GREYSTONE
ENERGY SYSTEMS INC

The single point glass network temperature sensor incorporates a precision sensor encapsulated in a 31.75 mm L x 9.525 mm W x 9.525 mm H (1.25" x .375" x .375") Aluminum probe. Standard wire length is 1.5 m (5'). All probes are constructed to provide excellent heat transfer, fast response and are potted to resist moisture penetration.The transmitter provides a BACnet® or Modbus signal for network connection. A compact ABS enclosure with a hinged and gasketed cover is provided for ease of installation.

SPECIFICATION:

Power Supply .... **BACnet®:** 24 Vac/dc ±10% (non-isolated half-wave rectified)
Modbus: 24 Vac/dc ±20% (non-isolated half-wave rectified)
Consumption .... **BACnet®:** 25 mA max @ 24 Vdc
Modbus: 10 mA max @ 24 Vdc
Protection Circuitry............ Reverse voltage protected and over voltage protected
Operating Environment ... -40 to 50°C (-40 to 122°F), 5 to 95 %RH non-condensing
Probe Material .... Aluminum
Probe Dimensions.............. 31.75mm L x 9.525mm W x 9.525mm D
(1.25" x 0.375" x 0.375")
Wire Material .... PVC insulated, parallel bonded (22 AWG)
Wire Length .... 1.5m (5')
Wiring Connections........... Screw terminal block (14 to 22 AWG)
Enclosure .... ABS - UL94-V0, IP65 (NEMA4X)
E style includes thread adapter (1/2" NPT to M16)
and cable gland fitting
Country of Origin................ Canada
Temperature
Sensing Element................. NTC thermistor
Accuracy .... ±0.2°C (±0.36°F) @ 0 to 70°C (32 to 158°F)
Probe Sensing Range........ -20 to 100°C (-4 to 212°F)
Resolution .... 0.1°C/°F
BACnet® Communications Interface
Hardware.............................. 2 wire RS-485
Software................................ Native BACnet® MS/TP protocol
Baud Rate .... 9600, 19200, 38400, 57600, 76800, or 115200 (auto-detect)
Network Address Range .. Locally set to 0-127
Serial Configuration........... 8N1
Modbus Communications Interface
Hardware.............................. 2 wire RS-485
Software................................ Native Modbus MS/TP protocol (RTU)
Baud Rate .... 9600, 19200, 38400, 57600, 76800, or 115200 (auto-detect)
Network Address Range .. Locally set to 1-255
Parity .... None
Stop Bits................................ 1
Error Checking..................... A001 (CRC-16 reverse)
Serial Configuration........... 8N1

PART NUMBER SELECTED

PRODUCT SELECTION INFORMATION:

MODEL	Product Description
TNGL	Glass Network Temperature Sensor

CODE	Enclosure
A	ABS, with hinged & gasketed cover
E	Same as A, with thread adapter & cable gland fitting

CODE	Sensor
20X	NTC Thermistor, ±0.2°C

| CODE	Communication Output
B	BACnet®
M	Modbus

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

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

Find a suitable location on an exterior window where both the probe and enclosure can be mounted. On one side apply epoxy compound and press firmly against the glass. Hold in place until the epoxy has set.

Encloure provides mounting tabs for ease of installation.

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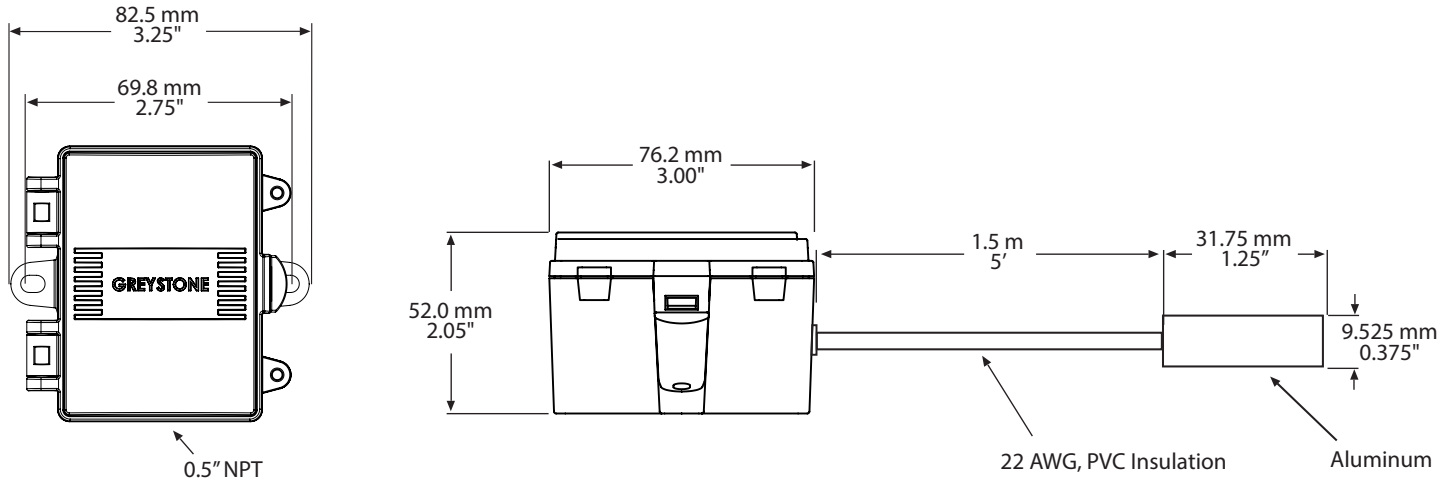
RoHS COMPLIANT
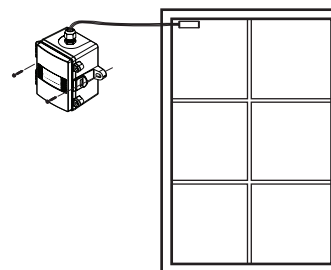
BACnet® COMMUNICATION

BACnet® is a data communication protocol for building automation and control networks. The sensor communicates on a standard 2-wire RS-485 MS/TP network designed to run at speeds from 9600 to 115200 baud over twisted pair wiring.

BACnet® is a registered trademark of ASHRAE. ASHRAE does not endorse, approve or test products for compliance with ASHRAE standards. Compliance of BACnet® listed products to the requirements of ASHRAE Standard 135 is the responsibility of BACnet® International (BI). BTL is a registered trademark of BI.
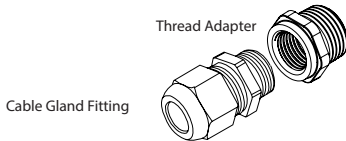
MODBUS COMMUNICATION

Modbus is a network protocol for industrial manufacturing environments. The sensor communicates on a standard Modbus network using the RTU (Remote Terminal Unit) transmission mode. The hardware interface is RS-485.

DIMENSIONS:

82.5 mm
3.25"

69.8 mm
2.75"

0.5" NPT

76.2 mm
3.00"

52.0 mm
2.05"

1.5 m
5'

31.75 mm
1.25"

9.525 mm
0.375"

22 AWG, PVC Insulation

Aluminum

Included with E style enclosure

Thread Adapter

Cable Gland Fitting

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RoHS COMPLIANT

GREYSTONE HAS AN **ISO 9001** REGISTERED QUALITY SYSTEM