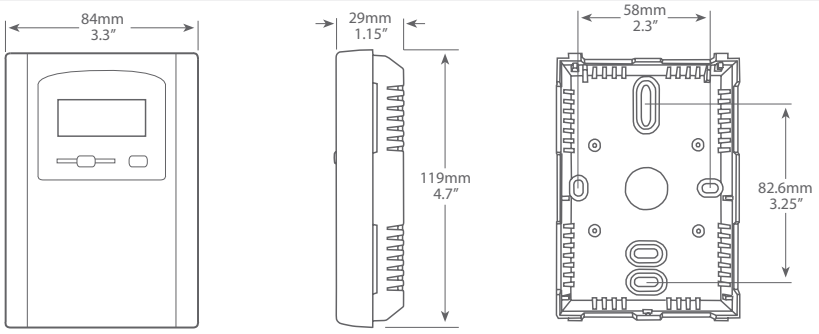
GREYSTONE
ENERGY SYSTEMS INC

HIGH ACCURACY ROOM HUMIDITY TRANSMITTER



HAHRC SERIES

PRODUCT DESCRIPTION

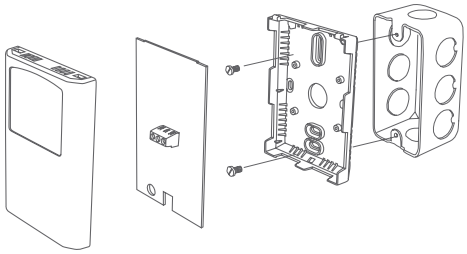
The high accuracy room humidity transmitter uses a highly accurate and field-proven RH sensor in an attractive, low profile enclosure to monitor room relative humidity levels. Additional options include an occupancy override button, a communication jack, a fan speed switch, a slide-pot setpoint control, 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.

TYPICAL INSTALLATION

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

The high accuracy room humidity transmitter 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 for connection to the Building Automation System.



SPECIFICATIONS

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	**Current:** 550 Ω maximum **Voltage:** 10 KΩ minimum
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 to 122°F), 0 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	Screw terminal block (14 to 22 AWG)
OPTIONAL TEMPERATURE SENSOR	Various Thermistors and RTDs available as 2 wire resistive output
OPTIONAL 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
OPTIONAL MANUAL OVERRIDE	**Type:** Front panel, momentary pushbutton **Ratings:** 50 mA @ 12 Vdc, N.O., SPST
OPTIONAL LCD DISPLAY	**Range:** 00.0 to 99.9 %RH, 3 digit **Size:** 38.1mm W x 16.5mm H (1.5" x 0.65") **Digit Height:** 11.43mm (0.45") **Symbols:** %RH
OPTIONAL STATUS LED INPUT (N/A WHEN LCD SELECTED)	**Signal Type:** 5V current limited, 2 wire standard **LED Colors:** Yellow (Y), Red (R), or Green (G) **Power Supply:** 5 Vdc standard, 10 or 24 Vdc optional
OPTIONAL COMMUNICATION JACKS	**Molex:** 4 pin header to 4 pin terminal block, requires HHTA - Hand Held Adapter
OPTIONAL 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 KΩ, custom ranges available, contact Greystone
COUNTRY OF ORIGIN	Canada

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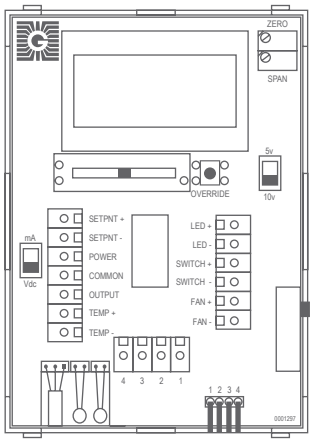
WIRING INFORMATION



TERMINAL	FUNCTION
PWR	+24 Vdc/ac Input
COM	Common
OUT	Analog Output
TEMP +	Resistance Output
TEMP -	Resistance Output
SETPNT +	Resistance Output
SETPNT -	Resistance Output
LED +	+5 Vdc Input
LED -	Common
SWITCH +	Digital Output
SWITCH -	Digital Output
FAN +	Resistance Output
FAN -	Resistance Output

ORDERING

PRODUCT	**HAHRC**	High Accuracy Room Humidity Transmitter
RH ACCURACY	**1** **2**	1% 2%
OUTPUTS	**N** **L**	No LCD LCD
SENSOR	**18** **48** **22** **39** **55** **40** **46**	1000 Ω Platinum, IEC 751, 385 Alpha, thin film, Class A 1000 Ω Platinum, IEC 751, 385 Alpha, thin film, 1/3 DIN 1000 Ω Platinum, IEC 751, 385 Alpha, thin film, 1/10 DIN 10,000 Ω Type 2, NTC Thermistor, ±0.05°C 10,000 Ω Type 2, NTC Thermistor, ±0.03°C 10,000 Ω Type 3, NTC Thermistor, ±0.1°C 20,000 Ω NTC Thermistor, ±0.1°C
OPTIONS (MULTIPLE SELECTIONS CAN BE MADE)	**P** **S** **Y** **R** **G** **E** **F**	0-10K linear slide pot for set point control (other ranges available, contact Greystone) Front panel push button momentary switch (N.O.) Yellow LED (n/a when LCD is selected) Red LED (n/a when LCD is selected) Green LED (n/a when LCD is selected) External jack for remote system access (4 pin header) Fan speed switch, 5 position, (Off, Auto, Low, Mid, High)

PART NUMBER

HAHRC

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

RoHS COMPLIANT

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