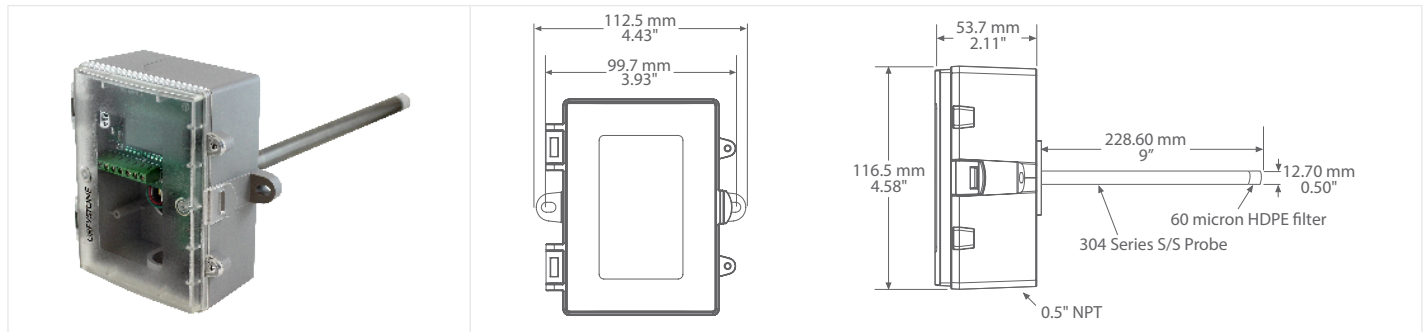




DUCT DEWPOINT TRANSMITTER



DWDT SERIES

PRODUCT DESCRIPTION

The duct dewpoint transmitter is designed for use in environmental monitoring and control systems where high performance and stability are demanded. Its state-of-the-art design combines digital linearization and temperature compensation with a highly accurate and reliable thermoset polymer based capacitance humidity sensor and curve-matched NTC thermistor temperature sensor for reliability and accuracy in the most critical applications.

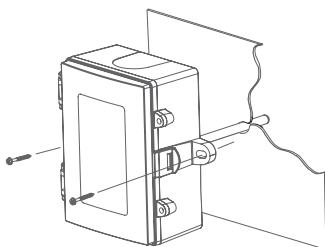
The dewpoint series has four measurement variables which include dewpoint, dry-bulb temperature, wet-bulb temperature and enthalpy which are available by either an analog, BACnet® or Modbus signal to provide the most efficient monitoring and control solution. A Polycarbonate hinged and gasketed enclosure is provided for ease of installation.

TYPICAL INSTALLATION

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

The transmitter installs directly into any air duct with a minimum width/diameter of 25.5 cm (10"). Select a suitable installation area in the middle of the duct wall. To achieve the best reading, do not place in an area where air stratification may be present.

The enclosure provides mounting tabs for ease of installation.

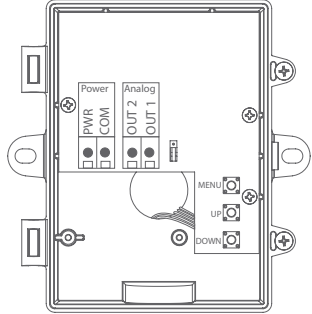
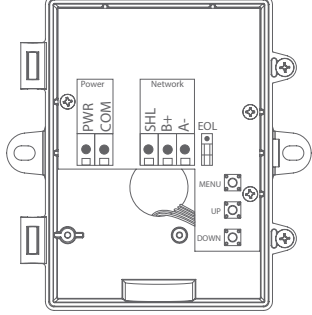


