



## ROUGH DUTY RH/TEMPERATURE, REMOTE PROBE TRANSMITTER

The Rough Duty RH/Temperature Remote Probe Transmitters are designed for use in environmental monitoring and control systems where high performance and stability are essential. Their state-of-the-art design combines digital linearization and temperature compensation with highly accurate and reliable digital humidity and temperature sensors, ensuring precision and dependability in the most critical applications.

The Rough Duty RH/Temperature Remote Probe Transmitters are designed to measure relative humidity and temperature, available through either analog or communication signals to provide an efficient monitoring and control solution. A hinged and gasketed, weatherproof polycarbonate enclosure is included for ease of installation.

The remote probe options are available in different cable lengths with compatible mounting accessories. Select the required cable length and mounting accessories as per your application.

## SPECIFICATIONS

SENSOR TYPE	<b>Temperature (T):</b> Bipolar transistor sensor chip <b>Relative Humidity (RH):</b> Thermoset Polymer-based Capacitive Sensor Chip
MEASUREMENT RANGE	<b>Temperature (T):</b> -20 to 60°C (-4 to 140°F) <b>Relative Humidity (RH):</b> 0 to 100 %RH
ACCURACY	<b>Temperature (T):</b> ±0.1°C (±0.18°F) @ 0 to 60°C (32 to 140°F) Typical <b>Relative Humidity (RH):</b> ±1% (20 to 70 %RH) @ 25°C Typical ±1.5% (0 to 20 %RH and 70% to 90% RH) @ 25°C Typical
LCD DISPLAY VALUES:	<b>Temperature (T):</b> -20.0 to 60.0°C (0.1°C resolution) or -4 to 140°F (0.2°F resolution) <b>Relative Humidity (RH):</b> 0 to 100 %RH
OUTPUT	<b>Analog Signals:</b> 2X 4-20mA (Active) or 0-5 / 0-10 Vdc, (selectable) <b>Network Communication:</b> BACnet® /Modbus (selectable)
RELAY OUTPUT	Form-C (NO/RCOM/NC) max 24v AC/DC, 3A contact rating Programmable from Temperature/RH/Digital Input/MODBUS soft point
OUTPUT DRIVE @ 24 VDC	<b>Current:</b> 550 Ω maximum <b>Voltage:</b> 10K Ω minimum
OUTPUT PARAMETERS	<b>Temperature:</b> -20 to 60°C (-4 to 140°F) <b>Relative Humidity:</b> 0 to 100%
INTERNAL ADJUSTMENT	<b>Temperature OFFSET:</b> ±5.0°C or ±10.0°F programmable <b>Relative Humidity OFFSET:</b> ±20 %RH, programmable 2 point GAIN for Temperature & RH
POWER SUPPLY	24 Vac/dc ±10% (non-isolated half-wave rectified)
CONSUMPTION	75mA
PROTECTION CIRCUITRY	Reverse voltage protected, and output limited
BACNET® PROTOCOL	MS/TP, 2-wire RS-485 Baud rate - 9600, 19200, 38400, 57600, 76800 & 115200 0-127 slave address range (Factory default is 1, 127 devices max on one daisy chain)
MODBUS PROTOCOL	RTU, 2-wire RS-485 Baud rate - 9600, 19200, 38400, 57600, 76800 & 115200 1-247 slave address range (Factory default is 1, 247 devices max on one daisy chain)
PROGRAMMING/SELECTION	Via internal push buttons and on-screen menu
OPERATING CONDITIONS	-20 to 60°C (-4 to 140°F), 0 to 95 %RH non-condensing
STORAGE CONDITIONS	-40 to 70°C (-40 to 158°F), 0 to 95 %RH non-condensing
ENCLOSURE	<b>Material:</b> <b>B:</b> Grey polycarbonate, UL94-V0, IP65 (NEMA 4X) <b>F:</b> Same as B, includes thread adapter (1/2" NPT to M16) and liquid tight cable gland fitting cord grip 1.7 to 5.8mm (0.067 to 0.228") <b>G:</b> 90° Angled Cable Gland <b>Dimensions:</b> 112.5mm W x 116.5mm H x 53.7mm D (4.43" x 4.58" 2.11")
DISPLAY UNITS	<b>Symbols:</b> °C, °F, %RH <b>Display Size:</b> 37mm x 13mm <b>Digit Height:</b> 5mm <b>Backlight:</b> AUTO/ON/OFF
SENSOR REMOTE PROBE	SS316, 75mm (2.95"), 16mmØ (0.63") M8 Electrical connector FT6 remote cable - 1m (3.3'), 3m (9.8'), 5m (16.4') & 10m (32.8')

