



# GREYSTONE ENERGY SYSTEMS INC

## HIGH ACCURACY ROOM HUMIDITY TRANSMITTER HAHRC Series

The HAHRC Series room humidity transmitter uses a highly accurate and field-proven RH sensor in an attractive, low profile enclosure to monitor room relative humidity levels. Additional options include an occupancy override button, a communication jack, a fan speed switch, a slide-pot setpoint control, a high accuracy temperature sensor and a status LED or LCD display. The RH output can be field selected as a linear 4-20 mA, 0-5 or 0-10 Vdc signal.

### SPECIFICATION:

Sensor.....	Thermoset polymer based capacitive
Accuracy.....	±1% (20 to 80% RH) ±2% (5 to 95% RH)
Range.....	0 to 100% RH non-condensing
Hysteresis.....	± 3% RH
Response Time.....	15 seconds typical
Stability.....	±1.2% RH typical @ 50% RH in 5 years
Power Supply.....	24 Vac/dc ±10% (non-isolated half-wave rectified)
Consumption @ 24 Vdc.....	20 mA
Input Voltage Effect.....	Negligible over specified operating range
Output Signal.....	4-20 mA current loop, 0-5 Vdc or 0-10 Vdc - Jumper selectable
Output Drive @24 Vdc.....	550 ohm max. for current, 10K ohms min. for voltage
Output Resolution.....	10 bit PWM
Internal Adjustments.....	ZERO and SPAN pots
Protection Circuitry.....	Reverse voltage protected and output limited
Operating Conditions.....	0° to 50°C (32°-122°F), 0-95% RH non-condensing
Enclosure Size.....	84mmW x 119mmH x 29mmD (3.3" x 4.7" x 1.15")
Wiring Connections.....	Screw terminal block (14 to 22 AWG)

### OPTIONS:

#### LCD DISPLAY

Range.....	00.0 to 99.9 %RH, 3 digit
Display Size.....	38.1 x 16.5 mm (1.5" x 0.65")
Digit Height.....	11.43 mm (0.45")
Symbol.....	% RH

#### TEMPERATURE

Sensor Type.....	Platinum RTD 1000 Ω, 385 Alpha @ 0°C NTC Thermistor, 10,000 Ω Type 2/3 or 20,000 Ω @ 25°C
Accuracy.....	<b>RTD Class A:</b> ±0.15°C @ 0°C <b>RTD 1/3 DIN:</b> ±0.1°C @ 0°C <b>RTD 1/10 DIN:</b> ±0.03°C @ 0°C <b>Thermistor (39):</b> ±0.05°C, 0-70°C <b>Thermistor (40/46):</b> ±0.1°C, 0-70°C <b>Thermistor (55):</b> ±0.03°C, 0-70°C

#### SETPOINT SLIDE POT

Range.....	Front panel pot, two wire resistive output, 0-10 KΩ
Custom spans available.....	1K, 2K, 5K, 10K or 20K Ω

#### VERRIDE

Type.....	Front panel, momentary push-button, 2 wire dry contact
Switch ratings.....	N.O., SPST, 50 mA @12 Vdc

#### LED INPUT

Signal Type.....	Digital input, 5 Vdc, 2 wire
Color.....	Yellow, Red or Green

#### NETWORK COMMUNICATIONS

Type.....	4-pin header connector to 4-pin terminal block
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#### FAN SPEED SWITCH

Type.....	Side panel mount, 5 position switch
Range.....	Off, Auto, Low, Medium, High
Signal.....	Resistance: 0, 2, 4, 6, 8 KΩ (Custom ranges available)



