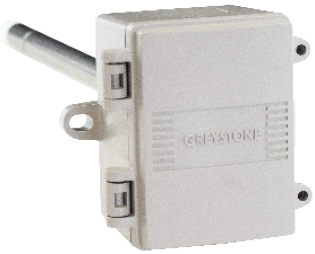
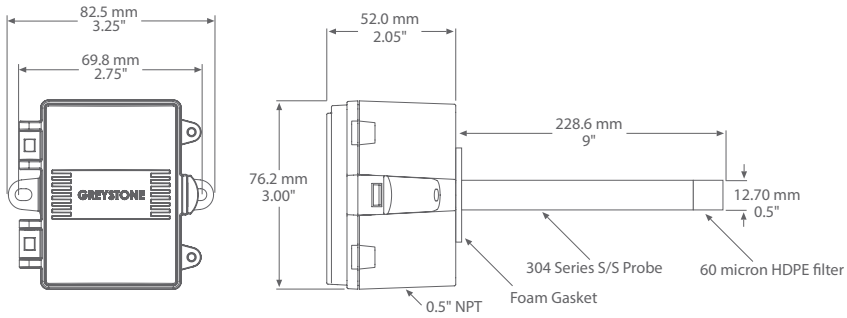
GREYSTONE
ENERGY SYSTEMS INC

NETWORK DUCT HUMIDITY/TEMPERATURE SENSOR





HNDT SERIES

PRODUCT DESCRIPTION

The network duct humidity/temperature sensor uses a highly accurate and reliable Thermoset Polymer based capacitance humidity sensor and temperature sensor, that is field replaceable to monitor humidity and temperature levels and transmit values via BACnet® or Modbus communication to a building automation system. The sensor is encapsulated in a 230 mm (9") long by 12.7 mm (0.5") diameter 304 S/S probe. A 60 micron HDPE filter protects the sensor for contaminants. A hinged, gasketed weatherproof ABS enclosure provides ease of installation and protection from the elements.

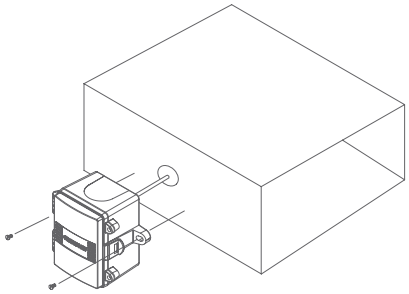
TYPICAL INSTALLATION

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

The network 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.

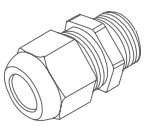
A terminal block connection is provided. for connection to the Building Automation System.



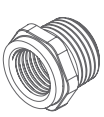
SPECIFICATIONS

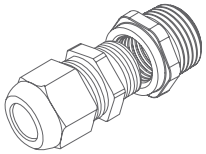
RELATIVE HUMIDITY	**Accuracy:** ±2, 3, or 5 %RH (5 to 95 %RH) **Range:** 0 to 100 %RH **Resolution:** 0.01 %RH **Hysteresis:** ±0.8 %RH @ 25°C (77°F) **Response Time:** 8 seconds typical **Stability:** <0.25 %RH/year
TEMPERATURE SENSOR	**Sensor Accuracy:** ±0.2°C (±0.4°F) @ 0 to 70°C (32 to 158°F) **Probe Sensing Range:** -40 to 50°C (-40 to 122°F), 5 to 95 %RH non-condensing **Resolution:** 0.01°C/°F **Response Time:** 2 seconds **Stability:** <0.03°C/year
NETWORK COMMUNICATION	**Hardware:** MS/TP, 2-wire RS-485 **Software:** BACnet® or Modbus **Baud Rate:** 9600, 19200, 38400, 57600, 76800, or 15200 **Address Range: BACnet®:** 0 to 127 **Modbus:** 1 to 255
OPTIONAL RELAY	**Contacts:** 0.5 A @ 125 Vac / 1 A @ 24 Vdc **Setpoint:** Relative Humidity: 1 to 90 %RH or Temperature: 5 to 40°C (40 to 100°F)
POWER SUPPLY	24 Vac/dc ±10% typical, 28 Vac/dc maximum
CONSUMPTION	22 mA @ 24 Vdc, 70 mA @ 24 Vac
OPERATING ENVIRONMENT	-40 to 50°C (-40 to 122°F)
PROBE MATERIAL	Stainless steel with porous filter
PROBE DIAMETER	12.7mm (0.5")
PROBE LENGTH	230mm (9")
WIRING CONNECTION	Screw terminal block (14 to 22 AWG)
ENCLOSURE	**A:** ABS, UL94-V0, IP65 (NEMA 4X) **E:** Same as A, with thread adapter (1/2" NPT to M16) and cable gland fitting
DIMENSIONS	82.5mm W x 76.2mm H x 52.0mm D (3.25" x 3.0" x 2.05")
APPROVALS	CE
COUNTRY OF ORIGIN	Canada

OPTIONAL ACCESSORIES - INCLUDED WITH E ENCLOSURE OPTION



CABLE GLAND FITTING





THREAD ADAPTER 1/2" NPT TO M16

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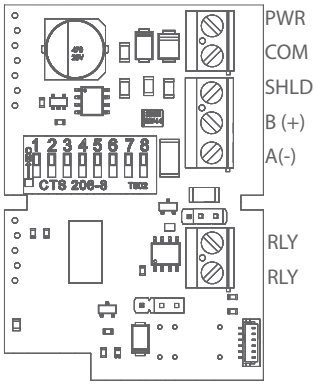
WIRING INFORMATION



TERMINAL	FUNCTION
PWR	24 Vac/dc from controller or power supply
COM	GND or COMMON
SHLD	Network Output
B (+)	Network Output
A (-)	Network Output
RLY	Relay Output
RLY	Relay Output

ORDERING

			PART NUMBER
PRODUCT	**HNDT**	Network Duct Humidity/Temperature Sensor	**HNDT**
ENCLOSURE	**A** **E**	ABS with hinged and gasketed cover Same as A, with thread adapter and cable gland fitting	
RH ACCURACY	**2** **3** **5**	2% 3% 5%	
OUTPUT	**B** **M**	BACnet® Modbus	
RELAY	**X** **R**	No Relay Relay	
CERTIFICATES	**-** **N**	None (leave blank) NIST Certificate	

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

REPLACEMENT SENSOR MODULE	**HRMPB200** **HRMPB300** **HRMPB500**	Relative Humidity/Temperature Probe Replacement, 2% Accuracy Relative Humidity/Temperature Probe Replacement, 3% Accuracy Relative Humidity/Temperature Probe Replacement, 5% Accuracy	

RoHS COMPLIANT

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