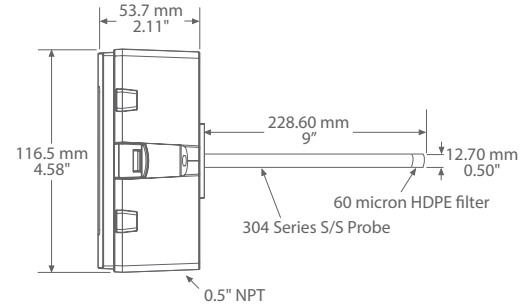
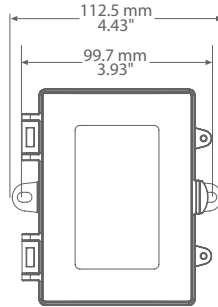
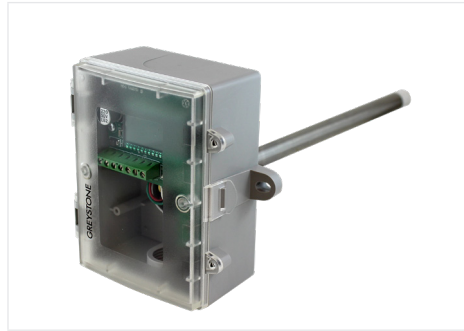


## DUCT DEWPOINT TRANSMITTER



### 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. The state-of-the-art design combines digital linearization and temperature compensation with a highly accurate and reliable humidity sensor and curve-matched NTC thermistor temperature sensor for reliability and accuracy in the most critical applications.

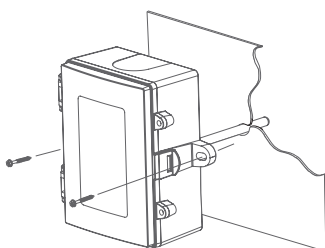
The dewpoint series has five measurement variables which include dewpoint, dry-bulb temperature, wet bulb temperature, relative humidity and enthalpy which are available by either an analog, BACnet® or Modbus signal to provide the most efficient monitoring and control solution. A Polycarbonate hinged 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.

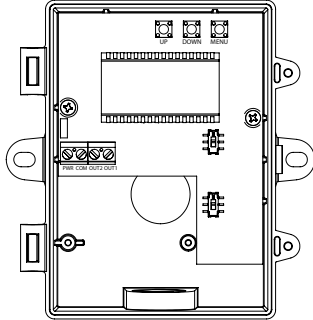


## SPECIFICATIONS

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

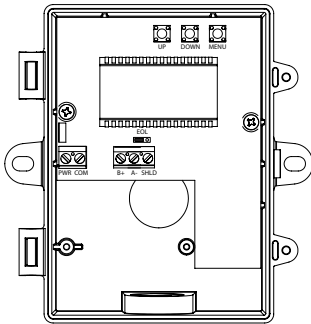


## WIRING INFORMATION



### ANALOG WIRING

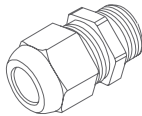
TERMINAL	FUNCTION
PWR	24 Vac/dc of controller or power supply
COM	To GND or COMMON of controller
OUT2	Analog Output 2
OUT1	Analog Output 1



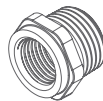
### NETWORK WIRING

TERMINAL	FUNCTION
PWR	24 Vac/dc of controller or power supply
COM	To GND or COMMON of controller
B +	Network Output
A -	Network Output
SHLD	Network Output

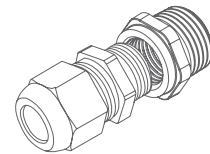
## ACCESSORIES - INCLUDED WITH F ENCLOSURE OPTION



CABLE GLAND FITTING



THREAD ADAPTER 1/2" NPT TO M16



## ORDERING

PRODUCT	DWDT	Duct Dewpoint Transmitter
ENCLOSURE	<b>B</b>	Polycarbonate, with hinged and gasketed cover
	<b>F</b>	Same as B, with thread adapter and cable gland fitting
OUTPUT	<b>A</b>	Analog 4-20 mA, 0-5, 0-10 Vdc, field selectable
	<b>B</b>	BACnet® communications
	<b>M</b>	Modbus communications

## PART NUMBER

DWDT

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