GREYSTONE ENERGY SYSTEMS INC

HIGH ACCURACY STRAP-ON TEMPERATURE TRANSMITTER HATXSO Series

The high accuracy single point strap-on temperature transmitter has a precision platinum RTD bonded to a 38.1 mm x 38.1 mm $(1.5" \times 1.5")$ aluminum plate and adhered to a 38 mm (1.5")compressible foam. A 25.4 cm (10") S/S Pipe clamp is provided to secure the assembly to various sizes of pipes. All probes are constructed to provide excellent heat transfer, fast response and are potted to resist moisture penetration. A transmitter that provides a high accuracy signal with excellent long term stability, low hysteresis and fast response is available with various ranges.

SPECIFICATION:

Sensor Accuracy. RTD Class A: ±0.15°C @ 0°C RTD 1/3 DIN: ±0.1°C @ 0°C RTD 1/10 DIN: ±0.03°C @ 0°C Probe Sensing Range. -20 to 105°C (-4 to 221°F) Wire Material PVC insulated, parallel bonded, 22 AWG Probe Material Aluminum plate with compressible foam backing Probe Dimensions 38 mm (1.5″) square Pipe-strap 25.4 mm (10″) Stainless steel Wire Material PVC insulated, parallel bonded, 22 AWG Output Signal 4-20 mA current loop, 0-5 Vdc, or 0-10 Vdc (factory configured) Transmitter Accuracy ±0.1% of span, including linearity 4-20 mA loop power supply 15-35 Vdc or 22-32 Vac Minimum Loop Current 2 mA nominal (occurs with shorted sensor) Maximum Loop Current 22.5 mA nominal (occurs with open sensor) Maximum Loop Load >600 ohms 0-5 Vdc Power Supply 10-35 Vdc or 10-32 Vac 0-10 Vdc Power Supply 5 mA nominal Maximum Output (Voltage) 5 mA nominal	Sensor Type	1000 ohm Platinum RTD
RTD 1/3 DIN: ±0.1°C @ 0°C RTD 1/10 DIN: ±0.03°C @ 0°CProbe Sensing Range20 to 105°C (-4 to 221°F)Wire MaterialPVC insulated, parallel bonded, 22 AWGProbe MaterialAluminum plate with compressible foam backingProbe Dimensions38 mm (1.5″) squarePipe-strap25.4 mm (10″) Stainless steelWire MaterialPVC insulated, parallel bonded, 22 AWGOutput Signal4-20 mA current loop, 0-5 Vdc, or 0-10 Vdc (factory configured)Transmitter Accuracy±0.1% of span, including linearity4-20 mA loop power supply15-35 Vdc or 22-32 VacMinimum Loop Current2 mA nominal (occurs with shorted sensor)Maximum Loop Current22.5 mA nominal (occurs with open sensor)Maximum Loop Load>600 ohms0-5 Vdc Power Supply10-35 Vdc or 10-32 Vac0-10 Vdc Power Supply5 mA nominalMaximum Output (Voltage)5 mA nominalMaximum Output (Voltage)5 mA nominalMaximum Output (Voltage)5 mA nominalMaximum Output (Voltage)5 mA nominalAmbient Operating Range0 to 50°C (32 to 122°F), 0-95% RH non-condensingEnclosureABS - UL94-V0, IP65 (NEMA4X) E - includes thread adapter (1/2" NPT to M16), and cable gland fittingWiring ConnectionsScrew terminal block (14 to 22 AWG)		
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Output Signal	Pipe-strap	25.4 mm (10") Stainless steel
(factory configured) Transmitter Accuracy	Wire Material	PVC insulated, parallel bonded, 22 AWG
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 4-20 mA loop power supply		(factory configured)
Minimum Loop Current 2 mA nominal (occurs with shorted sensor) Maximum Loop Current 22.5 mA nominal (occurs with open sensor) Maximum Loop Load >600 ohms 0-5 Vdc Power Supply 10-35 Vdc or 10-32 Vac 0-10 Vdc Power Supply 15-35 Vdc or 15-32 Vac Maximum Current (Voltage) 5 mA nominal Maximum Output (Voltage) 5 mA nominal Maximum Output (Voltage) Limited to <5.5 Vdc for 0-5 Vdc, <10.5 for 0-10 Vdc	Transmitter Accuracy	±0.1% of span, including linearity
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Maximum Loop Load	Minimum Loop Current	2 mA nominal (occurs with shorted sensor)
0-5 Vdc Power Supply	Maximum Loop Current	22.5 mA nominal (occurs with open sensor)
0-10 Vdc Power Supply	Maximum Loop Load	>600 ohms
Maximum Current (Voltage) 5 mA nominal Maximum Output (Voltage) 5 mA nominal Input Voltage Effect	,	
Maximum Output (Voltage) Limited to <5.5 Vdc for 0-5 Vdc, <10.5 for 0-10 Vdc	0-10 Vdc Power Supply	15-35 Vdc or 15-32 Vac
Input Voltage Effect Negligible over specified operating range Protection Circuitry Reverse voltage protected and output limited Ambient Operating Range 0 to 50°C (32 to 122°F), 0-95% RH non-condensing Enclosure ABS - UL94-V0, IP65 (NEMA4X) E - includes thread adapter (1/2" NPT to M16), and cable gland fitting Wiring Connections Screw terminal block (14 to 22 AWG)	Maximum Current (Voltage)	5 mA nominal
Protection Circuitry		
Ambient Operating Range 0 to 50°C (32 to 122°F), 0-95% RH non-condensing Enclosure ABS - UL94-V0, IP65 (NEMA4X) E - includes thread adapter (1/2" NPT to M16), and cable gland fitting Wiring Connections Screw terminal block (14 to 22 AWG)	Input Voltage Effect	Negligible over specified operating range
Enclosure	Protection Circuitry	Reverse voltage protected and output limited
E - includes thread adapter (1/2" NPT to M16), and cable gland fitting Wiring Connections	Ambient Operating Range	0 to 50°C (32 to 122°F), 0-95% RH non-condensing
and cable gland fitting Wiring Connections Screw terminal block (14 to 22 AWG)	Enclosure	
Wiring Connections Screw terminal block (14 to 22 AWG)		• • •
		5 5
Country of Origin Canada		
	Country of Origin	Canada

