GREYSTONE ENERGY SYSTEMS INC

TECHNICAL DATA SHEET **HTX3 Series**




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## HIGH ACCURACY HUMIDITY/TEMPERATURE TRANSMITTER

The HTX3 High-Accuracy Humidity and Temperature Transmitter is used in environmental monitoring and control systems that require high accuracy and stability. The state-of-the-art design combines digital linearization and temperature compensation. A highly accurate and reliable Thermoset polymer-based capacitance sensor chip and a Class A resistance temperature detector (RTD) provides reliability and accuracy in the most critical applications.

The HTX3 Series Transmitters has two measurement variables for relative humidity (RH) and dry-bulb temperature. Both variables are available as analog signals (2X) to provide the most efficient monitoring and control solution. A weatherproof polycarbonate enclosure protects the electronics. The hinged and gasketed cover provides ease of installation.

An optional NIST traceable calibration certificate is available.

## SPECIFICATIONS

| | |
|---|---|
| HUMIDITY SENSOR TYPE | Thermoset polymer-based capacitance sensor chip |
| HUMIDITY ACCURACY | ±1% RH, 20% to 70% RH @ 25°C Typical<br>±1.5% RH, 0% to 20% RH and 70 % to 90% RH @ 25°C Typical |
| HUMIDITY MEASUREMENT RANGE | 0% RH to 100% RH |
| TEMPERATURE SENSOR TYPE | 1K ohm platinum, IEC751, 385 Alpha, thin film, Class A |
| TEMPERATURE SENSOR ACCURACY | ±0.15°C (±0.27°F) @ 0°C (32°F) |
| TEMPERATURE MEASUREMENT RANGE | -40°C to 60°C (-40°F to 140°F) or 0°C to 60°C (32°F to 140°F) |
| HYSTERESIS | ±0.8 %RH maximum |
| REPEATABILITY | ±0.5 %RH |
| SENSOR RESPONSE TIME | 8 s |
| OUTPUT SIGNALS (2X) | 4 to 20 mA, loop-powered<br>0 to 5 Vdc or 0 to 10 Vdc |
| POWER SOURCE UL | 24 Vac/dc ±10% typical, SELV (Class 2) |
| CONSUMPTION | 22 mA @ 24 Vdc, 70 mA @ 24 Vac |
| OUTPUT DRIVE AT 24 VDC | Current: 550 Ω Max Voltage: 10,000Ω Min |
| INPUT VOLTAGE EFFECT | Negligible over specified operating range |
| PROTECTION CIRCUITRY | Reverse voltage protected and output limited |
| OPERATING CONDITIONS | -40°C to 60°C (-40°F to 140°F), 0% RH to 95% RH, noncondensing |
| STORAGE CONDITIONS | -40°C to 70°C (-40°F to 158°F), 0% RH to 95% RH, noncondensing |
| INTERNAL ADJUSTMENTS | Temperature ZERO and SPAN pots<br>Humidity Offset pot -10% to +10% |
| PROTECTION CLASS | III |
| CONFORMITY | CE, UKCA |
| CERTIFICATION | UL60730 & CSA E60730 |
| PURPOSE OF CONTROL | Operating Control |
| TYPE OF ACTION | Type 1 |
| IMPULSE VOLTAGE | 330V |
| POLLUTION DEGREE | 2 |
| WIRING CONNECTIONS | Screw terminal block, 14 AWG to 22 AWG |
| WIRING ACCESS | Rear: 0.895" hole for conduit connection<br>Side : M16 x 1.5 Cable gland |
| ENCLOSURE DIMENSIONS | 116.5 mm H x 113.1 mm W x 54.0 mm D (4.59 in. x 4.45 in. x 2.13 in.) |
| ENCLOSURE MATERIAL | Grey polycarbonate with gasket, UL94-V0 |
| ENCLOSURE RATING | IP65 (NEMA 4X) |
| PROBE, L X D | 304 S/S, 104.8 mm x 12.7 mm (4.1 in. x 0.5 in.) |
| FILTER | 20 Micron porous PTFE filter |
| WEIGHT | 7.8 oz (220g), including probe |
| OPTIONAL CALIBRATION CERTIFICATE | NIST traceable 1-Point or 3-Point |
| COUNTRY OF ORIGIN | Canada |