### PART NUMBER SELECTED

### PRODUCT SELECTION INFORMATION:

MODEL	Product Description
HAHRC	High Accuracy Room Humidity Transmitter

CODE	RH Accuracy
1	1 %
2	2 %

CODE	Display
N	No LCD
L	LCD

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

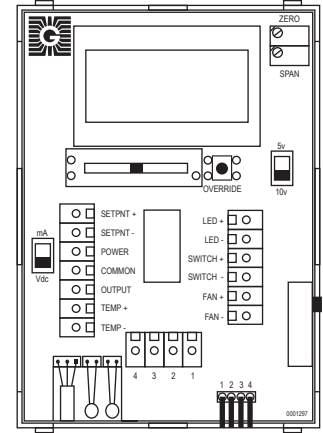
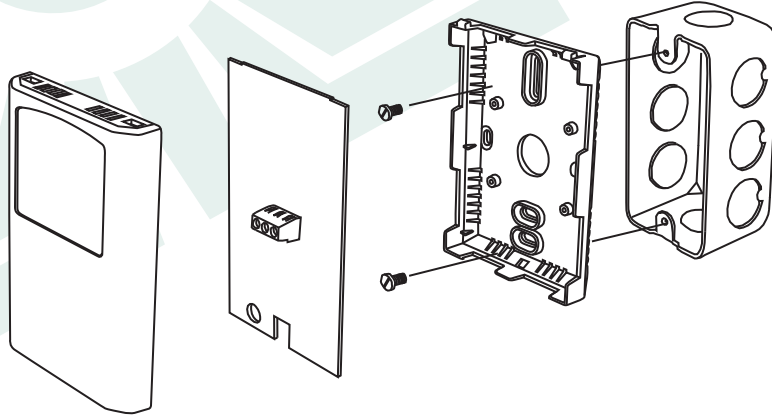
CODE	Options (Multiple selections may be made)
P	Setpoint Adjustment
S	Override switch
Y	Yellow LED (n/a with LCD)
R	Red LED (n/a with LCD)
G	Green LED (n/a with LCD)
E	Comm. Jack (4 pin header)
F	Fan speed switch

## TYPICAL INSTALLATION:

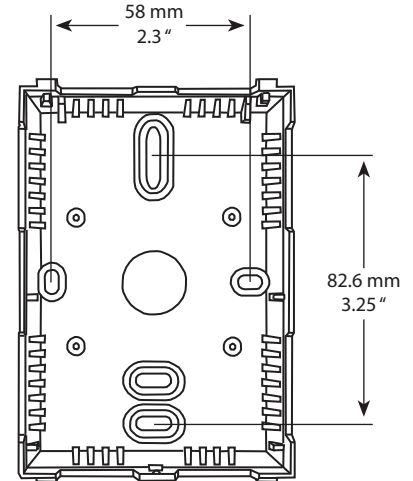
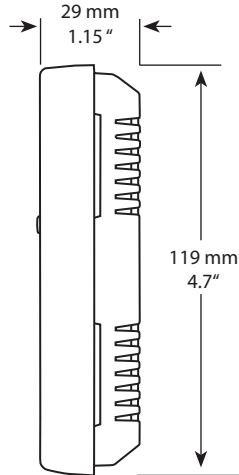
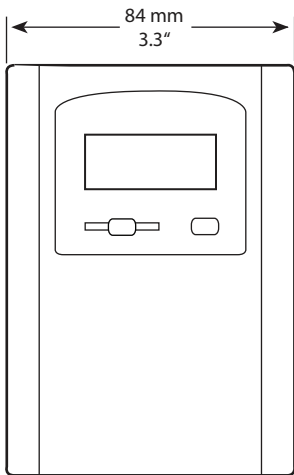
For complete installation and wiring details, please refer to the product installation instructions.

The HAHRC series can be mounted directly to a single gang electrical box or directly to a wall. Multiple mounting holes are provided for connection to a variety of electrical boxes.

A terminal block connection is provided. connection to the Building Automation System.



## DIMENSIONS:



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



# GREYSTONE

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RoHS  
COMPLIANT



Greystone Energy Systems Inc. is one of North America's largest ISO registered manufacturers of HVAC 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