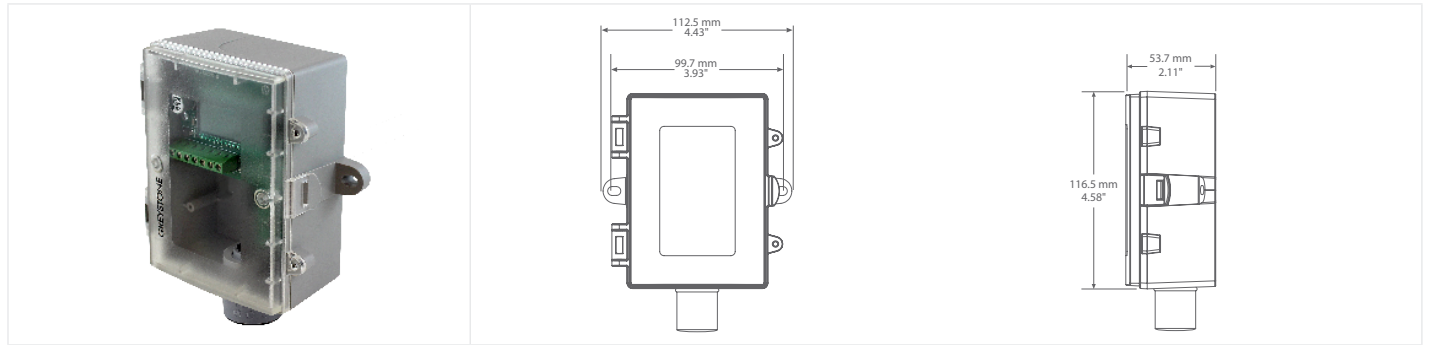




OUTSIDE DEWPOINT TRANSMITTER



DWOS SERIES

PRODUCT DESCRIPTION

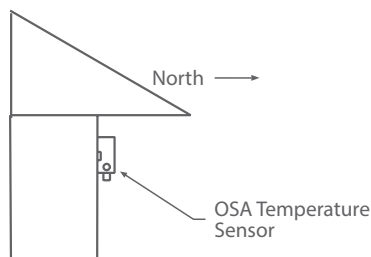
The outside dewpoint transmitters are designed for use in environmental monitoring and control systems where high performance and stability are demanded. It's state-of-the-art design combines digital linearization and temperature compensation with a highly accurate and reliable thermoset polymer based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

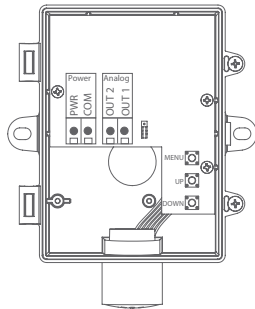


SPECIFICATIONS

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: Grey polycarbonate, UL94-V0, IP65 (NEMA 4X) Dimensions: 112.5mm W x 116.5mm H x 53.7mm D (4.43" x 4.58" x 2.11") Approvals: CE, RoHS
APPROVALS	CE
COUNTRY OF ORIGIN	Canada

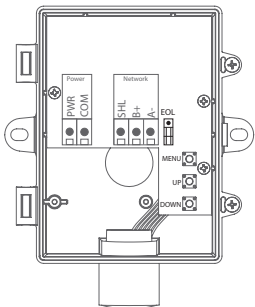


WIRING INFORMATION



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	DWOS	Outside Dewpoint Transmitter
ENCLOSURE	B	Polycarbonate, with hinged and gasketed cover
OUTPUT	I V B M	Current 4-20 mA Voltage 0-5, 0-10 Vdc, field selectable BACnet® communications Modbus communications

PART NUMBER

DWOS

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