GREYSTONE ENERGY SYSTEMS INC

HUMIDITY/TEMPERATURE TRANSMITTER
RH Series

Precision humidity/temperature control/sensing

FEATURES:

- Highly stable RH sensor element
- Humidity range: 0-100%
- Accuracy available 2%, 3%, & 5%
- Precision Platinum RTD for Temperature
- 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/temperature transmitters 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 humidity sensor and platinum RTD for reliability and accuracy in even the most critical applications. Various models cover many aspects of RH and temperature measurement and several optional features are available to meet virtually all HVAC applications.

SPECIFICATION:

Humidity 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.
Temperature Sensor Type:	1000Ω Platinum, IEC 751, 385 Alpha, thin film
Accuracy:	±0.1% of span
Operating Temperature:	0˚ to 70˚C (32˚ to 158˚F) for RH110 -40˚ to 85˚C (-40˚ to 185˚F) for RH210/RH310
Operating Humidity:	0 to 95% RH non-condensing
Power Supply:	18 to 35 Vdc, 15 to 26 Vac (RH110B is Vdc only)
Consumption:	22 mA maximum
Input Voltage Effect:	Negligible over specified operating range
Protection Circuitry:	Reverse voltage protected and output limited
Output Signals:	**RH110B:** 4-20 mA output only **RH210A/RH310A:** 4-20 mA, 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:	RH110B (Designer), IP20 (Nema 1), 70x114x30mm, (2.75"w x 4.5"h x 1.25"d) RH210A (ABS), IP61 (Nema 2),114x84x53mm (4.5"w x 3.3"h x 2.1"d) RH310A (ABS WP) IP65 (Nema 4X),145x100x64mm (5.7"w x 3.95"h x 2.5"d)
RH210 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, Dual transmitter - Humidity and Temperature
RH110B	Designer Space
RH210A	Duct
RH310A	Outside Air

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

CODE	Power Supply
1	24 Vdc (RH110B)
2	24 Vac/Vdc (RH210A & RH310A)

CODE	Output Signals (RH and Temperature)
A	4 - 20 mA
D	0 - 5 Vdc (RH210A and RH310A only)
E	0 - 10 Vdc (RH210A and RH310A only)

CODE	Transmitter Span Range
1	0˚C - 35˚C (32˚F - 95˚F)
2	0˚C - 50˚C (32˚F - 122˚F)
3	0˚C - 100˚C (32˚F - 212˚F)
6	-50˚C - 50˚C (-58˚F - 122˚F)

RH110B	03C	1	A	1

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

EXAMPLE:

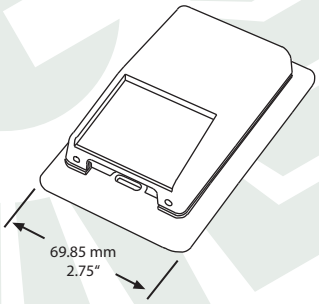
RH110B03C2A1

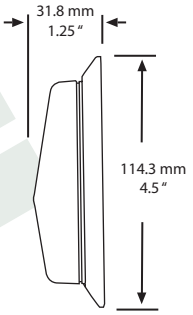
3% Space designer humidity c/w temperature transmitter with 1000Ω RTD, 24 Vdc power supply, 4 - 20mA output over 0˚C - 35˚C (32˚F - 95˚F).

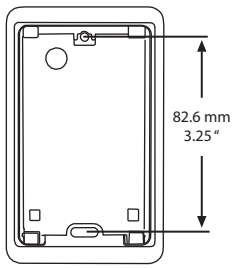
Note: Remote display option also available, see Miscellaneous Control Devices data sheet.

ENCLOSURE DIMENSIONS

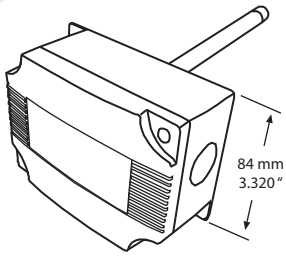
RH110B

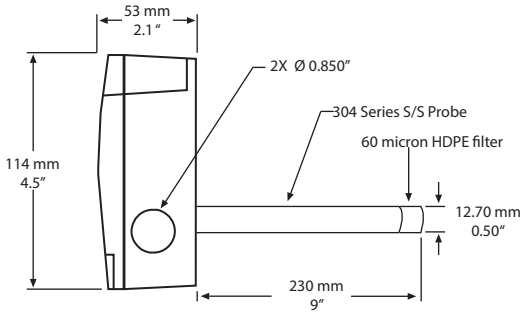




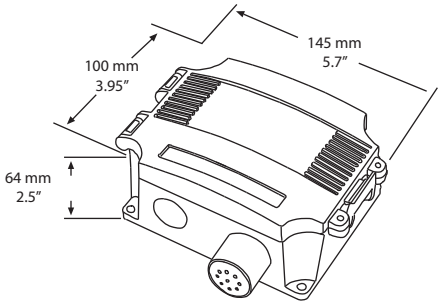


RH210A





RH310A



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RoHS COMPLIANT

Greystone Energy Systems Inc. is one of North America's largest ISO registered manufacturers of HVAC/R sensors and transmitters 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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V.01/14
PRINTED IN CANADA