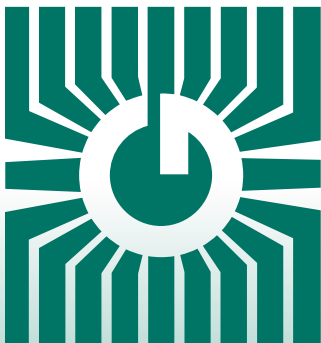


GREYSTONE ENERGY SYSTEMS INC



HIGH ACCURACY ROOM TEMPERATURE SENSOR HATSPC Series



Precision temperature control/sensing

FEATURES:

- High Accuracy Thermistor or RTD sensing elements
- LCD Display
- Setpoint Adjustment
- Optional Override, Fan Speed Switch and Communication Jack
- Custom laser etching available

*Peace of mind
through reliable
temperature monitoring*

GREYSTONE HAS AN ISO 9001 REGISTERED QUALITY SYSTEM

DESCRIPTION:

The HATSPC 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 high accuracy 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.

SPECIFICATIONS:

Power Supply Consumption 24 Vac/dc $\pm 10\%$ (non-isolated half-wave rectified)
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 Sensor

Sensor Platinum RTD 1000 Ω , 385 Alpha @ 0°C
NTC Thermistor, 10,000 Ω @ 25°C, Type 2 or 3
NTC Thermistor, 20,000 Ω @ 25°C
Accuracy **RTD Class A:** $\pm 0.15^\circ\text{C}$ @ 0°C
RTD 1/3 DIN: $\pm 0.1^\circ\text{C}$ @ 0°C
RTD 1/10 DIN: $\pm 0.03^\circ\text{C}$ @ 0°C
NTC Thermistor Type 39: $\pm 0.05^\circ\text{C}$, 0-70°C
NTC Thermistor Type 40/46: $\pm 0.1^\circ\text{C}$, 0-70°C
NTC Thermistor Type 55: $\pm 0.03^\circ\text{C}$, 0-70°C

Setpoint Adjustment

Type Up/Down pushbuttons for ± 10 resistive steps
Range 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 - 35° C/32 - 95° F (Jumper selectable)
Display Resolution 0.5° C/F
Display Size 38.1 mm W x 16.5 mm H
(1.5" x 0.65")
Digit Height 11.43 mm (0.45")
Symbols °C, °F, OCC
Backlight Programmable: On, Off or Auto

Manual Override

Type Front panel, momentary pushbutton
Ratings 50 mA @12 Vdc, N.O., SPST

Occupied Input

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

Communication Jacks

Molex 4 Pin header to 4 pin terminal block. Requires HHTA - Hand Held Adapter

Fan Speed Switch

Type Side mounted, 5 position slide switch
Designators Off, Auto, Low, Medium, High
Signal 2 wire, resistance output - 0, 2, 4, 6, 8 K Ω
Custom ranges available, contact Greystone

HATSPC - ROOM TEMPERATURE SENSOR: PRODUCT ORDERING INFORMATION:

MODEL	Product Description
HATSPC	High Accuracy Room Temperature Sensor w/ Setpoint Adjustment & LCD

CODE	High Accuracy Sensors
18	1000 Ω Platinum, IEC 751, 385 Alpha, thin film, Class A
48	1000 Ω Platinum, IEC 751, 385 Alpha, thin film, 1/3 DIN
22	1000 Ω Platinum, IEC 751, 385 Alpha, thin film, 1/10 DIN
39	10,000 Ω, Type 2, NTC Thermistor, ±0.05 C
55	10,000 Ω, Type 2, NTC Thermistor, ±0.03 C
40	10,000 Ω, Type 3, NTC Thermistor, ±0.1 C
46	20,000 Ω, NTC Thermistor, ±0.1 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

