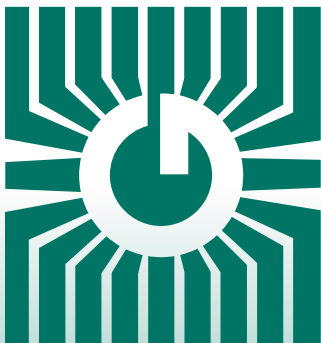


# GREYSTONE ENERGY SYSTEMS INC



## HIGH ACCURACY TEMPERATURE TRANSMITTERS HATX Series



### Precision temperature sensing/control

#### FEATURES:

- High Accuracy RTD sensing element
- Choice of scaled ranges and outputs
- Various enclosure styles
- Various configurations
- Custom laser etching available

*Peace of mind  
through reliable  
temperature monitoring*

GREYSTONE HAS AN ISO 9001 REGISTERED QUALITY SYSTEM

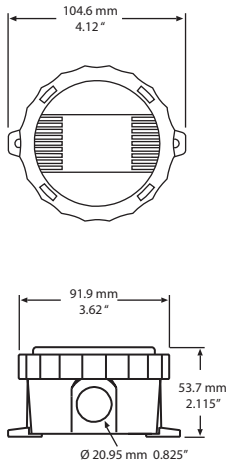
# HATX - TEMPERATURE TRANSMITTER CONFIGURATIONS

## SPECIFICATIONS:

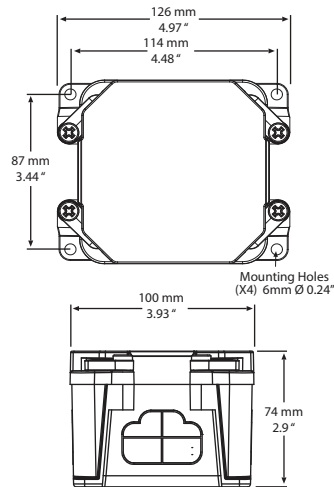
Sensor.....	1000 ohm Platinum RTD	Output Signal.....	4-20mA current loop, 0-5 Vdc, or 0-10 Vdc (factory configured)
Sensor Accuracy.....	<b>RTD Class A:</b> ±0.15°C @ 0°C <b>RTD 1/3 DIN:</b> ±0.1°C @ 0°C <b>RTD 1/10 DIN:</b> ±0.03°C @ 0°C	Transmitter Accuracy.....	±0.125% of span, including linearity
Probe sensing Range.....	<b>BM, CN, SO, GL, RP, DR:</b> -20 to 105°C (-4 to 221°F) <b>DC, DF, FL, RN:</b> -20 to 60°C (-4 to 140°F) <b>OS:</b> -40 - 85°C (-40 - 185°F)	4-20 mA loop power Supply.....	15-35 Vdc or 22-32 Vac
Wire Material.....	<b>BM, CN, SO, GL, OS, RP:</b> PVC insulated, parallel bonded <b>DF, DC, FL, RN, RS:</b> FT-6 Plenum Rated Cable <b>DR:</b> KYNAR, PVDF, 28 AWG	Minimum Current Loop.....	2 mA nominal (occurs with shorted sensor)
Wire length.....	<b>FL:</b> 1.83 m (6') <b>RN, GL:</b> 1.524 m (5')	Maximum loop Current.....	22.5 mA nominal (occurs with open sensor)
Probe Material.....	<b>BM, CN, DR, RP, RN:</b> 304 series stainless steel <b>SO, GL:</b> Aluminum plate w/ compressible foam backing <b>DC:</b> Soft copper	Maximum Loop Load.....	>600 ohms
Probe Dimension.....	<b>BM, CN, DR, RP, RN:</b> 6.35 mm (0.25") Diameter <b>SO:</b> 38.1 mm (1.5") Square <b>DC:</b> 7.94 mm (0.3125") Diameter <b>GL:</b> 31.75 x 9.525 x 9.525 mm (1.25" x 0.375" x 0.375")	0-5 Vdc Power Supply.....	10-35 Vdc or 10-32 Vac
Fitting Size.....	1/2" NPT	0-10 Vdc Power Supply.....	15-35 Vdc or 15-32 Vac
Fitting Material.....	Nylon	Maximum Current (Voltage).....	5 mA nominal
		Maximum Output (Voltage).....	limited to <5.5 Vdc for 0-5 Vdc, <10.5 for 0-10 Vdc
		Input Voltage Effect.....	Negligible over specified operating range
		RFI rejection.....	Good RFI rejection of normal frequencies
		Protection Circuitry.....	Reverse voltage protected and output limited
		Ambient Operating Range.....	-40 - 85°C (-40 - 185°F), 0-95% RH non-condensing
		Enclosure.....	(E) ABS, UL94-V0, IP65 (NEMA 2) (P)-PVC, IP65 (NEMA 4X)
		Wiring Connections.....	Screw terminal block

