



# GREYSTONE ENERGY SYSTEMS INC

## OUTSIDE HUMIDITY /TEMPERATURE TRANSMITTER RH310 Series

The RH310 series uses a highly accurate and reliable Thermoset Polymer based capacitance humidity sensor and Platinum RTD temperature sensor together with state-of-the-art digital linearization and temperature compensated circuitry to monitor humidity levels. A hinged, gasketed weatherproof ABS enclosure provides easy of installation and protection from the elements.



### SPECIFICATION:

Humidity Sensor Type..... Thermoset polymer based capacitive

Accuracy ..... ±2, 3, or 5% RH, (5% to 95% RH)

Measurement Range..... 0 to 100% RH

Temperature Dependence..... ±0.05% RH/ °C

Hysteresis ..... ±1.5% RH maximum

Repeatability ..... ±0.5% RH typical

Linearity..... ±0.5% RH typical

Stability..... ±1% RH typical at 50% RH in 5 yrs.

Sensor Response Time..... 15 seconds typical

Sensitivity..... 0.1% RH

Temperature Sensor Type..... 1000 Ω Platinum. IEC751, 385 Alpha, thin film, Class B ±0.3°C @ 0°C

Temperature Accuracy ..... ±0.1% of span

Operating Temperature ..... -40° to 85°C (-40° to 185°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, 0-1, 0-5 or 0-10 Vdc

Output Drive at 24 Vdc..... 550 ohms max for current output 10K ohms min for voltage output

Internal Adjustments ..... Clearly marked ZERO and SPAN pots

Wiring Connections..... Screw terminal block (14 to 22 AWG)

Enclosures..... ABS, UL94-5VB, IP65 (NEMA 4X)  
\*In order to maintain the published NEMA/IP ratings, properly rated conduit or cable gland adapters must be used.

### PART NUMBER SELECTED

### PRODUCT SELECTION INFORMATION:

MODEL	Product Description
RH310A	Outside Humidity/Temperature Transmitter

CODE	RH Accuracy
02C	2%
03C	3%
05C	5%

CODE	Output Signals (RH and Temperature)
2A	4-20 mA
2D	0-5 Vdc
2E	0-10 Vdc

CODE	Scaled Temperature Span
1	0° - 35°C (32° - 95°F)
2	0° - 50°C (32° - 122°F)
3	0° - 100°C (32° - 212°F)
6	-50° - 50°C (-58° - 122°F)

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

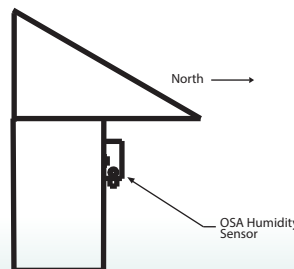
### Custom Temperature Range:

### TYPICAL INSTALLATION:

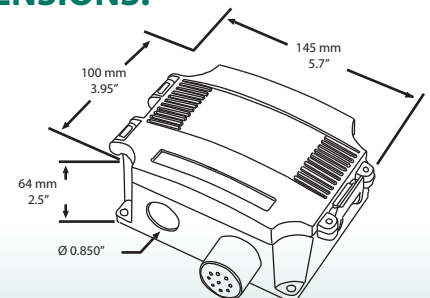
**For complete installation and wiring details, please refer to the product installation instructions.**

The RH310 should be mounted on an outside North facing wall, under the eaves which will provide protection from direct sunlight and wind.

The RH310 can be mounted directly to buildings wall face using the four provided mounting holes. There are 0.85" holes for conduit connection.



### DIMENSIONS:



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