RoHS COMPLIANT

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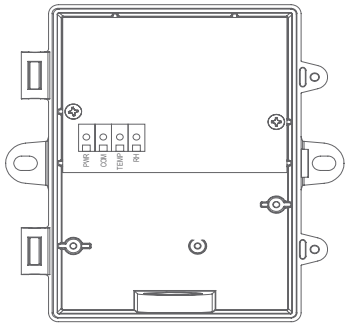
Greystone Energy Systems, Inc.
321 Desbrisay Avenue, Moncton,
New Brunswick, Canada E1E 0J2

Ph: +1 (506) 853-3057 Fax: +1(506) 853-6014
North America: 1-800-561-5611
E-mail: mail@greystoneenergy.com



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## WIRING INFORMATION

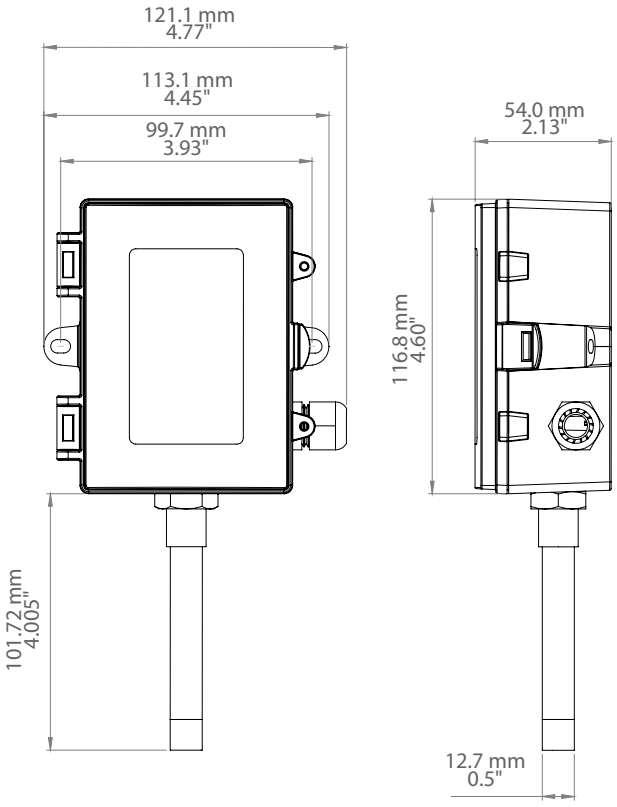



| TERMINAL | FUNCTION |
|---|---|
| PWR | 24 Vac/dc of controller or power supply |
| COM | To GND or COMMON of controller |
| TEMP | Analog Output |
| RH | Analog Output |

## ORDERING CODE

| SERIES | APPLICATION | | ENCLOSURE | | | OUTPUT | | TEMP RANGE | | | NIST CALIBRATION CERTIFICATE | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HTX3 | | | | | 1 | | | | | SP | | |
| | **W** | Wall Mount | **B** | Rear Cable Entry Hole for EMT 22.7 mm D (0.895") | | **A** | 4-20 mA | **08G** | -40°C to 60°C (-40°F to 140°F) | | | None (Leave Blank) |
| | | | **F** | Side Cable Gland | | **D** | 0-5 Vdc | **09S** | 0°C to 60°C (32°F to 140°F) | | **1N** | 1-Point RH/T |
| | | | | | | **E** | 0-10 Vdc | | | | **3N** | 3-Point RH/T |

## DIMENSIONS






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Greystone Energy Systems, Inc.
321 Desbrisay Avenue, Moncton,
New Brunswick, Canada E1E 0J2

Ph: +1 (506) 853-3057 Fax: +1(506) 853-6014
North America: 1-800-561-5611
E-mail: mail@greystoneenergy.com