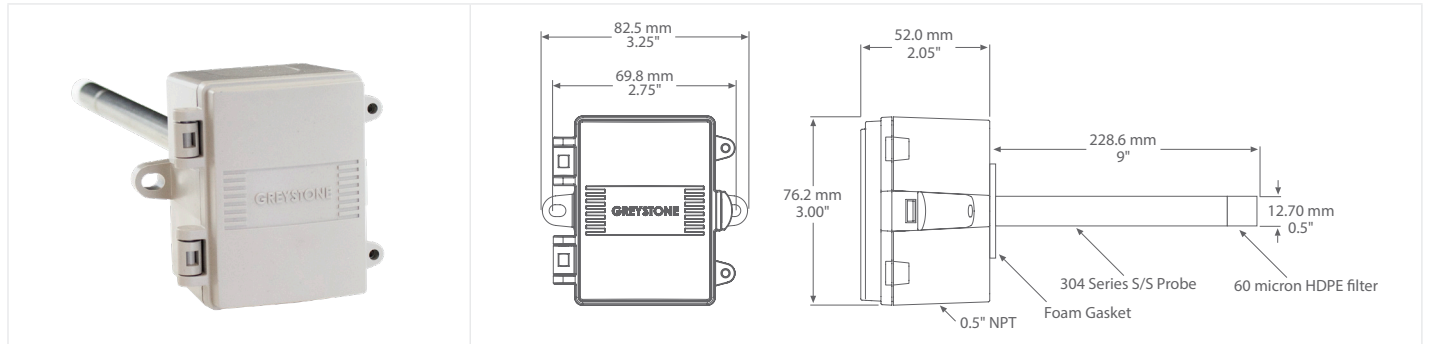




HIGH ACCURACY DUCT HUMIDITY TRANSMITTER



HAHSDT SERIES

PRODUCT DESCRIPTION

The high accuracy duct humidity transmitter 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. The sensor is encapsulated in a 230 mm (9") long by 12.7 mm (0.5") diameter 304 S/S probe and is field replaceable. A 60 micron HDPE filter protects the sensor for contaminants. An optional integrated temperature sensor is available.

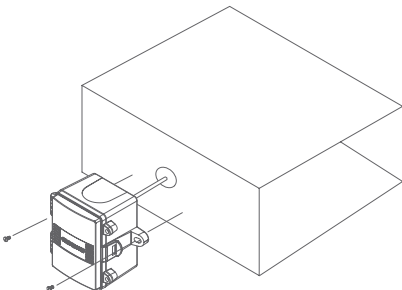
TYPICAL INSTALLATION

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

The duct type probes are installed through a hole in the side of the duct to monitor a single point humidity within the duct. Install the probe in a straight section of duct at a suitable distance downstream from any heating, cooling or humidification devices.

Mounting tabs on the outside of the enclosure for ease of installation.

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



SPECIFICATIONS

SENSOR TYPE	Thermoset polymer based capacitive
SENSOR ACCURACY	±1.5% (0 to 80 %RH) or ±2% (0 to 100 %RH)
MEASUREMENT RANGE	0 to 100 %RH
RESOLUTION	±0.01 %RH
HYSTERESIS	±0.8 %RH @ 25°C (77°F)
RESPONSE TIME	8 seconds
STABILITY	<0.25% RH/year
AMBIENT OPERATING RANGE	-40 to 50°C (-4 to 122°F)
POWER SUPPLY	24 Vac/dc ~ ±10% typical
CONSUMPTION	22 mA maximum @24Vdc, 70mA @24Vac
OUTPUT SIGNAL	4-20 mA current loop, 0-5 Vdc, 0-10 Vdc, or 0-1 Vdc (field selectable)
OUTPUT DRIVE @ 24 VDC	Current: 550Ω max Voltage: 10,000Ω min
OPTIONAL TEMPERATURE SENSOR (ACCURACIES LISTED ARE APPLICABLE TO SENSING ELEMENT ONLY)	Sensor Type: Platinum RTD 1000Ω, 385 Alpha @ 0°C NTC Thermistor, 10,000Ω Type 2/3 or 20,000Ω @ 25°C Accuracy: RTD Class A - ±0.15°C (±0.27°F) @ 0°C (32°F) RTD 1/3 DIN - ±0.1°C (±0.18°F) @ 0°C (32°F) RTD 1/10 DIN - ±0.03°C (±0.054°F) @ 0°C (32°F) Thermistor (39) - ±0.05°C (±0.09°F), 0 to 70°C (32 to 158°F) Thermistor (40/46) - ±0.1°C (±0.18°F), 0 to 70°C (32 to 158°F) Thermistor (55) - ±0.03°C (±0.054°F), 0 to 70°C (32 to 158°F)
ENCLOSURE	A: ABS, UL94-V0, IP65 (NEMA 4X) E: Same as A, with thread adapter (1/2" NPT to M16) and cable gland fitting
PROBE	230mm (9") length x 12.7mm (1/2") diameter s/s with porous filter
TERMINATION	Screw terminal block (14 to 22 AWG)
COUNTRY OF ORIGIN	Canada

