERING

PART NUMBER

TSRC

PRODUCT	TSRC	Room Temperature Sensor
SENSOR	**2**	100 Ω Platinum, 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
	59	10,000 Ω @ 25°C, ±1%, B = 3435 ±1% (25/85)
OPTIONS (MULTIPLE SELECTIONS CAN BE MADE)	**P**	0-10,000 Ω linear slide pot for set point control
	S	Exposed push button momentary switch - N.O.
	C	3 digit LCD temperature indicator °C / °F selectable
	F	Fan speed switch (Auto, Off, Low, Mid, High)
	Y	Yellow LED (n/a if C option is selected)
	R	Red LED (n/a if C option selected)
	G	Green LED (n/a if C option selected)
	E	External jack for remote system access (4 pin header)

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

RoHS COMPLIANT