



# GREYSTONE ENERGY SYSTEMS INC

## HIGH ACCURACY REMOTE IMMERSION TEMPERATURE TRANSMITTER HATXR Series

The HATXR is single point immersion temperature transmitter with remote probe for chilled water applications. It incorporates a high accuracy platinum RTD encapsulated in a 6.35 mm (0.25") OD, 304 stainless steel probe and is available in various lengths (see ordering chart). All probes provide excellent heat transfer, fast response and 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..... 1000 ohm Platinum RTD  
 Accuracy..... **RTD Class A:**  $\pm 0.15^{\circ}\text{C}$  @  $0^{\circ}\text{C}$   
                                   **RTD 1/3 DIN:**  $\pm 0.1^{\circ}\text{C}$  @  $0^{\circ}\text{C}$   
                                   **RTD 1/10 DIN:**  $\pm 0.03^{\circ}\text{C}$  @  $0^{\circ}\text{C}$

Probe sensing Range .....  $-20$  to  $60^{\circ}\text{C}$  ( $-4$  to  $140^{\circ}\text{F}$ )  
 Wire Material ..... FT-6 Rated Plenum Cable 22 AWG  
 Wire Length ..... 1.524 m (5')  
 Probe Material ..... 304 Series Stainless Steel  
 Probe Dimension..... 6.35 mm (0.25") Diameter  
 Fitting Size ..... 1/2" NPT  
 Fitting Material ..... Nylon  
 Output Signal..... 4-20mA current loop, 0-5 Vdc, or  
                                   0-10 Vdc (factory configured)  
 Transmitter Accuracy.....  $\pm 0.125\%$  of span, including  
                                   linearity  
 4-20 mA loop power Supply. 15-30 Vdc or 22-28 Vac  
 Minimum Current Loop ..... 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 ..... 10-30 Vdc or 10-28 Vac  
 0-10 Vdc Power Supply..... 15-30 Vdc or 15-28 Vac  
 Maximum Current (Voltage).. 5 mA nominal  
 Maximum Output (Voltage).. limited to <math>5.5\text{ Vdc}</math> for 0-5 Vdc,  
                                   <math>10.5</math> 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.....  $-20$  -  $60^{\circ}\text{C}$  ( $-4$  -  $140^{\circ}\text{F}$ ), 0-95% RH  
                                   non-condensing  
 Enclosure ..... (E)-ABS, UL94-5VB, IP65 (NEMA 4X)  
                                   (P)- PVC, IP65 (NEMA 4X)  
 Wiring Connections..... Screw terminal block  
                                   (14 to 22 AWG)

### PART NUMBER SELECTED

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### PRODUCT SELECTION INFORMATION:

MODEL	Product Description
HATXRN	High Accuracy Remote Probe Immersion Temperature Transmitter with Nylon Fitting

CODE	Enclosure
E	Round ABS, with gasket cover
P	PVC Weatherproof

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

CODE	Probe Length
A	50 mm (2")
B	100 mm (4")
C	150 mm (6")
D	200 mm (8")

CODE	Output
A	4-20 mA
D	0-5 Vdc
E	0-10 Vdc

CODE	Scaled Range
1	$0^{\circ}$ - $35^{\circ}\text{C}$ ( $32^{\circ}$ - $95^{\circ}\text{F}$ )
2	$0^{\circ}$ - $50^{\circ}\text{C}$ ( $32^{\circ}$ - $122^{\circ}\text{F}$ )
3	$0^{\circ}$ - $100^{\circ}\text{C}$ ( $32^{\circ}$ - $212^{\circ}\text{F}$ )
*	Custom range, please contact Greystone

[Empty box for custom scaled temperature range]

### \*CUSTOM SCALED TEMPERATURE RANGE

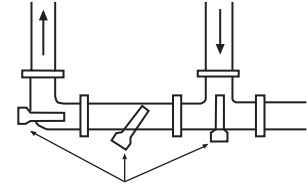
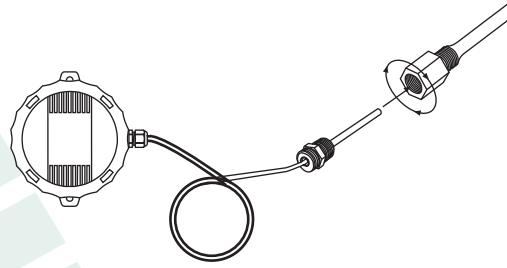
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## TYPICAL INSTALLATION:

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

**NOTE: All immersion sensors require a thermowell (sold separately)**

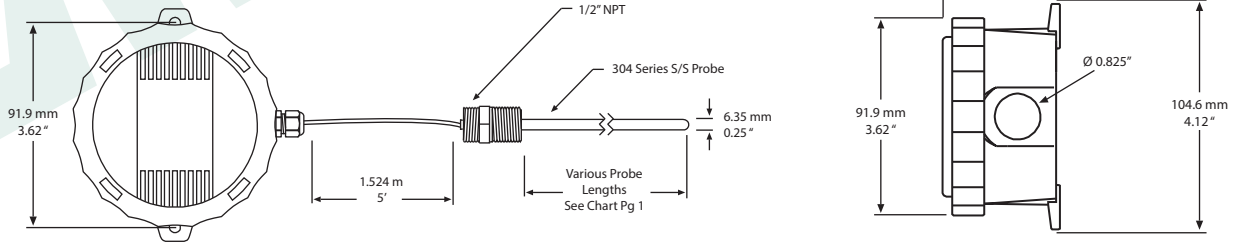
The immersion type probes are installed in the appropriate length thermowell for the pipe size. Thermal conductive compound should be added inside the thermowell to provide optimum thermal transfer.



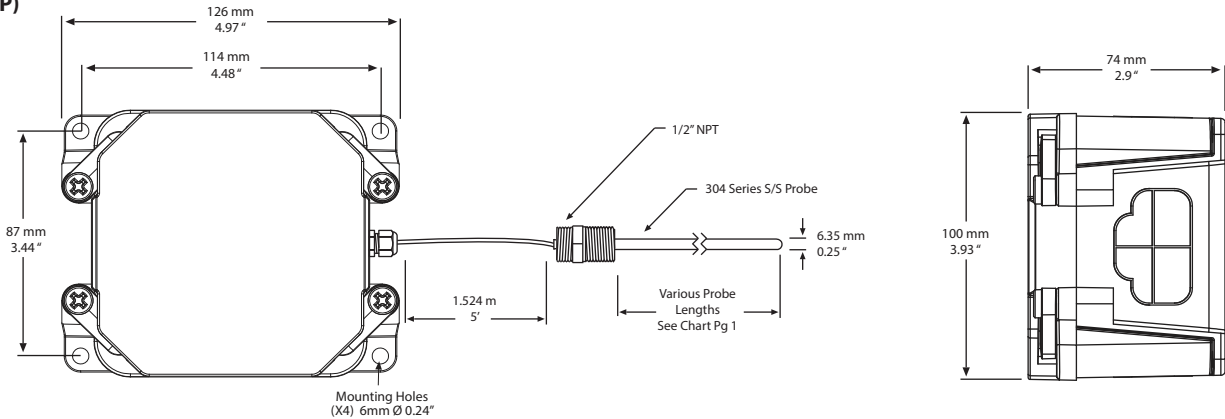
Thermowell placement in pipe

## DIMENSIONS:

### Round ABS Enclosure (E)



### PVC Enclosure (P)



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



**GREYSTONE**  
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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.*

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