GREYSTONE
ENERGY SYSTEMS INC

# S/S SURFACE HUMIDITY TRANSDUCER
# RH100S Series

The RH100S Stainless Steel Wall Plate Relative Humidity unit uses a field-proven capacitive type humidity sensor and microprocessor temperature compensation for reliable, accurate measurement of indoor humidity.

The watertight wall plate sensor is perfect for washdown locations and features a 304 stainless steel plate with a 100 micron sintered stainless steel filter.

This product is available as a humidity sensor only or with various direct temperature sensors.

The plate sensor is available with either 4-20 mA or 0-5 Vdc or 0-10 Vdc output signal types and the transmitter is located on the back of the plate for ease of installation.

## SPECIFICATION: RH100S

Sensor Type:.....Thermoset Polymer based capacitive
Accuracy at 25˚C:.....±2, 3, or 5% RH, (5% to 95% RH)
Measurement Range:...0 to 100% RH
Hysteresis:.....±3% RH maximum
Response Time:.....15 seconds typical
Stability:.....±1.2% RH typical
Operating Temp:.....0˚ to 70˚C (32˚ to 158˚F)
Operating Humidity:....0 to 95% RH non-condensing
Sensor Protection:.....100 micron sintered filter
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
Output Drive at 24 dc:.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)
Opt.Temp. Sensor:.....Various RTDs and thermistors available as two-wire resistance output (See Ordering Chart)
Enclosure:.....S/S, IP64 (Nema 3R), 70.6x114.3x41mm (2.8"w x 4.5"h x 1.6"d)

**PART NUMBER SELECTED**

## PRODUCT SELECTION INFORMATION:

| MODEL | Product Description |
|---|---|
| RH100S | S/S Surface Humidity Transducer |

| CODE | Accuracy |
|---|---|
| 02 | 2% |
| 03 | 3% |
| 05 | 5% |

| CODE | Output |
|---|---|
| I20 | 4-20mA output |
| V05 | 0-5Vdc output |
| V10 | 0-10Vdc output |

| CODE | Optional Temperature Sensor |
|---|---|
| L | 100Ω Platinum, IEC 751, 385 Alpha, thin film |
| C | 1000Ω Platinum, IEC 751, 385 Alpha, thin film |
| F | 1801Ω, NTC Thermistor, ±0.2˚C |
| E | 3,000Ω, NTC Thermistor, ±0.2˚C |
| D | 10,000Ω, type 3, NTC Thermistor, ±0.2˚C |
| J | 10,000Ω, type 2, NTC Thermistor, ±0.2˚C |
| K | 20,000Ω, NTC Thermistor, ±0.2˚C |
| M | 1000 Ω Nickel, Class B, DIN 43760 |
| B | 10k Ω Type 3, NTC Therm, ±0.2 C c/w 11K shunt Resistor |
| G | 2.252KΩ Thermistor, ±0.2 C |

| CODE | Options |
|---|---|
| TP | Tamperproof Screws |

| | | | | |
|---|---|---|---|---|
| RH100S | 03 | I20 | D | - |

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



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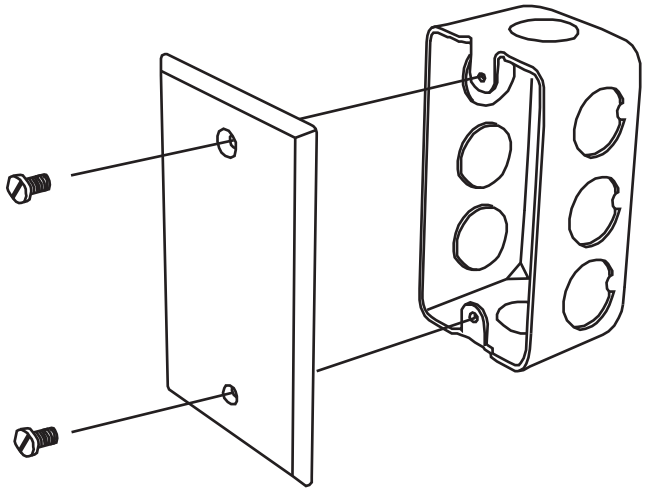
## TYPICAL INSTALLATION:

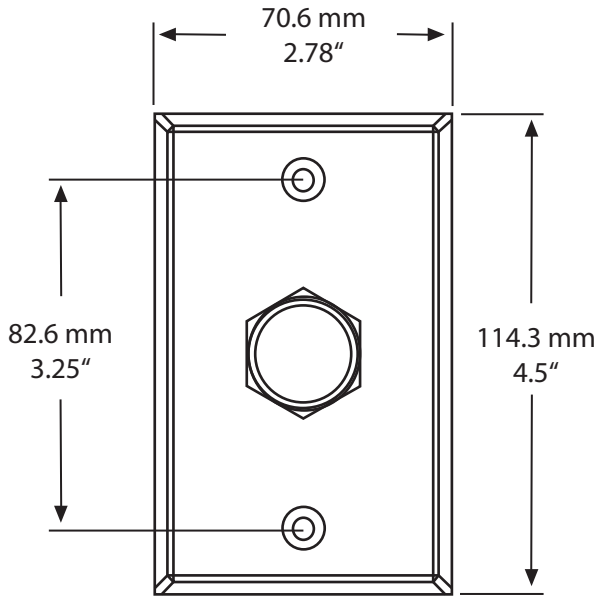
**For complete installation and wiring details, please refer to the product installation instructions.**

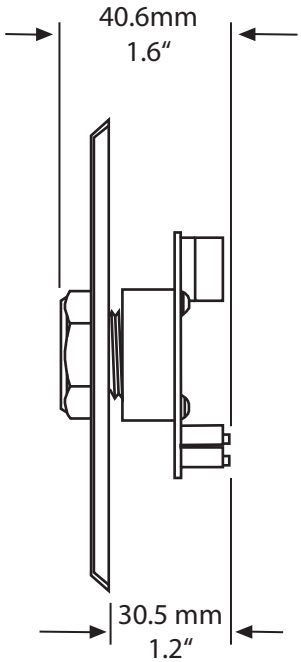
The SS plate type sensor installs directly on a standard electrical box and should be mounted five feet from the floor of the area to be controlled. Do not mount the sensor near doors, opening windows, supply air diffusers or other known air disturbances. Avoid areas where the sensor is exposed to vibrations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

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



## ENCLOSURE DIMENSIONS

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



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