**SPECIFICATIONS**

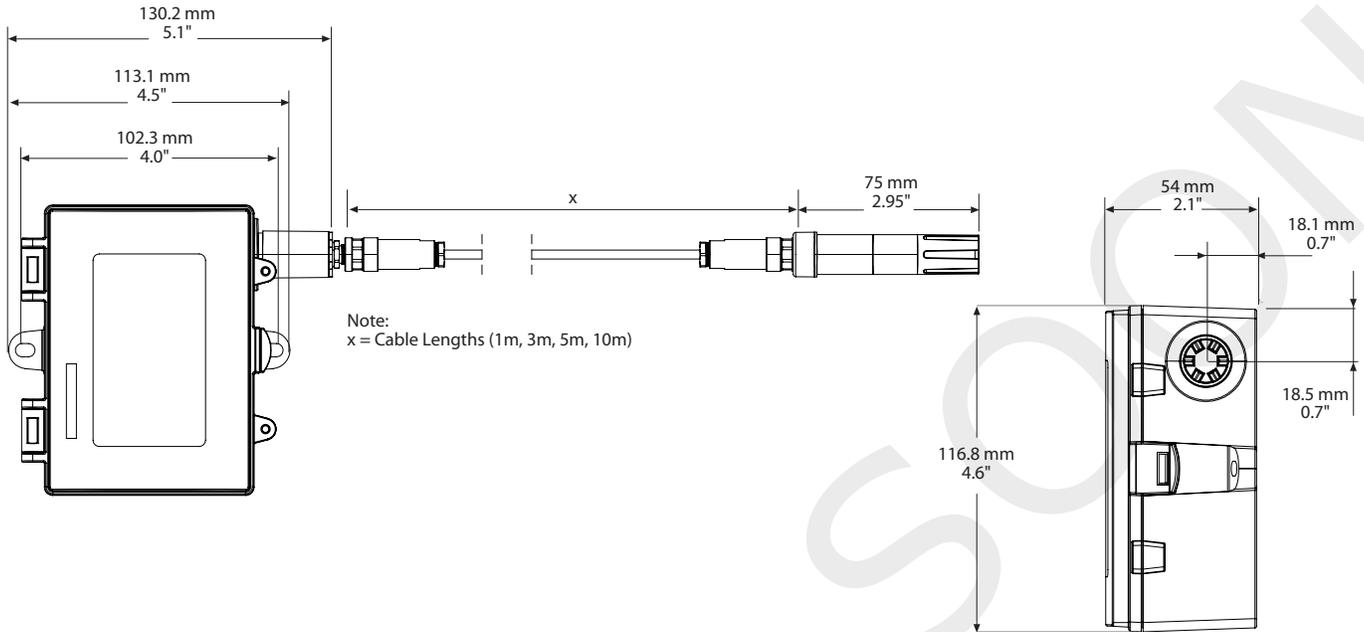
WIRING CONNECTION	Removable screw terminal block, 16 AWG to 28 AWG
OPTIONAL CALIBRATION CERTIFICATE	NIST traceable 1-Point or 3-Point
APPROVAL (PENDING)	CE / UKCA / UL / BTL
CERTIFICATION (PENDING)	UL 60730 & CSA E60730
PROTECTION CLASS	III
PURPOSE OF CONTROL	Operating Control
TYPE OF ACTION	Type 1
IMPULSE VOLTAGE	330V
POLLUTION DEGREE	2
COUNTRY OF ORIGIN	Canada