NOTE: The temperature sensor accuracies listed in the specifications section apply to the sensing element only prior to product assembly and may not be reflected in the complete assembly.

Due to the measurement uncertainty, it is possible, that the true resistance value of the single delivered sensor at 0°C can be out of the defined tolerance class. Profiling each assembly to take into consideration lead wire and the attachment method should be completed.

OPTIONAL ACCESSORIES - INCLUDED WITH E ENCLOSURE OPTION

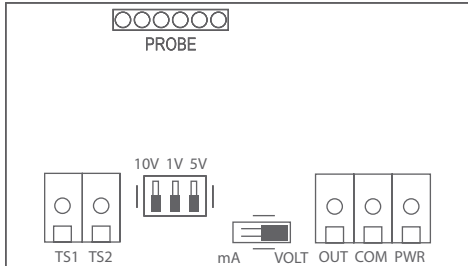


CABLE GLAND FITTING

THREAD ADAPTER 1/2" NPT TO M16



WIRING INFORMATION



TERMINAL	FUNCTION
PWR	24 Vac/dc of controller or power supply
COM	COM GND or COMMON
OUT	Analog Output
TS1	Resistance Output
TS2	Resistance Output

ORDERING

PRODUCT	HAHSDT	High Accuracy Duct Humidity Transmitter
ENCLOSURE	A E	ABS with hinged and gasketed cover Same as A, with thread adapter and cable gland fitting
RH ACCURACY	1 2	1.5% 2%
OPTIONAL TEMPERATURE SENSOR	00 18 48 22 39 55 40 46	No Temperature Sensor Option 1000 Ω Platinum, IEC 751, 385 Alpha, thin film, Class A 1000 Ω Platinum, IEC 751, 385 Alpha, thin film, 1/3 DIN 1000 Ω Platinum, IEC 751, 385 Alpha, thin film, 1/10 DIN 10,000 Ω Type 2, NTC Thermistor, ±0.05°C 10,000 Ω Type 2, NTC Thermistor, ±0.03°C 10,000 Ω Type 3, NTC Thermistor, ±0.1°C 20,000 Ω NTC Thermistor, ±0.1°C

PART NUMBER

HAHSDT

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

ORDERING - REPLACEMENT SENSOR MODULE

PRODUCT	HAHRMPB	Replacement Humidity Sensor Module - Probe
RH ACCURACY	1 2	1.5% 2%
OPTIONAL TEMPERATURE SENSOR	00 18 48 22 39 55 40 46	No Temperature Sensor Option 1000 Ω Platinum, IEC 751, 385 Alpha, thin film, Class A 1000 Ω Platinum, IEC 751, 385 Alpha, thin film, 1/3 DIN 1000 Ω Platinum, IEC 751, 385 Alpha, thin film, 1/10 DIN 10,000 Ω Type 2, NTC Thermistor, ±0.05°C 10,000 Ω Type 2, NTC Thermistor, ±0.03°C 10,000 Ω Type 3, NTC Thermistor, ±0.1°C 20,000 Ω NTC Thermistor, ±0.1°C

PART NUMBER

HAHRMPB