*This product is factory calibrated and any field adjustment will void the warranty.

TYPICAL INSTALLATION:

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

The strap-on temperature transmitter series can be mounted directly to various sizes of pipes and secured using a 254 mm (10") S/S pipe clamp. If necessary, remove a section of insulation from the pipe. The 254 mm (10") S/S pipe clamp is a "Quick Release" type and can be separated by moving the tightening screw so that it is perpendicular to the clamp and slide the clamp apart. Postion the aluminum plate on the pipe so it makes the best contact, wrap the clamp around the pipe and re-assemble and tighten. Any excess clamp may be cut off. For best results, thermal conductive compound should be applied to pipe prior to mounting the probe.

Wiring connections are made inside the enclosure.



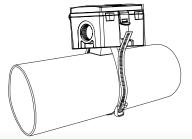
PART NUMBER SELECTED

PRODUCT SELECTION INFORMATION:

MOI	DEL	EL Product Description										
HAT	xso	High Accuracy Strap-on Temperature Transmitter										
		CODE Enclosure										
		A		ABS, with hinged & gasketed cover Same as A, with thread adapter & cable gland fitting								
				С	DE	Sensor						
			4	8 8 2	1000 Ω , Platinum, 2 wire, IEC 751, 385 Alpha, thin film Class A 1000 Ω , Platinum, 2 wire, IEC 751, 385 Alpha, thin film 1/3 DIN 1000 Ω , Platinum, 2 wire IEC 751, 385 Alpha, thin film, 1/10 DIN							
						CODE	E	Output				
						A D E		4-20 mA 0-5 Vdc 0-10 Vdc				
								CODE	Scaled Range			
								001 002 003 *	0 to 35°C (32 to 95°F) 0 to 50°C (32 to 122°F) 0 to 100°C (32 to 212°F) Custom ranges available			
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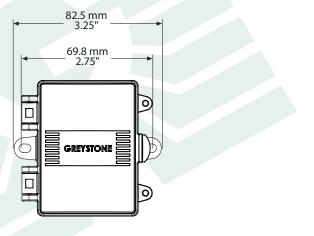
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Greystone Energy Systems, Inc. reserves the right to make design modifications without prior notice.

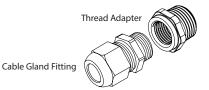


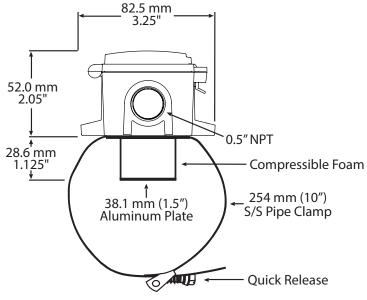


DIMENSIONS:



Included with E style enclosure









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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 leadingedge 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.

GREYSTONE HAS AN ISO 9001 REGISTERED QUALITY SYSTEM