## ENCLOSURE DIMENSIONS:

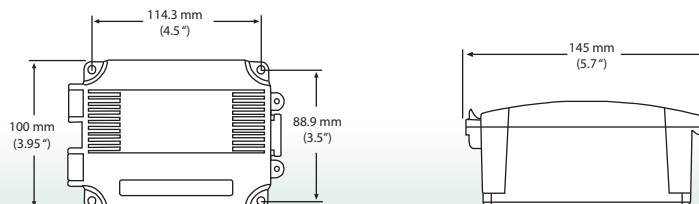
**ABS Enclosure**



**PVC Enclosure**



**ABS Weatherproof Enclosure (OS Only)**



# PRODUCT ORDERING INFORMATION:

MODEL	Product Description
HATX	High Accuracy Temperature Transmitter Series

CODE	Mounting Style
BM	Duct
DC	Duct average, copper probe
DF	Duct average, flexible cable
DR	Duct average, rigid stainless steel probe
CN	Immersion, Nylon Fitting, 1/2" NPT
RN	Immersion w/Remote Probe, Nylon Fitting, 1/2" NPT
RP	Strap-on - Remote Probe
SO	Strap-on - Assembly clamps around pipe with aluminum plate c/w 254 mm (10") stainless clamp
OS	Outside Air
FL	Flying lead
GL	Glass

CODE	Enclosure
E	ABS Enclosure
P	PVC Weatherproof

CODE	Sensor
18	1000 Ω Platinum, 2 Wire, IEC 751, 385 Alpha, thin film, Class A
48	1000 Ω Platinum, 2 Wire, IEC 751, 385 Alpha, thin film, 1/3 DIN
22	1000 Ω Platinum, 2 Wire, IEC 751, 385 Alpha, thin film, 1/10 DIN
41	1000 Ω Platinum, 3 Wire, IEC 751, 385 Alpha, thin film, Class A
49	1000 Ω Platinum, 3 Wire, IEC 751, 385 Alpha, thin film, 1/3 DIN
50	1000 Ω Platinum, 3 Wire, IEC 751, 385 Alpha, thin film, 1/10 DIN

CODE	Probe Length	Lengths are applicable to these Mounting Styles
A	50 mm (2")	BM, RP, RN & CN
B	100 mm (4")	BM, RP, RN & CN
C	150 mm (6")	BM, RP, RN & CN
D	200 mm (8")	BM, RP, RN & CN
E	300 mm (12")	BM
F	450 mm (18")	BM, DR
G	600 mm (24")	DR
H	900 mm (36")	DR
I	1800 mm (6')	DC, DF
J	3600 mm (12')	DC, DF
K	6100 mm (20')	DC, DF
L	7300 mm (24')	DC, DF

**OMIT FOR SO, OS, FL & GL**

CODE	Output
A	4-20mA 2 or 3 wire
D	0-5 VDC 3 wire
E	0-10 VDC 3 wire

CODE	Scaled Range
1	0°C - 35°C (32°F - 95°F)
2	0°C - 50°C (32 F - 122 F)
3	0°C - 100°C (32°F - 212°F)
6	-50°C - 50°C (-58°F - 122°F)

HATX	BM	C	18	E	A	2
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## FEATURES:

The HATX temperature transmitters offer a platinum RTD's with transmitter which can be interfaced with a computerized monitoring or control system. A wide variety of configurations are available such as:

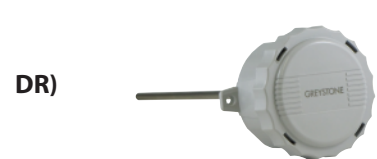
**BM & BB) Duct Sensor** – The BM & BB is for single point monitoring. Both are available with various probe lengths. The BM has various enclosures available and the BB provides a mounting bracket for installation.



**CN & RN) Immersion Sensor** – The CN & RN have a 1/2" NPT fitting to be mounted into a thermowell. The RN is provided with 1.524 (5') of cable for remote mounting of the probe. It is available in various lengths and enclosures.



**DF, DC & DR) Duct Averaging Sensor** – All models incorporate numerous sensors along the assembly and act as a single sensor averaging the temperature across the sensors. They are available in various lengths. The DF flexible multi-point duct average temperature sensor utilizes several high accuracy sensors space at equal distances. The DC series multi-point average duct temperature sensor utilizes several high accuracy sensors space at equal distances and encapsulated in a 7.94 mm (0.3125") OD, soft copper probe. The DR is a constructed of rigid stainless steel. Various enclosures are available.



**RP & SO) Strap-on Sensor** – The RP single point strap-on temperature sensor utilizes a high accuracy sensor encapsulated in a 6.35 mm (0.25") OD, 304 stainless steel probe. The SO single point strap-on temperature sensor has a high accuracy sensor bonded to a 38 mm x 38 mm (1.5" x 1.5") aluminum plate and adhered to a 38 mm x 25.4 mm (1.5 x 1") compressible foam.



**OS) OSA Sensor** – The OS, single point outside air temperature sensor utilizes a high accuracy sensor. All probes are constructed to provide excellent heat transfer, fast response and are potted to resist moisture penetration.



**GL) Glass** – The GL single point glass temperature sensor utilizes a high accuracy sensor encapsulated in a 31.75mm L x 9.525mm W x 9.525 mm H (1.25" x .375" x .375") Aluminum probe.



**FL) Flying Lead** – FL single point flying lead temperature sensor utilizes a high accuracy sensor encapsulated in 6.35 mm (0.25") OD X 50 mm (2"), 304 series stainless steel probe.



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**RoHS**  
COMPLIANT



*Greystone Energy Systems Inc. is one of North America's largest ISO registered manufacturers of HVAC/R sensors and transmitters for Building Automation Management Systems.*

*We have conscientiously established a worldwide reputation as an industry leader by maintaining leading-edge design technology, prompt technical support, and a commitment to on-time deliveries. We take pride in our Quality Management System which is ISO 9001 certified, assuring our customers of consistent product reliability.*

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