



# GREYSTONE ENERGY SYSTEMS INC

## DUCT AVERAGE TEMPERATURE TRANSMITTER TE500D Series

The TE500D multi point duct average temperature transmitter incorporates numerous precision platinum RTD's at equal distances (DC is continuous) and encapsulated in a 7.94 mm (0.3125") OD, soft copper 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.....	<b>DC:</b> -20 to 60°C (-4 to 140°F) <b>DC:</b> -40 - 100°C (-40 - 212°F)
Wire Material.....	PVC insulated, parallel bonded (Type 2, 100Ω Plat. uses FT4)
Probe Material.....	Soft copper
Probe Dimension.....	7.94 mm (0.3125") Diameter
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)-Cast 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)

### TYPICAL INSTALLATION:

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

The duct average probes are installed through a hole in the side of the duct to monitor an average temperature within the duct. Select a probe length that allows for criss-crossing the duct multiple times. Install the probes in a straight section of duct at a suitable distance downstream from any heating, cooling or humidification elements.

Each enclosure style provides mounting tabs on the outside for ease of installation.



### PART NUMBER SELECTED

### PRODUCT SELECTION INFORMATION:

MODEL	Product Description
TE500D	Duct Average Temperature Transmitter
TE500DC	Continuous Duct Average Temperature Transmitter (Available in Type 12 sensor only)

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

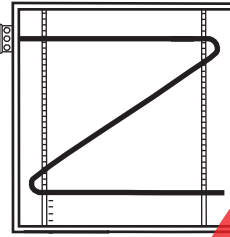
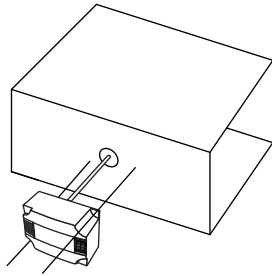
CODE	Sensor
2	100 Ω Plat. IEC 751, 385 Alpha, thin film
12	1000 Ω Platinum, IEC 751, 385 Alpha, thin film (Standard)

CODE	Probe Length/No. of Sensors for D Style
G3	1800 mm (6') 4 Sensors N/A on DC
H3	3600 mm (12') 4 Sensors
I3	6100 mm (20') 4 Sensors N/A on DC
J3	7300 mm (24') 9 sensors

CODE	Output
1A	4-20 mA
1C	0-5 Vdc
1E	0-10 Vdc

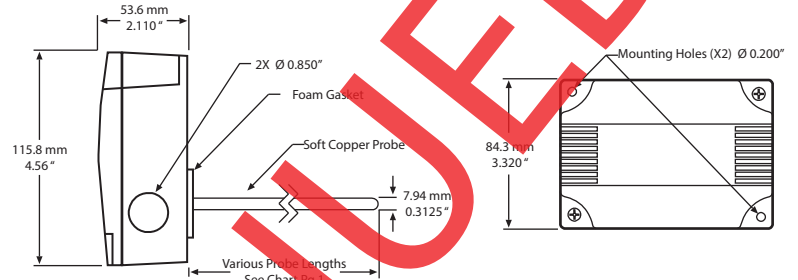
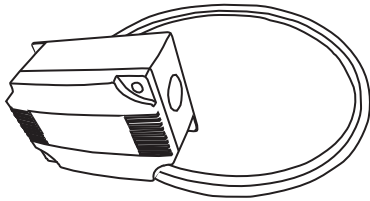
CODE	Scaled Range
1	0-35°C (32-95°F)
2	0-50°C (32-122°F)
3	0-100°C (32-212°F)
6	-50-50°C (-58-122°F)
*	Custom ranges available

## TYPICAL INSTALLATION:

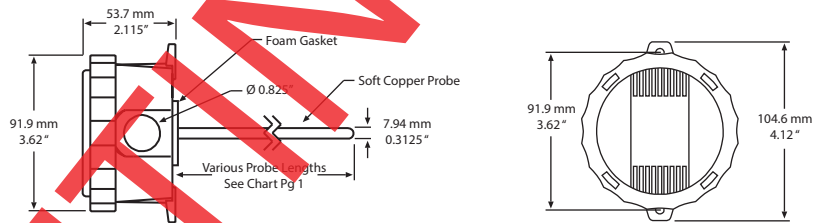
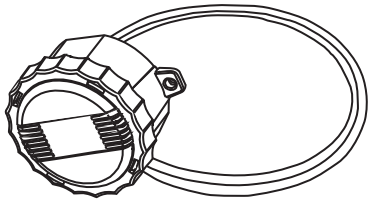


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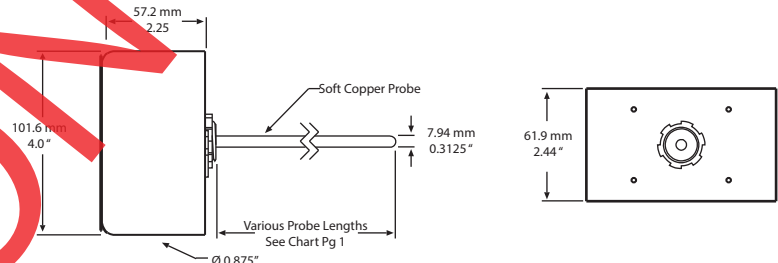
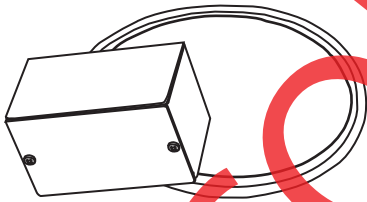
ABS Enclosure



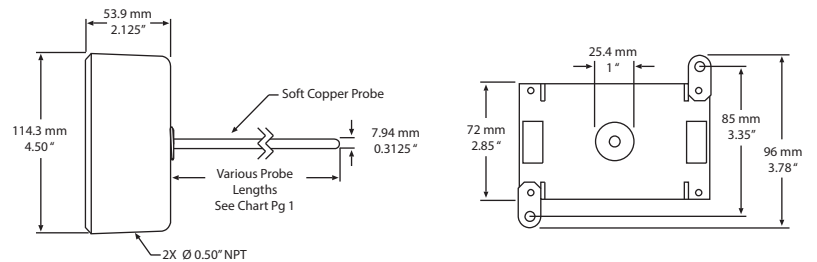
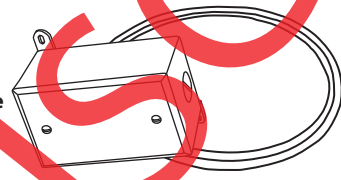
Round ABS Enclosure



Metal Enclosure



Weatherproof Enclosure



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