

GREYSTONE

ENERGY SYSTEMS INC

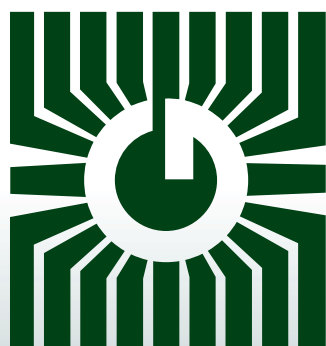
ROOM HUMIDITY TRANSMITTER HRC Series



Precision humidity control/sensing

FEATURES:

- Highly stable RH sensor element
- Humidity range: 0-100%
- Accuracy available 2%, 3%, & 5%
- Choice of precision temperature sensors
- LCD display available
- Optional override, setpoint & fan speed control
- Field selectable outputs
- Custom logo available



*Peace of mind
through reliable
humidity/temperature
monitoring*

DESCRIPTION:

The HRC 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 resistive temperature sensor and a status LED or a LCD display. The RH output can be field selected as a linear 4-20 mA, 0-5 or 0-10 Vdc signal.

SPECIFICATIONS:

Sensor.....	Thermoset polymer based capacitive
Accuracy.....	±2, 3 or 5% RH from 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	White ABS - IP30 (NEMA 1) 84mmW x 119mmH x 29mmD (3.3" x 4.7" x 1.15") Screw terminal block (14 to 22 AWG)
Wiring Connections	

OPTIONS:

Temperature

Sensor..... Various Thermistors and RTD's available as 2 wire resistive output

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

LCD DISPLAY

Display Range 00.0 to 99.9 %RH, 3 digit
 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 % RH

Status LED Input (N/A when LCD selected)

Signal Type 5 V current limited, 2-wire 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 KΩ
 Custom ranges available, contact Greystone

PRODUCT ORDERING INFORMATION:

MODEL	Product Description
HRC	Room Humidity Transmitter

CODE	RH Accuracy
2	2 %
3	3 %
5	5 %

CODE	Outputs
N	No LCD
L	LCD

CODE	Sensor
T2	100 Ω Platinum, IEC 751, 385 Alpha, thin film
T5	1801 Ω, NTC Thermistor, ±0.2 C
T6	3000 Ω, NTC Thermistor, ±0.2 C
T7	10,000 Ω, type 3, NTC Thermistor, ±0.2 C
T8	2.252K Ω, NTC Thermistor, ±0.2 C
T12	1000 Ω Platinum, IEC 751, 385 Alpha, thin film
T13	1000 Ω Nickel, Class B, DIN 43760
T14	10,000 Ω, type 3, NTC Thermistor, ±0.2 C c/w 11K shunt resistor
T20	20,000 Ω, NTC Thermistor, ±0.2 C
T24	10,000 Ω, type 2, NTC Thermistor, ±0.2 C

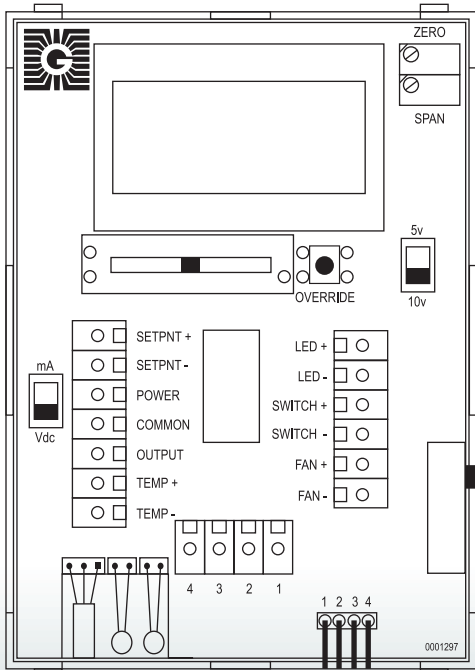
CODE	Options (Multiple selections can be made)
P	0-10K linear slide pot for set point control (Other ranges available, contact Greystone)
S	Front panel push button momentary switch (NO)
Y	Yellow LED (n/a when LCD is selected)
R	Red LED (n/a when LCD is selected)
G	Green LED (n/a when LCD is selected)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

