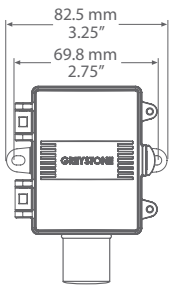
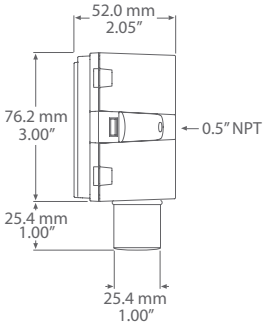
GREYSTONE
ENERGY SYSTEMS INC

NETWORK OUTSIDE HUMIDITY/TEMPERATURE SENSOR





HNOS SERIES

PRODUCT DESCRIPTION

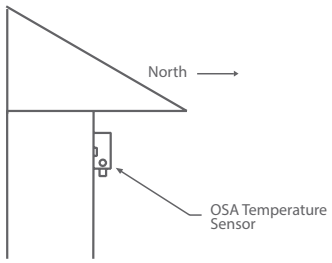
The outside air network humidity/temperature sensor uses a highly accurate and reliable Thermoset Polymer based capacitance humidity sensor and temperature sensor, that is field replaceable, to monitor humidity and temperature levels and transmit values via BACnet® or Modbus communication to a building automation system. A hinged, gasketed weatherproof Polycarbonate enclosure with sensor hub 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 outside sensor should be mounted on an outside North facing wall, under the eaves which will provide protection from direct sunlight and wind.

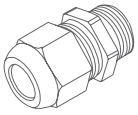
The outside sensor can be mounted directly to buildings wall face using the provided mounting holes. There is a 0.86" hole for conduit connection of the back of the enclosure.



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 115200 **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 60°C (-40 to 140°F)
PROBE MATERIAL	PVC sensor hub
WIRING CONNECTION	Screw terminal block (14 to 22 AWG)
ENCLOSURE	**A:** Polycarbonate, UL94-V0, IP65 (NEMA 4X) **E:** Same as A, with cable gland fitting
DIMENSIONS	82.5mm W x 76.2mm H x 52.0mm D (3.25" x 3.0" x 2.05")
COUNTRY OF ORIGIN	Canada

OPTIONAL ACCESSORIES - INCLUDED WITH E ENCLOSURE OPTION



CABLE GLAND FITTING

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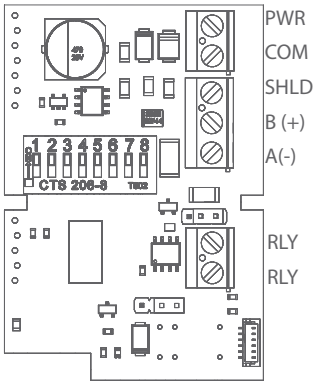
WIRING INFORMATION



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

PRODUCT	**HNOS**	Network Outside Humidity/Temperature Sensor
ENCLOSURE	**A** **E**	Polycarbonate with hinged and gasketed cover Same as A, with 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	**HRMOS200** **HRMOS300** **HRMOS500**	Relative Humidity/Temperature Hub Replacement, 2% Accuracy Relative Humidity/Temperature Hub Replacement, 3% Accuracy Relative Humidity/Temperature Hub Replacement, 5% Accuracy

PART NUMBER

HNOS

RoHS COMPLIANT

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