



# GREYSTONE

ENERGY SYSTEMS INC

## IMMERSION TEMPERATURE TRANSMITTER TE500C Series



The TE500C single point immersion temperature transmitter incorporates a precision 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. (See ordering chart)

### SPECIFICATION:

Sensor	100 ohm Platinum RTD or 1000 ohm Platinum RTD
Sensor Accuracy	±0.3°C (±0.54°F) @ 0°C (32°F)
Probe sensing Range	-20 to 105°C (-4 to 221°F)
Wire Material	PVC insulated, parallel bonded (Type 2, 100Ω Plat. uses FT4)
Probe Material	304 Series Stainless Steel
Probe Dimension	6.35 mm (0.25") Diameter
Fitting Size	1/2" NPT
Fitting Material	<b>A</b> - Brass, <b>E</b> - Nylon
Output Signal	4-20mA 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 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	10-35 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)	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	ABS, UL94-5VB, IP61 (NEMA 2) (E)-ABS, UL94-5VB, IP65 (NEMA 4X) (M)-Gal. Steel, IP50 (NEMA 1) (W)-Aluminum, IP64 (NEMA3X) *In order to maintain the published NEMA/IP ratings, properly rated conduit or cable gland adapters must be used.
Wiring Connections	Screw terminal block (14 to 22 AWG)

### PART NUMBER SELECTED

### PRODUCT SELECTION INFORMATION:

MODEL	Product Description
TE500C	Immersion Temperature Transmitter

CODE	Enclosure (ABS enclosure is standard)
	ABS enclosure, standard (no code required, leave blank)
<b>E</b>	Round ABS, w/gasketed cover
<b>M</b>	Metal utility box
<b>W</b>	Aluminum weatherproof box

CODE	Sensor
<b>2</b>	100 Ω Platinum, IEC 751, 385 Alpha, thin film
<b>12</b>	1000 Ω Platinum, IEC 751, 385 Alpha, thin film (Standard)

CODE	Probe Length
<b>A2</b>	50 mm (2")
<b>B2</b>	100 mm (4")
<b>C2</b>	150 mm (6")
<b>D2</b>	200 mm (8")
<b>E2</b>	300 mm (12")
<b>F2</b>	450 mm (18")

CODE	Fitting
<b>A</b>	Brass, Spring loaded 1/2" NPT
<b>E</b>	Nylon, Non-spring loaded 1/2" NPT

CODE	Output
<b>1A</b>	4-20 mA
<b>1D</b>	0-5 Vdc
<b>1E</b>	0-10 Vdc

CODE	Scaled Range
<b>1</b>	0° - 35°C (32° - 95°F)
<b>2</b>	0° - 50°C (32° - 122°F)
<b>3</b>	0° - 100°C (32° - 212°F)
<b>4</b>	50° - 150°C (122° - 302°F)
<b>5</b>	50° - 250°C (122° - 482°F)
<b>*</b>	Custom range, please contact Greystone

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

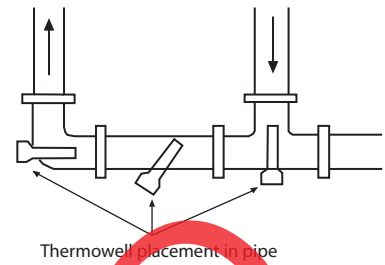
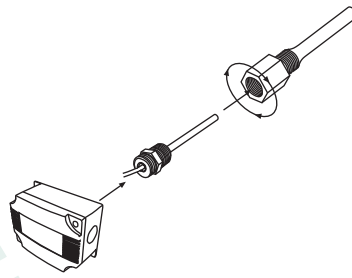
**Custom Scaled Range:**