HRC	3	L	T7	P	S	← Typical Model Number
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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

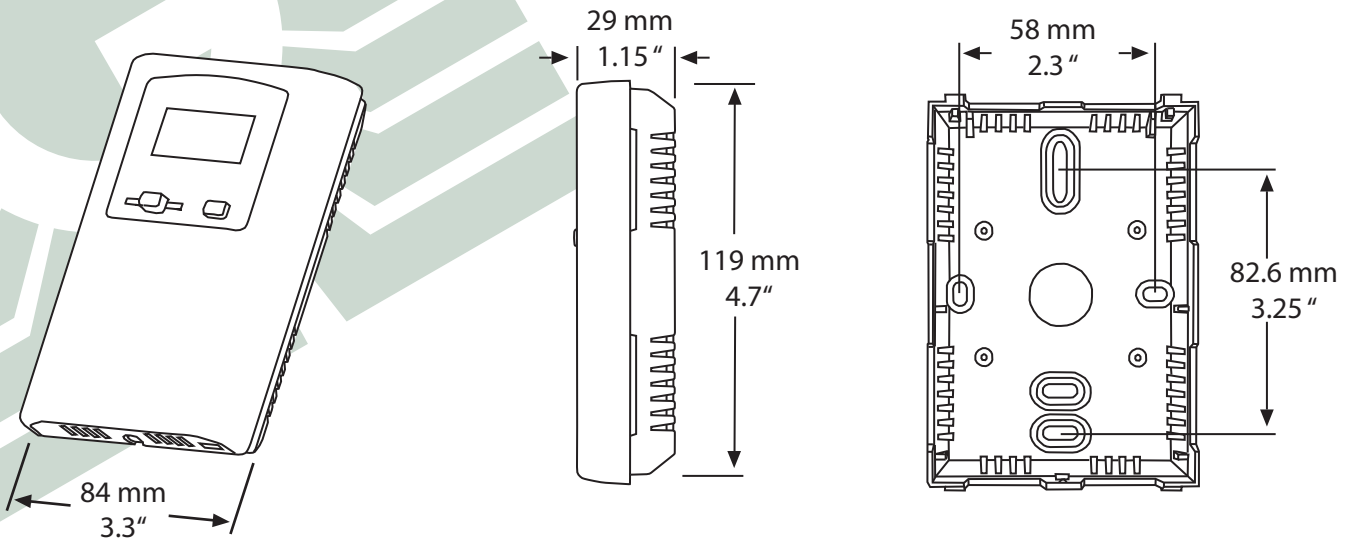
Terminal	Function
POWER	From +24 Vac/dc of controller or power supply
COMMON	To GND or COMMON of controller (for 24 Vac power or voltage output signal only)
OUTPUT	RH output to analog input of controller 4-20 mA or 0-5/0-10 Vdc
SETPNT + SETPNT -	Slide-pot output to analog input of controller (resistive output)
TEMP + TEMP -	Temperature sensor output to analog input of controller (resistive output)
LED + LED -	Positive input to LED (anode) from digital output Negative input to LED (cathode), 5Vdc standard
SWITCH + SWITCH -	Override switch + to digital input of controller Override switch - to COMMON of controller
FAN + FAN -	Fan speed switch + to analog input of controller Fan speed switch - to COMMON of controller
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

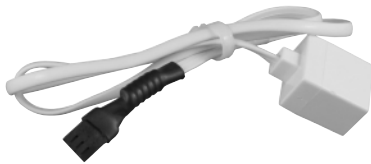
**To save on number of connection wires, all GND or COMMON may be connected together.

***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.



A35R

A multi-purpose screw driver that includes a standard flat screwdriver and a 1/16" allen key, and can be used on all Greystone wall sensors.

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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.

GREYSTONE HAS AN ISO 9001 REGISTERED QUALITY SYSTEM