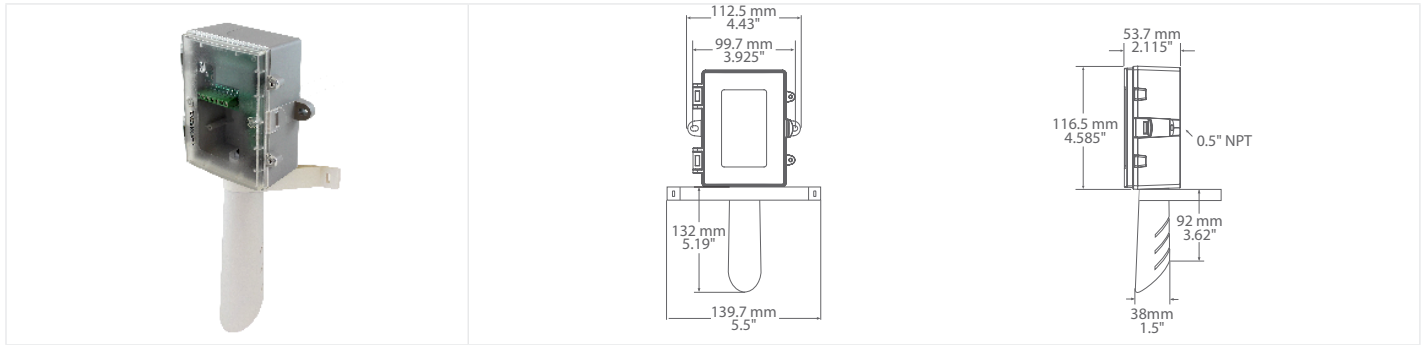




## OUTSIDE DEWPOINT TRANSMITTER WITH SUN AND WINDSHIELD



### DWOB SERIES

#### PRODUCT DESCRIPTION

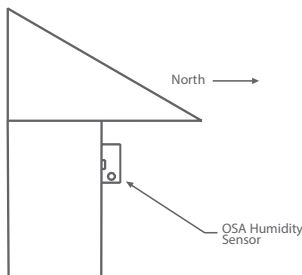
The outside dewpoint transmitters are designed for use in environmental monitoring and control systems where high performance and stability are demanded. It's state-of-the-art design combines digital linearization and temperature compensation with a highly accurate and reliable thermoset polymer based 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 hinged and gasketed, weatherproof Polycarbonate enclosure is included for ease of installation.

#### TYPICAL INSTALLATION

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

Select a suitable mounting spot on an exterior wall where the sensor is best protected from direct exposure to sunlight, wind, etc. preferably on a north facing wall. Do not mount the sensor near opening windows, supply/exhaust air louvres or other known air disturbances. Avoid areas where the sensor is exposed to vibrations or rapid temperature changes.

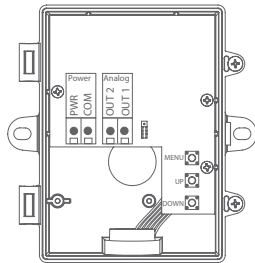


#### SPECIFICATIONS

<b>SENSOR TYPE</b>	Thermoset polymer based capacitive
<b>TEMPERATURE SENSOR TYPE</b>	NTC Thermistor
<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>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>Signals (2X):</b> 4-20 mA or 0-5/0-10 Vdc (factory set) <b>Signal 1:</b> 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) <b>Signal 2:</b> 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) <b>Impedance @ 24 Vdc:</b> Current: 500Ω max Voltage: 10,000Ω minimum
<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> Grey polycarbonate, UL94-V0, IP65 (NEMA 4X) <b>Dimensions:</b> 112.5mm W x 116.5mm H x 53.7mm D (4.43" x 4.58" x 2.11") <b>Approvals:</b> CE, RoHS
<b>COUNTRY OF ORIGIN</b>	Canada

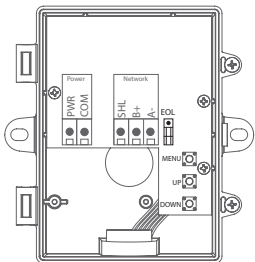


## WIRING INFORMATION



### ANALOG WIRING

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



### NETWORK WIRING

TERMINAL	FUNCTION
PWR	24 Vac/dc of controller or power supply
COM	To GND or COMMON of controller
SHL	To communications bus shield
B +	To + of communications bus
A -	To - of communications bus

## ORDERING

PRODUCT	DWOB	Description
ENCLOSURE	<b>B</b>	Polycarbonate, with hinged and gasketed cover
OUTPUT	<b>I</b> <b>V</b> <b>B</b> <b>M</b>	Current 4-20 mA Voltage 0-5, 0-10 Vdc, field selectable BACnet® communications Modbus communications

## PART NUMBER

DWOB

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