



# GREYSTONE

ENERGY SYSTEMS INC

## ROOM HUMIDITY TRANSMITTER RH100B Series

The RH100B series uses a highly accurate and reliable Thermoset Polymer based capacitance humidity sensor and state-of-the-art digital linearization and temperature compensated circuitry in an attractive, low profile enclosure to monitor room humidity levels.

An optional temperature sensor is available.

### SPECIFICATION:

Sensor Type .....Thermoset Polymer based capacitive  
 Accuracy ..... $\pm 2, 3, \text{ or } 5\%$  RH, (5% to 95% RH)  
 Measurement Range.....0 to 100% RH  
 Temperature Dependence... $\pm 0.05\%$  RH/  $^{\circ}\text{C}$   
 Hysteresis ..... $\pm 1.5\%$  RH maximum  
 Repeatability..... $\pm 0.5\%$  RH typical  
 Linearity..... $\pm 0.5\%$  RH typical  
 Sensor Response Time.....15 seconds typical  
 Stability ..... $\pm 1\%$  RH typical at 50% RH in 5 yrs.  
 Operating Temperature ..... $0^{\circ}$  to  $70^{\circ}\text{C}$  ( $32^{\circ}$  to  $158^{\circ}\text{F}$ )  
 Operating Humidity .....0 to 95% RH non-condensing  
 Power Supply.....18 to 35 Vdc, 15 to 26 Vac  
 Consumption.....22 mA maximum  
 Input Voltage Effect.....Negligible over specified operating range  
 Protection Circuitry.....Reverse voltage protected and output limited  
 Output Signal.....4-20 mA current loop, 0-5 or 0-10 Vdc (jumper-selectable)  
 Output Drive at 24 Vdc.....550  $\Omega$  max for current output  
 10K  $\Omega$  min for voltage output  
 Internal Adjustments .....Clearly marked ZERO and SPAN pots  
 Wiring Connections.....Screw terminal block (14 to 22 AWG)  
 Optional Temp. Sensor .....Various RTDs and thermistors available as two-wire resistance output (See Ordering Chart)  
 Enclosure .....White ABS, IP20 (Nema 1)  
 Dimensions.....70x114x30mm, (2.75" w x 4.5" h x 1.2"d)



### PART NUMBER SELECTED

### PRODUCT SELECTION INFORMATION:

MODEL	Product Description
RH100B	Room Humidity Transmitter

CODE	Accuracy
02	2%
03	3%
05	5%

CODE	Optional Temperature Sensor
L	100 $\Omega$ Platinum, IEC 751, 385 Alpha, thin film
C	1000 $\Omega$ Platinum, IEC 751, 385 Alpha, thin film
F	1801 $\Omega$ , NTC Thermistor, $\pm 0.2^{\circ}\text{C}$
E	3,000 $\Omega$ , NTC Thermistor, $\pm 0.2^{\circ}\text{C}$
D	10,000 $\Omega$ , type 3, NTC Thermistor, $\pm 0.2^{\circ}\text{C}$
J	10,000 $\Omega$ , type 2, NTC Thermistor, $\pm 0.2^{\circ}\text{C}$
K	20,000 $\Omega$ , NTC Thermistor, $\pm 0.2^{\circ}\text{C}$
M	1000 $\Omega$ Nickel, Class B, DIN 43760
B	10k $\Omega$ Type 3, NTC Therm, $\pm 0.2^{\circ}\text{C}$ c/w 11K shunt Resistor
G	2.252K $\Omega$ Thermistor, $\pm 0.2^{\circ}\text{C}$

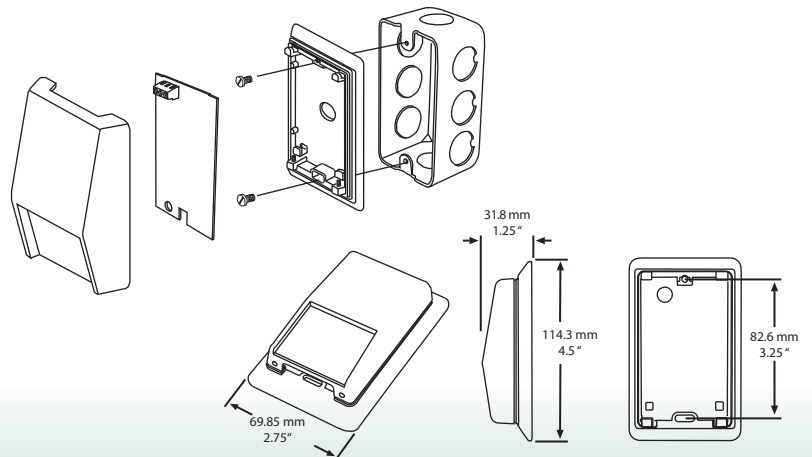
Greystone Energy Systems, Inc. reserves the right to make design modifications without prior notice.

### TYPICAL INSTALLATION:

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

The RH100 sensor installs directly on a standard electrical box and should be mounted five feet from the floor of the area to be controlled. Do not mount the sensor near doors, opening windows, supply air diffusers or other known air disturbances. Avoid areas where the sensor is exposed to vibrations or rapid temperature changes.

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



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**RoHS**  
COMPLIANT