SPECIFICATIONS

| | |
|-------------------------|---|
| SENSOR TYPE | Thermoset polymer based capacitive |
| TEMPERATURE SENSOR TYPE | NTC Thermistor |
| MEASUREMENT RANGE | Relative Humidity: 0 to 100 %RH Dry Bulb Temperature: -30 to 50°C (-22 to 122°F) |
| CALCULATED VALUES | Dewpoint Temperature: -30 to 50°C (-22 to 122°F) Wet Bulb Temperature: -30 to 50°C (-22 to 122°F) Enthalpy: 0 to 340 kJ/kg (0 to 146 BTU/lb) |
| ACCURACY | Relative Humidity (RH): ±2 %RH, 10 to 90 %RH @ 25°C Dry Bulb Temperature (T): ±0.2°C (±0.4°F) @ 0 to 50°C (32 to 122°F) Dewpoint Temperature (Td): ±1.0°C (±1.8°F) @ 40 %RH / 25°C Wet Bulb Temperature (Tw): ±1.0°C (±1.8°F) @ 50 %RH / 25°C Enthalpy: ±2 kJ/kg (±1 BTU/lb) @ 50 %RH / 25°C |
| LCD DISPLAY VALUES | Temperature: -30.0 to 50.0°C (0.5°C resolution) or -22 to 122°F (1°F resolution) Dewpoint: -30.0 to 50.0°C Td (0.5°C resolution) or -22 to 122°F Td (1°F resolution) Wet Bulb: -20.0 to 50.0°C Tw (0.5°C resolution) or -4 to 122°F Tw (1°F resolution) Enthalpy: 0 to 340 kJ/kg (1 kJ/kg resolution or 0 to 146 BTU/lb (1BTU/lb resolution) |
| OUTPUT | Signals (2X): 4-20 mA or 0-5/0-10 Vdc (factory set) Signal 1: Dry Bulb Temperature (field selectable range) T Range 1: -30 to 50°C (-22 to 122°F) T Range 2: 0 to 50°C (32 to 122°F) Signal 2: Dewpoint Temperature, Wet Bulb Temperature or Enthalpy (field selectable) Td Range 1: -30 to 50°C (-22 to 122°F) Td Range 2: -20 to 40°C (-4 to 104°F) Td Range 3: 0 to 50°C (32 to 122°F) Tw Range 1: -20 to 50°C (-4 to 122°F) Tw Range 2: 0 to 50°C (32 to 122°F) En Range 1: 0 to 340 kJ/kg (0 to 146 BTU/lb) En Range 2: 0 to 250 kJ/kg (0 to 107 BTU/lb) Impedance @ 24 Vdc: Current: 500Ω max Voltage: 10,000Ω minimum |
| BACnet® PROTOCOL | MS/TP, 2-wire RS-485 Baud rate - 9600, 19200, 38400, 57600, or 115200 0-127 slave address range |
| MODBUS PROTOCOL | RTU, 2-wire RS-485 Baud rate - 300, 600, 1200, 2400, 4800, 9600, 19200, or 38400 1-255 slave address range |
| POWER SUPPLY | 20 to 27 Vdc, 16 to 27 Vac (non-isolated half-wave rectified) |
| CONSUMPTION @ 24 VAC | Current: 50 mA max @ 24 Vdc, 1.5 VA max Voltage: 30 mA max @ 24 Vdc, 1 VA @ 24 Vac |
| OPERATING CONDITIONS | -30 to 50°C (-22 to 122°F), 0 to 95 %RH non-condensing |
| STORAGE CONDITIONS | -40 to 70°C (-40 to 158°F), 0 to 95 %RH non-condensing |
| WIRING CONNECTIONS | Terminal block (14 to 22 AWG) |
| ENCLOSURE | Material: B - Grey polycarbonate, UL94-V0, IP65 (NEMA 4X) F - Same as B, includes thread adapter (1/2" NPT to M16) and cable gland fitting Dimensions: 112.5mm W x 116.5mm H x 53.7mm D (4.43" x 4.58" x 2.11") Probe: 230mm (9") L x 12.7mm (1/2") D, 304 S/S with porous filter Approvals: CE, RoHS |
| APPROVALS | CE |
| COUNTRY OF ORIGIN | Canada |



WIRING INFORMATION

|  | <p>ANALOG WIRING</p> <table border="1"> <thead> <tr> <th>TERMINAL</th> <th>FUNCTION</th> </tr> </thead> <tbody> <tr> <td>PWR</td> <td>24 Vac/dc of controller or power supply</td> </tr> <tr> <td>COM</td> <td>To GND or COMMON of controller</td> </tr> <tr> <td>OUT1</td> <td>Analog Output 1</td> </tr> <tr> <td>OUT2</td> <td>Analog Output 2</td> </tr> </tbody> </table> | TERMINAL | FUNCTION | PWR | 24 Vac/dc of controller or power supply | COM | To GND or COMMON of controller | OUT1 | Analog Output 1 | OUT2 | Analog Output 2 | | |
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ACCESSORIES - INCLUDED WITH F ENCLOSURE OPTION

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

ORDERING

| | | |
|-----------|--|---|
| PRODUCT | DWDT | Duct Dewpoint Transmitter |
| ENCLOSURE | B F | Polycarbonate, with hinged and gasketed cover Same as B, with thread adapter and cable gland fitting |
| OUTPUT | I V B M | Current 4-20 mA Voltage 0-5, 0-10 Vdc, field selectable BACnet® communications Modbus communications |

PART NUMBER

| |
|-------------|
| DWDT |
| |

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