



# GREYSTONE

ENERGY SYSTEMS INC

## HIGH ACCURACY DUCT AVERAGE TEMPERATURE TRANSMITTER WITH LCD HATLDC Series

The HATLDC duct averaging temperature transmitter incorporates numerous high accuracy platinum RTD's encapsulated in a 7.94 mm (0.3125") OD, soft copper probe and is available in various lengths. 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 for measurement of duct temperatures. A LCD is provided in either °C or °F.



### 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..... FT6 Plenum rated, 22 AWG  
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 .....  $\pm 0.25\%$  of span, including  
linearity  
Power Supply..... **4-20 mA:** 15-35 Vdc or 22-32 Vac  
**0-5 Vdc:** 10-35 Vdc or 10-32 Vac  
**0-10 Vdc:** 15-35 Vdc or 15-32 Vac  
Consumption ..... **Current:** 22.5 mA Max  
(On open sensor)  
**Voltage:** 5 mA nominal  
Input Voltage Effect..... Negligible over specified  
operating range  
RFI rejection..... Good RFI rejection of normal  
frequencies  
Protection Circuitry..... Reverse voltage protected  
and output limited  
Display Units .....  $^{\circ}\text{C}$  or  $^{\circ}\text{F}$   
Display Range ..... 3 digit for -88.8 to 888 as  
necessary  
Display Size..... 24 mm x 11 mm  
(0.95" x 0.45")  
Ambient Operating Range....  $0 - 70^{\circ}\text{C}$  (32 -  $158^{\circ}\text{F}$ ),  
0-95% RH non-condensing  
Enclosure ..... Grey ABS, UL94-V0, IP65 (NEMA  
4X)  
Wiring Connections..... Screw terminal block  
(14 to 22 AWG)

### PART NUMBER SELECTED

### PRODUCT SELECTION INFORMATION:

MODEL	Product Description
HATLDC	High Accuracy Duct Average Temperature Transmitter with LCD Display

CODE	LCD Display
C	LCD display $^{\circ}\text{C}$
F	LCD display $^{\circ}\text{F}$

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

CODE	Probe Length	No. of Sensors
I	1800 mm (6')	4 Sensors
J	3600 mm (12')	4 Sensors
K	6100 mm (20')	4 Sensors
L	7300 mm (24')	9 Sensors

CODE	Output
A	Current 4-20mA
D	Voltage 0-5 VDC
E	Voltage 0-10 VDC

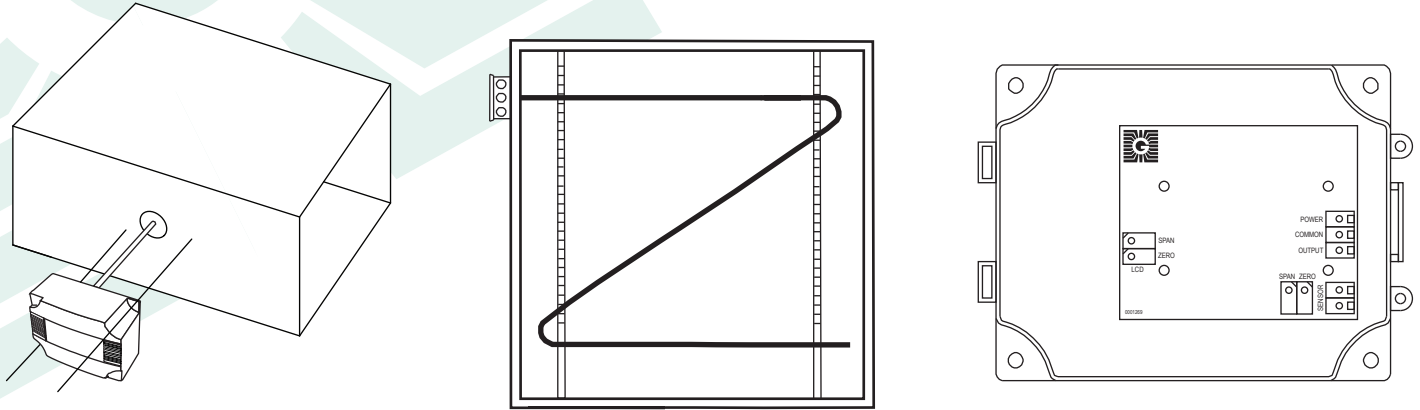
CODE	Scaled Range
1	$0 - 35^{\circ}\text{C}$ (32 - $95^{\circ}\text{F}$ )
2	$0 - 50^{\circ}\text{C}$ (32 - $122^{\circ}\text{F}$ )

## TYPICAL INSTALLATION:

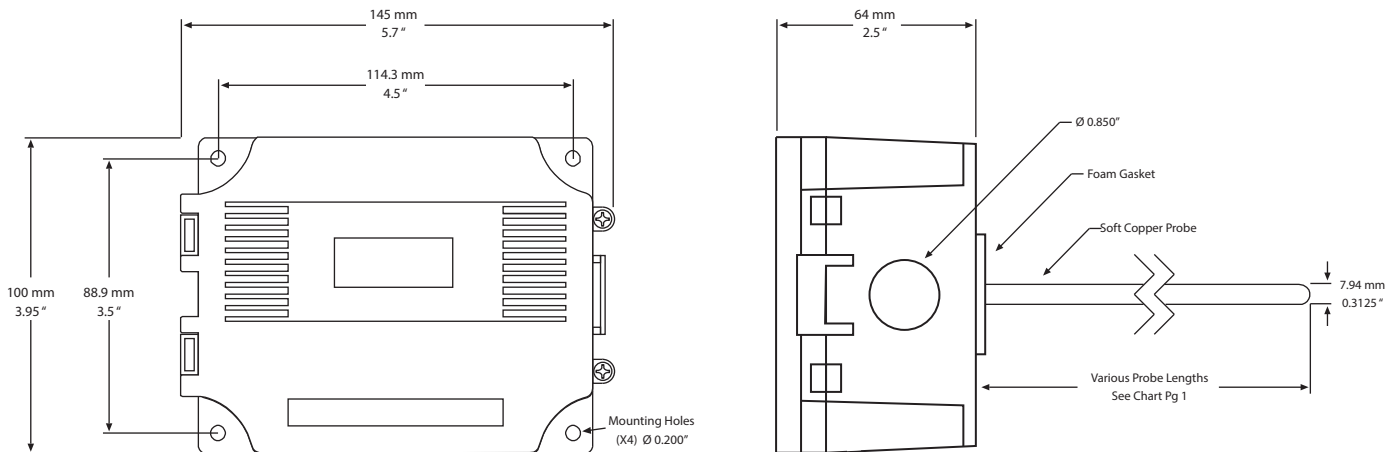
For complete installation and wiring details, please refer to the product installation instructions.

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 devices.

The enclosure provides mounting tabs or holes for ease of installation.



## DIMENSIONS:



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**