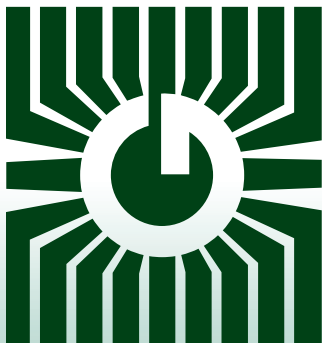


GREYSTONE ENERGY SYSTEMS INC



RELATIVE HUMIDITY TRANSDUCER RH 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
- Field selectable outputs
- AC/DC operation
- Custom logo available

*Peace of mind
through reliable
humidity monitoring*

GREYSTONE HAS AN ISO 9001 REGISTERED QUALITY SYSTEM

DESCRIPTION:

The RH series of humidity transducers are designed for use in environmental monitoring and control systems where high performance and stability are demanded. It's state-of-the-art design combines digital linearization and temperature compensation with a world class capacitive sensor for reliability and accuracy in even the most critical applications. Various models cover many aspects of RH measurement and several optional features are available to meet virtually all HVAC applications.

SPECIFICATION:

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
Temperature Dependence:.....	±0.05% RH/ °C
Hysteresis:.....	±1.5% RH maximum
Repeatability:.....	±0.5% RH typical
Linearity:.....	±0.5% RH typical
Sensor Response Time:.....	15 seconds typical
Stability:.....	±1% RH typical at 50% RH in 5 yrs.
Operating Temperature:.....	0° to 50°C (32° to 122°F) for RH100 -40° to 70°C (-40° to 158°F) for RH200/RH300
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 out limited
Output Signal:.....	4-20 mA current loop, 0-1, 0-5 or 0-10 Vdc (jumper-selectable)
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)
Optional LCD Display:.....	RH100A and RH200A 3 digit for 00.0 to 99.9% RH, 24 x 11mm (0.95" w x 0.45" h)
Optional Override Switch:.....	Normally open push-button, 0.4 VA at 24 Vac/dc two-wire output. (RH100A only)
Optional Temperature Sensor:...	Various RTDs and thermistors available as two-wire resistance output (See Ordering Chart)
Enclosures:.....	RH100A (Executive), IP30 (Nema 1), 71x119x32mm (2.8" w x 4.7" h x 1.25" d) RH100B (Designer), IP30 (Nema 1), 70x114x30mm, (2.75" w x 4.5" h x 1.2" d) RH200A (ABS), IP64 (Nema 12), 114x84x53mm (4.5" w x 3.3" h x 2.1" d) RH200E (Round), IP64 (Nema 3R), 91mm (3.6") diameter x 53mm (2.1") deep RH200M (Metal), IP30 (Nema 1), 102x63x58mm (4" w x 3.3" h x 2.1" d) RH200W (Metal WP) IP64 (Nema 3R), 115x72x56mm (4.5" w x 2.8" h x 2.5" d) RH300A (ABS WP) IP65 (Nema 3R), 122x112x63mm (4.8" w x 4.8" h x 2.5" d)
RH200 Probe:.....	230 mm (9") probe length x 12.7 mm (1/2") diameter stainless steel with porous filter

RELATIVE HUMIDITY: PRODUCT ORDERING INFORMATION

MODEL	Product Description
RH100	Space
RH200	Duct
RH300	Outside Air

CODE	Style
A	Executive (RH100), ABS enclosure (RH200) and ABS hinged enclosure (RH300)
B	Designer space (RH100)
E	Round ABS enclosure c/w gasketed cover (RH200)
M	Metal box (RH200)
W	Aluminum weatherproof (RH200)

CODE	Accuracy
02	2%
03	3%
05	5%

CODE	Optional Temperature Sensor
L	PT100-100Ω Platinum, IEC 751, 385 Alpha, thin film
C	PT1000-1000Ω Platinum, IEC 751, 385 Alpha, thin film
F	1801Ω, NTC Thermistor, ±0.2°C
E	3,000Ω, NTC Thermistor, ±0.2°C
H	100,000Ω, 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	10,000Ω Type 3, NTC Thermistor, ±0.2 C c/w 11K shunt Resistor
G	2.252KΩ Thermistor, ±0.2 C

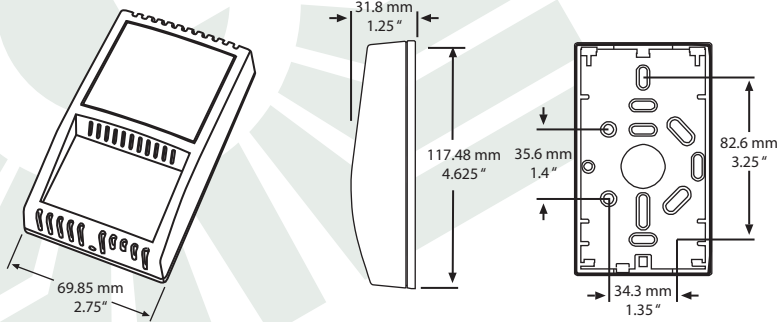
CODE	Options
01	LCD display (RH100A only)
02	Push button override, momentary (RH100A only)
03	LCD display and push button override (RH100A only)
AC	LCD display (RH200A only)

RH200	A	03	C	-
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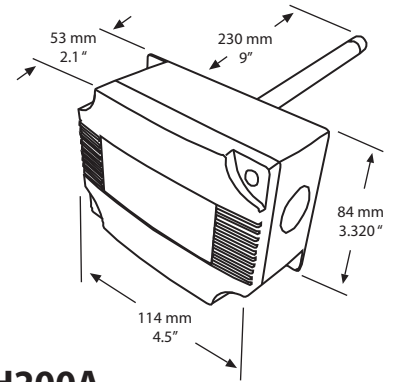
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EXAMPLE:
RH200A03C - Duct humidity c/w ABS enclosure, 3% accuracy and 1000 Ω temperature sensor.

