GREYSTONE

ACCURACY BY DESIGN

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

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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	1,000Ω Nickel RTD
B	10,000Ω Type 3, NTC Thermistor, ±0.2 C c/w 11K shunt Resistor
G	2.252KΩ Thermistor, ±0.2 C

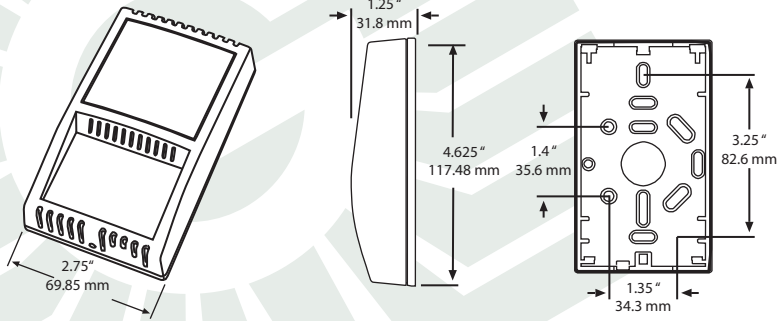| CODE	Options
01	LCD display (RH100A only)
02	Push button override, momentary (RH100A only)
03	LCD display and push button override (RH100A only)
AC	LCD display (RH200A only)

RH200	A	03	C	-

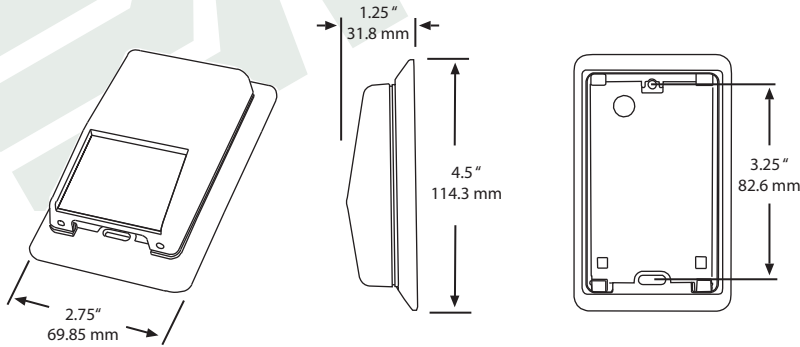Greystone Energy Systems, Inc. reserves the right to make design modifications without prior notice.

EXAMPLE:

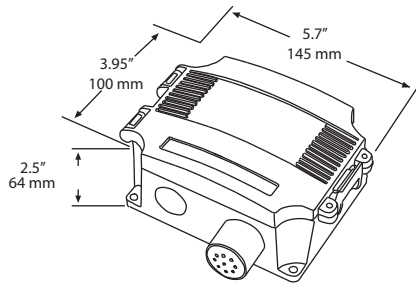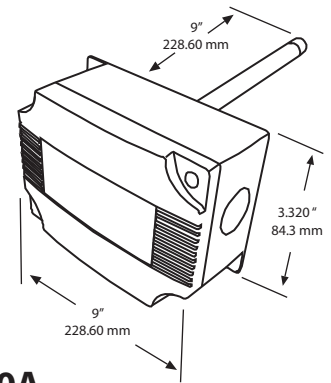**RH200A03C -** Duct humidity c/w ABS enclosure, 3% accuracy and 1000 Ω temperature sensor.

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ENCLOSURE DIMENSIONS

RH100A

1.25 "
31.8 mm

4.625 "
117.48 mm

1.4 "
35.6 mm

3.25 "
82.6 mm

1.35 "
34.3 mm

2.75"
69.85 mm

RH100B

1.25 "
31.8 mm

4.5 "
114.3 mm

3.25 "
82.6 mm

2.75"
69.85 mm

RH300A

5.7"
145 mm

3.95"
100 mm

2.5"
64 mm

RH200A

9"
228.60 mm

3.320 "
84.3 mm

9"
228.60 mm

RH200E

9"
228.60 mm

2.115"
53.7 mm

3.62"
91.9 mm

RH200M

9"
228.60 mm

2.10 "
53.3 mm

9"
228.60 mm

RH200W

9"
228.60 mm

2.85 "
72 mm

9"
228.60 mm
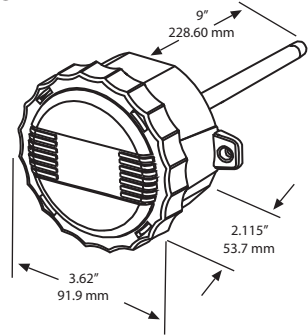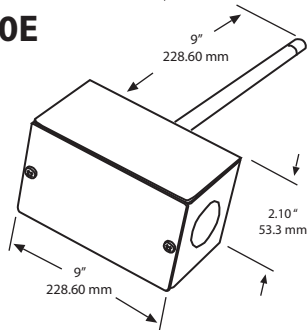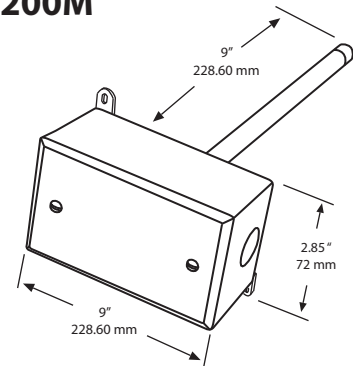

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Greystone Energy Systems Inc. is one of North America's largest ISO registered manufacturers of HVAC sensors and transducers for Building Automation Management Systems. We have conscientiously established a worldwide reputation as an industry leader 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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