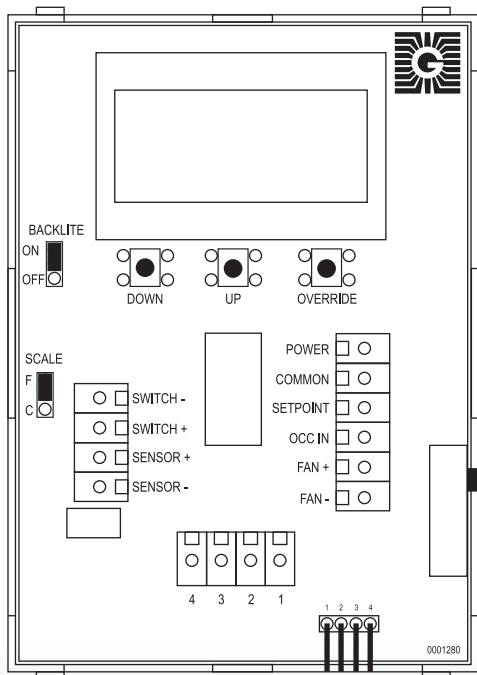
CODE	Options
S	Exposed override switch with LCD indication option (OCC)
E	4 Pin molex external jack for communications
F	5 position fan switch Off/Auto/Low/Med/High

HATSPC	39	P	S	F
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Greystone Energy Systems, Inc. reserves the right to make design modifications without prior notice.

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

PCB/WIRING INFORMATION



Terminal

Function

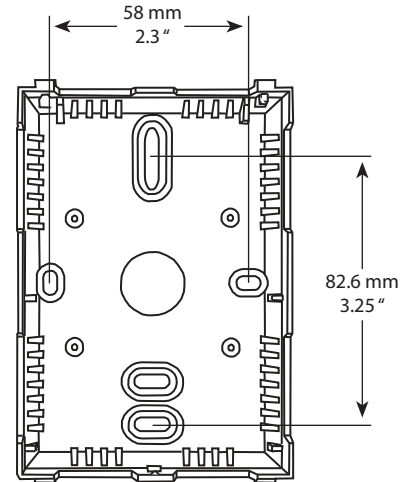
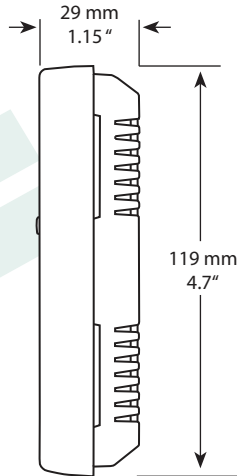
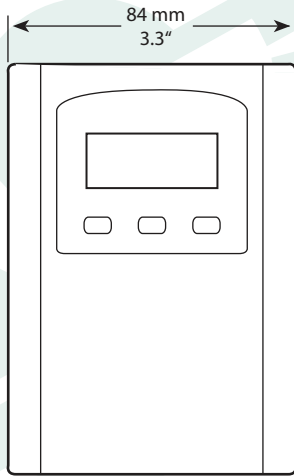
SWITCH -	GND or COMMON
SWITCH +	Digital output
SENSOR +	Resistance output
SENSOR -	GND or COMMON
POWER	Power input
COMMON	GND or COMMON
SETPOINT	Resistance Output
OCC IN	Vdc input (5 Vdc)
FAN +	Resistance output
FAN -	GND or COMMON
1	To External Jack PIN 1
2	To External Jack PIN 2
3	To External Jack PIN 3
4	To External Jack PIN 4

* Some models do not have all these features

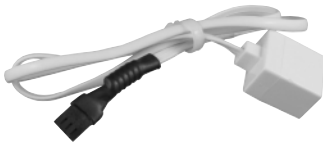
**To save on number of connection wires, all GND or COMMON may be connected together.

***Illustration shows standard wiring configuration. Custom configurations are available. Please contact Greystone.

DIMENSIONS:



ACCESSORIES:



HHTA-XXX

The HHTA - Handheld Adapter converts the Greystone standard 4 pin connector to the connector of choice such as a RJ12, phone jack. Several styles and configurations are available. Please contact Greystone.

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RoHS
COMPLIANT



Greystone Energy Systems Inc. is one of North America's largest ISO registered manufacturers of HVAC/R sensors and transmitters 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 which is ISO 9001 certified, assuring our customers of consistent product reliability.

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