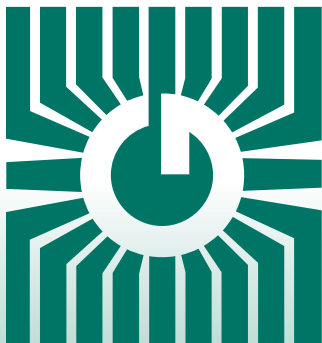


GREYSTONE ENERGY SYSTEMS INC



HIGH ACCURACY ROOM TEMPERATURE SENSORS HATSR Series



Precision temperature control/sensing

FEATURES:

- High Accuracy Thermistor or RTD sensing elements
- Optional LCD display
- Various options: Setpoint Adjustment, Override, etc.
- Custom laser etching available

*Peace of mind
through reliable
temperature monitoring*

GREYSTONE HAS AN ISO 9001 REGISTERED QUALITY SYSTEM

HATSR SERIES - HIGH ACCURACY ROOM TEMPERATURE SENSOR:

DESCRIPTION:

The HATSR Series of room temperature sensors incorporate a precision platinum RTD or a NTC thermistor in an wall mount enclosure available in either ABS or S/S. They can be mounted to an electrical box or directly on any wall.

The HATSR has various options available such as setpoint adjustment, manual override, LCD display, etc. that allows for use in a multitude of applications.

SPECIFICATIONS:

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
Sensor 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
Operating Temperature	0 - 50°C (32 - 122°F), 0 - 95%RH non-condensing
Enclosure	B - Stainless Steel - IP50 (NEMA 1) 69.85 mm W x 114.3 mm H x 4.75 mm D (2.75" x 4.5" x 0.1875") C - White ABS - IP30 (NEMA 1) 84mm W x 117mm H x 29mm D (3.3" x 4.6" x 1.15")
Wiring Connections.....	Sensor only - Pigtail, 2 or 3 wire With Options - Screw terminal block (14 to 22 AWG)

C Enclosure Options:

Setpoint Adjustment

Type.....	Front panel slidepot, 2 wire resistance output
Range.....	0K to 10K Ω standard
Custom spans available	1K, 2K, 5K, 10K or 20K Ω

Manual Override

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

Temperature Display

Power Supply	12-24 Vdc/24 Vac $\pm 10\%$
Consumption @ 24 Vdc	13 mA w/o backlight, 23 mA w/ backlight
Protection.....	Reverse voltage protected
Display Range	0 - 35° C/32 - 95° F (Jumper selectable)
Display Resolution	0.1° 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.....	Enable or disable via jumper

Occupied Input (Requires LCD)

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

Status LED Input (N/A when LCD selected)

Signal Type.....	Active high, low or 2-wire, 5 V current limited standard
LED Colors.....	Yellow (Y), Red (R) or Green (G),
Power Supply.....	5 Vdc standard, 10 or 24 Vdc optional

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

HATSRC - HIGH ACCURACY ROOM TEMPERATURE SENSOR: PRODUCT ORDERING INFORMATION:

MODEL	Product Description
HATSR	High Accuracy Room Temperature Sensor

CODE	Sensor
B	S/S Wall Plate
C	White ABS Enclosure

CODE	Sensor
18	1000 Ω Platinum, 2 Wire, IEC 751, 385 Alpha, thin film, Class A
48	1000 Ω Platinum, 2 Wire, IEC 751, 385 Alpha, thin film, 1/3 DIN
22	1000 Ω Platinum, 2 Wire, 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

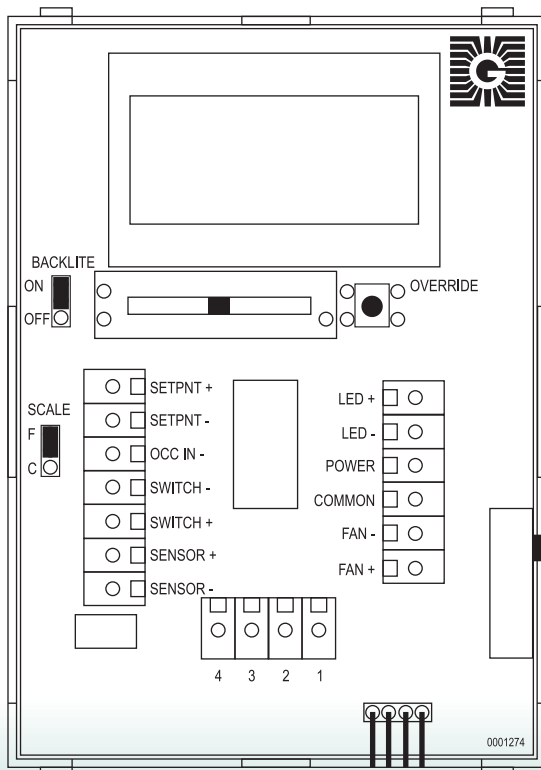
CODE	C Enclosure Options (Multiple selections can be made)
P	0-10K linear slide pot for set point control (Other ranges available, contact Greystone)
S	Front panel push button momentary switch (NO)
C	LCD Display temperature indicator °C/°F (Includes Occupied Input)
Y	Yellow LED (n/a when C option is selected)
R	Red LED (n/a when C option is selected)
G	Green LED (n/a when C option is selected)
E	External jack for remote system access (4-pin header)
F	Fan Speed Switch, 5 position, (Off, Auto, Low, Mid, High)