## TYPICAL INSTALLATION:

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

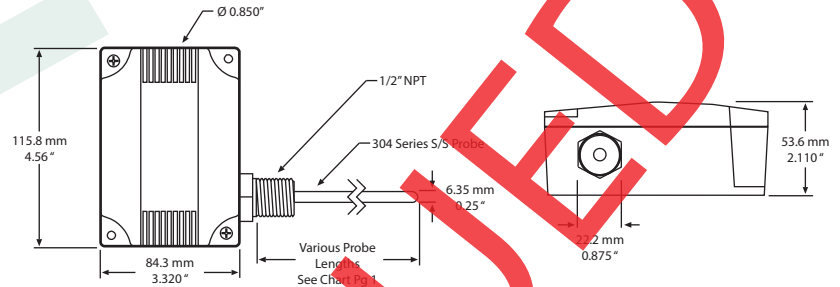
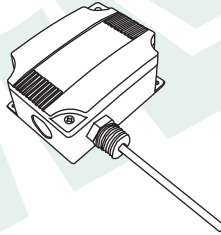
**NOTE: All immersion sensors require a thermowell (sold separately)**

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.

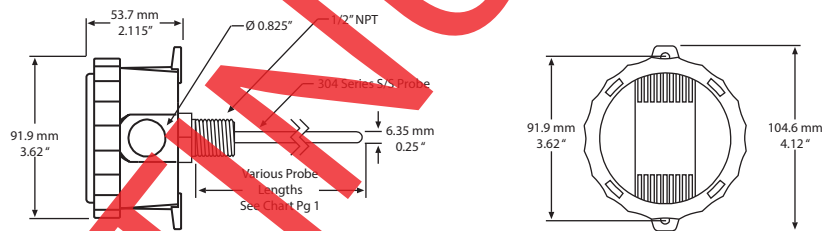
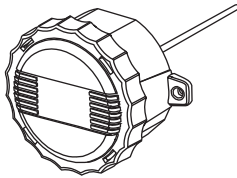


## DIMENSIONS:

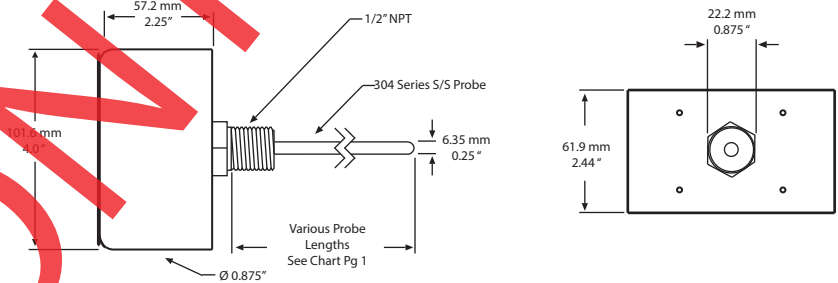
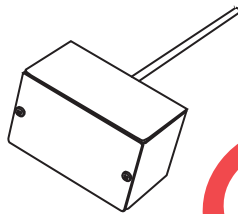
ABS Enclosure



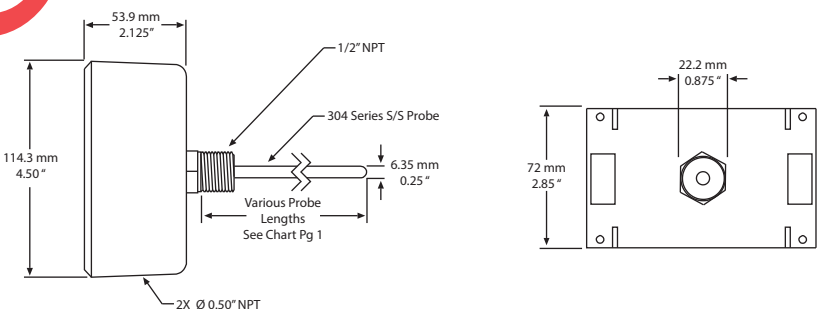
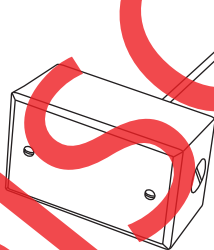
Round ABS Enclosure



Metal Enclosure



Weatherproof Enclosure



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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