



GREYSTONE

ENERGY SYSTEMS INC

HIGH ACCURACY OUTSIDE HUMIDITY TRANSMITTER HAHO Series

The HAHO series uses a highly accurate and reliable Thermoset Polymer based capacitance humidity sensor and state-of-the-art digital linearization and temperature compensated circuitry to monitor humidity levels. A 60 micron HDPE filter protects the sensor for contaminants. It is available in 2 weather-proof enclosure types that provide ease of installation and protection from the elements.

SPECIFICATION:

Sensor Type Thermoset Polymer based Capacitive
Range 0 to 100% RH
Accuracy $\pm 1\%$ (20 to 80% RH) or $\pm 2\%$ (5 to 95% RH)
Response 15 Seconds typical
Temp Dependence $\pm 0.05\%$ RH/°C
Hysteresis $\pm 1.5\%$ RH maximum
Repeatability $\pm 0.5\%$ RH typical
Linearity $\pm 0.5\%$ RH typical
Operating Range -40 to 85°C (-40 to 185°F)
Power Supply 18 to 30 Vdc, 15 to 26 Vac
Consumption 22 mA maximum
Protection Circuitry Reverse voltage protected and output limited
Output Signal 4-20 mA current loop, 0-5 or 0-10 Vdc (jumper-selectable)
Output Drive @ 24 Vdc 550 ohms max for current output
10K ohms min for voltage output
Internal Adjustments Clearly marked ZERO and SPAN pots
Optional Temp RTD's or Thermistors - See ordering chart
Enclosures **C:** PVC, IP65 (NEMA 4X)
D: Grey ABS - UL94-V0, IP65 (NEMA 4X)
Termination Screw terminal block (14 20 22 AWG)

OPTIONAL TEMPERATURE

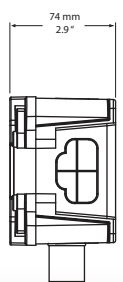
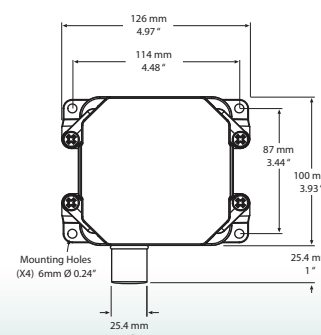
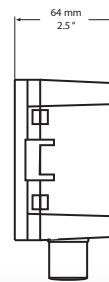
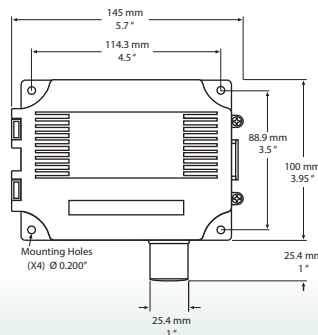
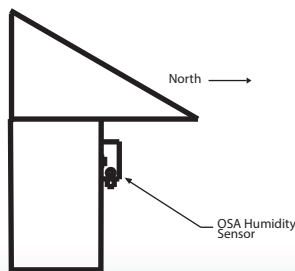
Sensor Type Platinum RTD 1000 Ω , 385 Alpha @ 0°C
NTC Thermistor, 10,000 Ω Type 2/3
or 20,000 Ω @ 25°C
Accuracy **RTD Class A:** $\pm 0.15^\circ\text{C}$ @ 0°C
RTD 1/3 DIN: $\pm 0.1^\circ\text{C}$ @ 0°C
RTD 1/10 DIN: $\pm 0.03^\circ\text{C}$ @ 0°C
Thermistor (39): $\pm 0.05^\circ\text{C}$, 0-70°C
Thermistor (40/46): $\pm 0.1^\circ\text{C}$, 0-70°C
Thermistor (55): $\pm 0.03^\circ\text{C}$, 0-70°C

TYPICAL INSTALLATION:

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

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

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



PART NUMBER SELECTED

PRODUCT SELECTION INFORMATION:

MODEL	Product Description
HAHO	High Accuracy Outside Air Humidity Transmitter

CODE	Enclosure
C	PVC Enclosure
D	ABS Enclosure with Hinged Cover

CODE	Accuracy
1	1%
2	2%

CODE	Optional High Accuracy Temperature Sensor
18	1000 Ω Plat, IEC 751, 385 Alpha, thin film, Class A
48	1000 Ω Plat, IEC 751, 385 Alpha, thin film, 1/3 DIN
22	1000 Ω Plat, IEC 751, 385 Alpha, thin film, 1/10 DIN
39	10,000 Ω , Type 2, NTC Thermistor, $\pm 0.05^\circ\text{C}$
55	10,000 Ω , Type 2, NTC Thermistor, $\pm 0.03^\circ\text{C}$
40	10,000 Ω , Type 3, NTC Thermistor, $\pm 0.1^\circ\text{C}$
46	20,000 Ω , NTC Thermistor, $\pm 0.1^\circ\text{C}$

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

Dimensions:

Greystone Energy Systems, Inc. (506) 853-3057 Fax: (506) 853-6014
150 English Drive, Moncton, North America: 1-800-561-5611
New Brunswick, Canada E1E 4G7 e-mail: mail@greystoneenergy.com
www.greystoneenergy.com

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