**ORDERING CODE**

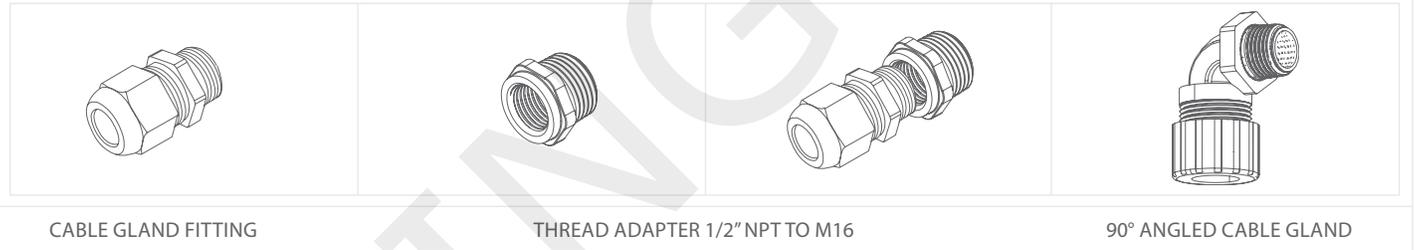
PRODUCT	HTX1R	Rough Duty RH/Temperature, Remote Probe
ENCLOSURE	B F G	Polycarbonate, with hinged and gasketed cover Same as B, with thread adapter and cable gland fitting Same as B, with 90° Angled Cable Gland
LCD DISPLAY	C V	Concealed, No NFC Viewable, No NFC
PROBE LENGTH	P	75mm (2.95")
PROBE / FILTER	SG	SS316 / SS Mesh Grid
CABLE LENGTH	01 03 05 10	01m (3.3') 03m (9.8') 05m (16.4') 10m (32.8')
NIST CALIBRATION CERTIFICATE	1N 3N	None (Leave Blank) 1-Point RH/T 3-Point RH/T

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

**DIMENSIONS**



**ACCESSORIES - INCLUDED WITH F STYLE ENCLOSURE**

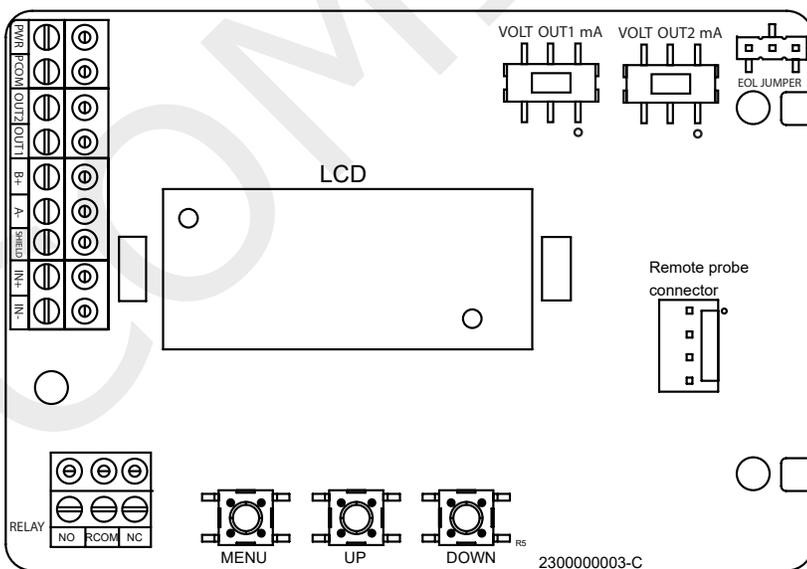


CABLE GLAND FITTING

THREAD ADAPTER 1/2" NPT TO M16

90° ANGLED CABLE GLAND

**WIRING INFORMATION**



TERMINAL	FUNCTION
PWR	24 Vac/dc
PCOM	Common
OUT1	Analog Output
OUT2	Analog Output
B+	Network Output
A-	Network Output
SHIELD	Network Output
IN+	Digital Input
IN-	Digital Input
NO	Relay Output - Normally Open Contract
RCOM	Relay Output - Common
NC	Relay Output - Normally Close Contract