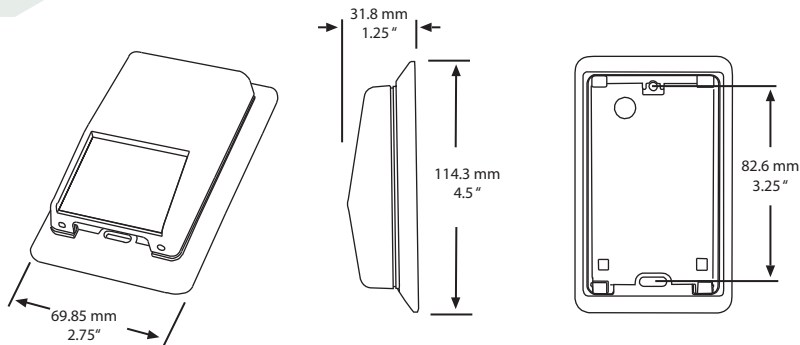
ENCLOSURE DIMENSIONS



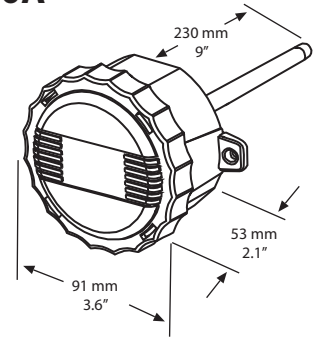
RH100A



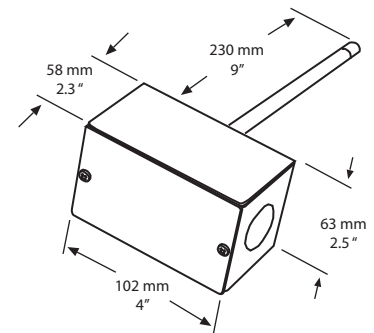
RH200A



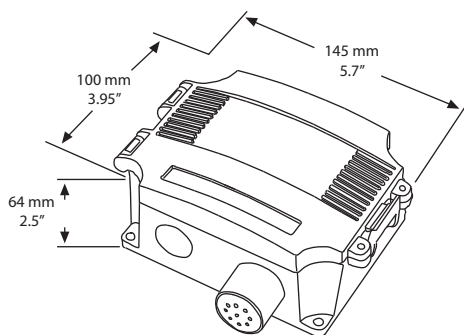
RH100B



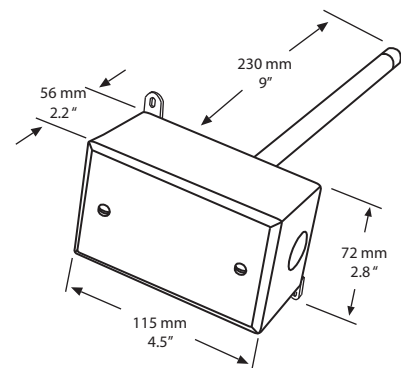
RH200E



RH200M



RH300A



RH200W

RH100S - S/S HUMIDITY TRANSDUCER

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.

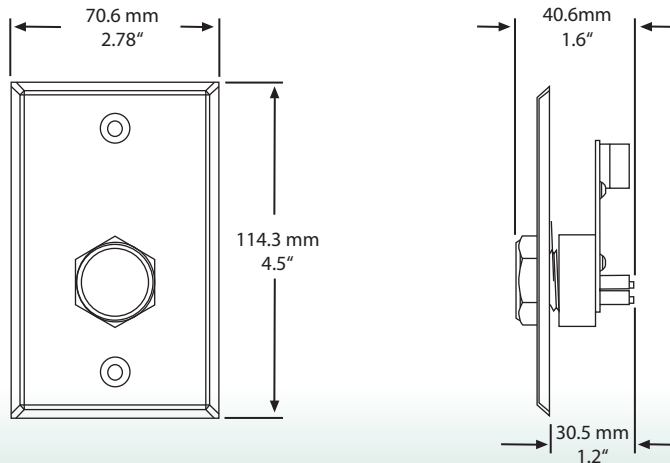
The plate sensor is available with either 4-20 mA or 0-5 Vdc or 0-10 Vdc output signal types and the transmitter is located on the back of the plate for ease of installation.



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
Sensor Response Time:.....	15 seconds typical
Stability:.....	±1.2% RH typical
Operating Temperature:.....	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 out limited
Output Signal:.....	4-20 mA current loop, 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)
Optional Temperature Sensor:...	Various RTDs and thermistors available as two-wire resistance output (See Ordering Chart)
Enclosure:.....	RH100S (S/S), IP64 (Nema 3R), 70.6x114.3x41 mm (2.8"w x 4.5"h x 1.6"d)

ENCLOSURE DIMENSIONS



RH100S PRODUCT ORDERING 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	10,000Ω Type 3, NTC Thermistor, ±0.2 C c/w 11K shunt Resistor
G	2.252KΩ Thermistor, ±0.2 C

CODE	Options
TP	Tamperproof Screws

RH100S	03	I20	D	-
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GREYSTONE

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RoHS
COMPLIANT



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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