HATSR C 7 P S

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 (C Enclosure)



Terminal

Function

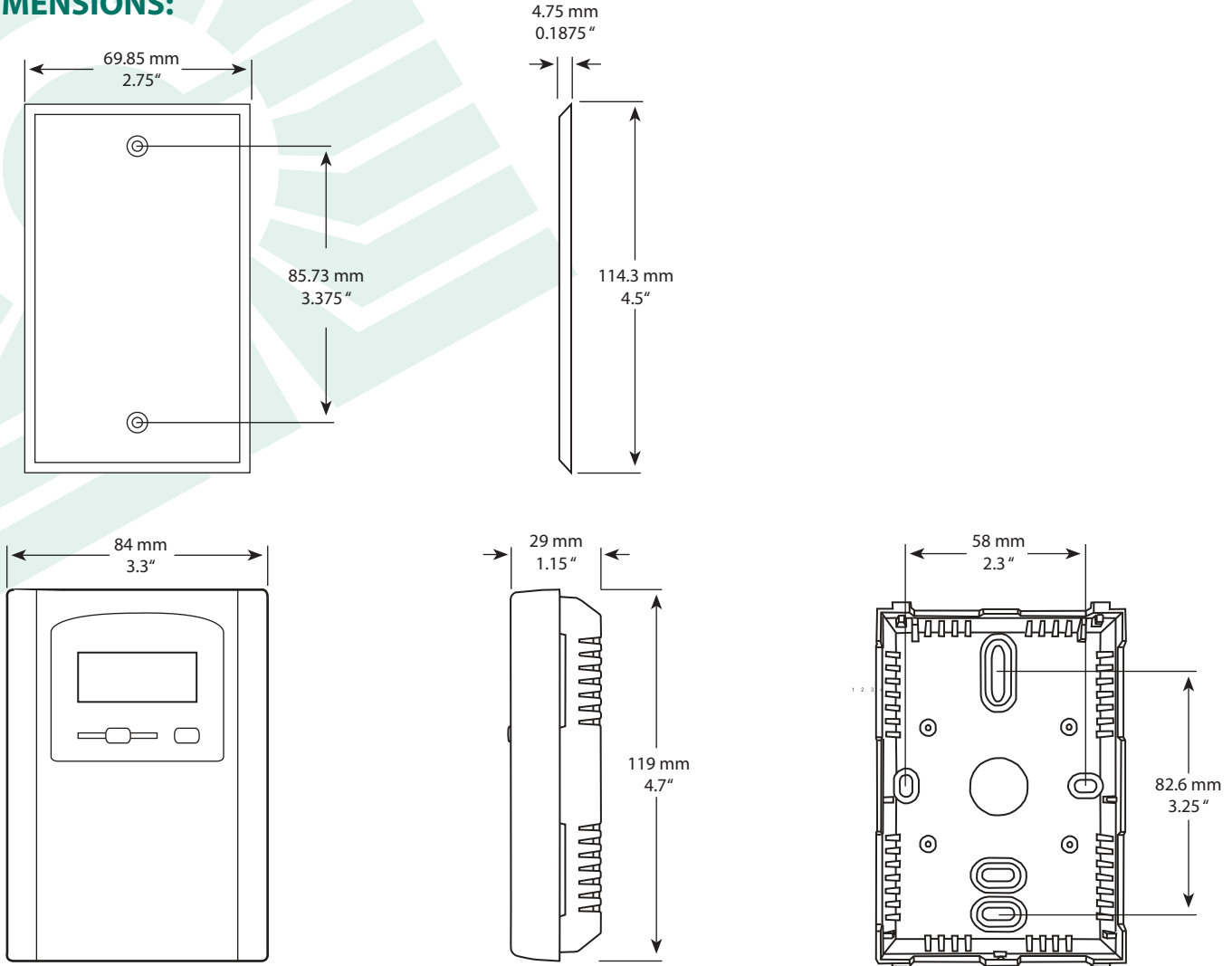
SETPNT +	Resistance Output
SETPNT -	GND or COMMON
OCC IN -	Vdc input (5 Vdc)
SWITCH -	GND or COMMON
SWITCH +	Digital output
SENSOR +	Resistance output
SENSOR -	GND or COMMON
LED +	Vdc input (5 Vdc standard)
LED -	GND or COMMON
POWER	Power input (Only required when LCD is selected)
COMMON	GND or COMMON (Only required when LCD is selected)
FAN -	GND or COMMON
FAN +	Resistance output
1	To External Jack PIN 1 (Farthest right)
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

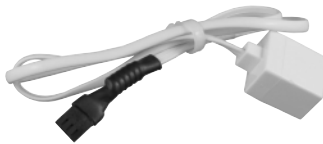
**To save on number of connection wires, all GND or COMMON may be connected together.

***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.



GREYSTONE

ENERGY SYSTEMS INC

Greystone Energy Systems, Inc.
150 English Drive, Moncton,
New Brunswick, Canada E1E 4G7

(506) 853-3057 Fax: (506) 853-6014
North America: 1-800-561-5611
e-mail: mail@greystoneenergy.com
www.greystoneenergy.com

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.

GREYSTONE HAS AN **ISO 9001** REGISTERED QUALITY SYSTEM