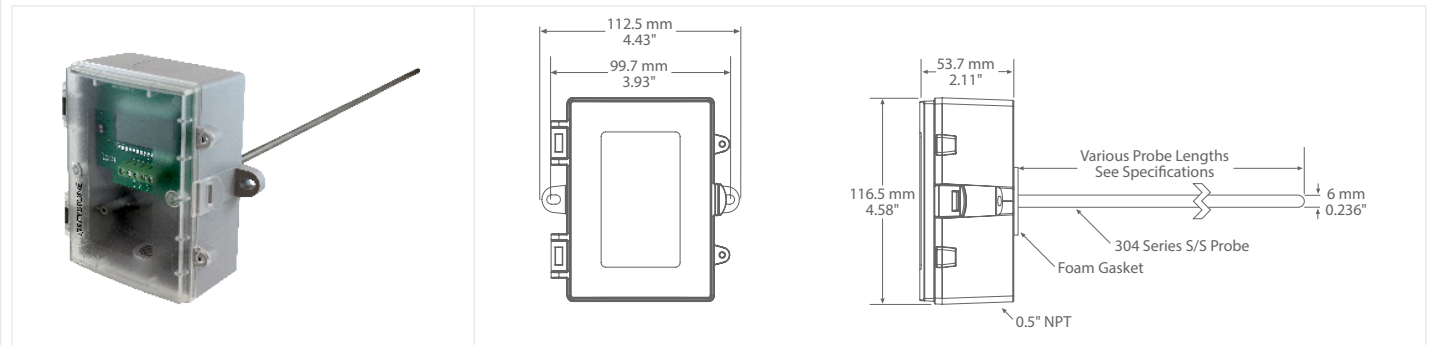




## HIGH ACCURACY RIGID DUCT AVERAGE TEMPERATURE TRANSMITTER WITH LCD



### HATDDR SERIES

#### PRODUCT DESCRIPTION

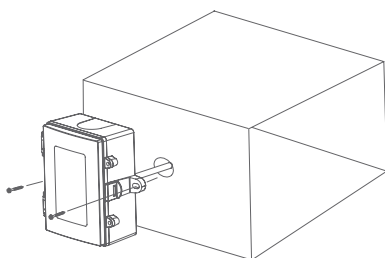
The high accuracy multi-point rigid duct average temperature transmitter incorporates four precision platinum RTD's encapsulated in a 6 mm (0.236") OD, 304 stainless steel probe and is available in various lengths (see ordering chart). All probes provide excellent heat transfer, fast response and resist 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. A weatherproof Polycarbonate enclosure is included for ease of installation. An LCD is provided in either °C or °F.

#### TYPICAL INSTALLATION

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

The duct type probes are installed through a hole in the side of the duct to monitor a single point temperature within the duct. Since the probes are tip sensitive, select a probe length that places the sensor well into the duct. Install the probe in a straight section of duct at a suitable distance downstream from any heating, cooling or humidification devices.

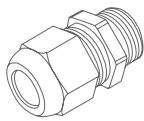
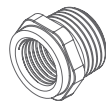
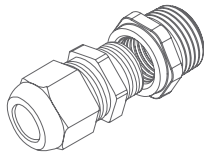
The enclosure provides mounting tabs for ease of installation.



#### SPECIFICATIONS

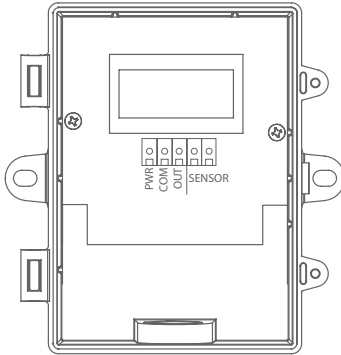
|                         |   |
|-------------------------|---|
| SENSOR TYPE             | 1000Ω Platinum, IEC 751, 385 Alpha, thin film   |
| SENSOR ACCURACY         | <b>RTD Class A:</b> ±0.15°C (±0.27°F) @ 0°C (32°F)<br><b>RTD 1/3 DIN:</b> ±0.1°C (±0.18°F) @ 0°C (32°F)<br><b>RTD 1/10 DIN:</b> ±0.03°C (±0.054°F) @ 0°C (32°F) |
| PROBE SENSING RANGE     | -40 to 60°C (-40 to 140°F)  |
| PROBE DIAMETER          | 6mm (0.236")  |
| PROBE MATERIAL          | 304 series stainless steel  |
| WIRE MATERIAL           | PVC/Kynar, 28 AWG   |
| STANDARD LENGTHS        | 450, 600, 900 mm (18", 24", 36")  |
| OUTPUT SIGNAL           | 4-20 mA current loop, 0-5 Vdc, or 0-10 Vdc (factory configured)   |
| TRANSMITTER ACCURACY    | ±0.2% of span, including linearity  |
| POWER SUPPLY            | 15-30 Vdc or 12-28 Vac  |
| CONSUMPTION (MAX)       | <b>Current:</b> 20 mA<br><b>Voltage:</b> 11 mA  |
| INPUT VOLTAGE EFFECT    | Negligible over specified operating range   |
| PROTECTION CIRCUITRY    | Reverse voltage protected and output limited  |
| OUTPUT DRIVE @ 24 VDC   | <b>Current:</b> 7000Ω max<br><b>Voltage:</b> 20,000Ω min  |
| LCD DISPLAY UNITS       | °C or °F (factory configured)   |
| DISPLAY RANGE           | 3 digit for -88.8 to 888 as required  |
| DISPLAY SIZE            | 38.1mm W x 16.5mm H (1.5" x 0.65")  |
| DIGIT HEIGHT            | 11.4mm (0.45") plus °C/°F symbol  |
| AMBIENT OPERATING RANGE | 0 to 50°C (32 to 122°F), 0 to 95 %RH  |
| ENCLOSURE               | <b>B:</b> Grey polycarbonate UL94-V0, IP65 (NEMA 4X)<br><b>F:</b> Same as B with thread adapter (1/2" NPT to M16) and cable gland fitting                       |
| WIRING CONNECTIONS      | Screw terminal block (14 to 22 AWG)   |
| COUNTRY OF ORIGIN       | Canada  |

#### ACCESSORIES - INCLUDED WITH F ENCLOSURE OPTION

|   |   |   |
|---|---|---|
|  |  |  |
| CABLE GLAND FITTING   | THREAD ADAPTER 1/2" NPT TO M16  |   |



## WIRING INFORMATION



| TERMINAL | FUNCTION                 |
|----------|--------------------------|
| PWR      | + 24 Vdc/ac power supply |
| COM      | Common                   |
| OUT      | Analog Output            |
| SEN      | Negative                 |
| SEN      | Excitation               |

## ORDERING

| PRODUCT       | HATDDR                              | High Accuracy Rigid Duct Average Temperature Transmitter with Display  |
|---------------|-------------------------------------|--|
| ENCLOSURE     | <b>B</b><br><b>F</b>                | Polycarbonate, with hinged and gasketed cover<br>Same as B, with thread adapter and cable gland fitting  |
| DISPLAY UNITS | <b>C</b><br><b>F</b>                | Celsius<br>Fahrenheit  |
| SENSOR        | <b>18</b><br><b>48</b><br><b>22</b> | 1000Ω, Platinum, 2 wire, IEC 751, 385 Alpha, thin film, Class A<br>1000Ω, Platinum, 2 wire, IEC 751, 385 Alpha, thin film 1/3 DIN<br>1000Ω, Platinum, 2 wire, IEC 751, 385 Alpha, thin film 1/10 DIN |
| PROBE LENGTH  | <b>F</b><br><b>G</b><br><b>H</b>    | 450mm (18")<br>600mm (24")<br>900mm (36")  |
| OUTPUT        | <b>A</b><br><b>D</b><br><b>E</b>    | 4-20 mA, 2 or 3 wire<br>0-5 Vdc, 3 wire<br>0-10 Vdc, 3 wire  |
| SCALED RANGE  | <b>001</b><br><b>002</b>            | 0 to 35°C (32 to 95°F)<br>0 to 50°C (32 to 122°F)  |

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

## PART NUMBER

| HATDDR |
|--------|
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