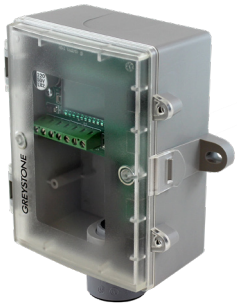
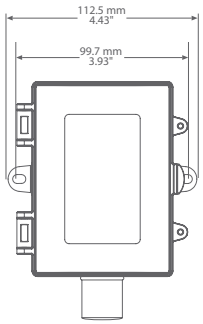
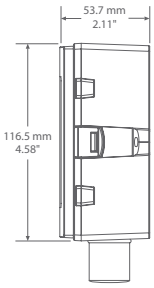
GREYSTONE
ENERGY SYSTEMS INC

OUTSIDE DEWPOINT TRANSMITTER







DWOS SERIES

PRODUCT DESCRIPTION

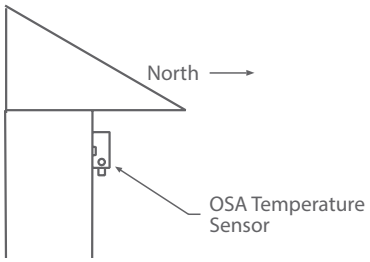
The outside dewpoint transmitters are designed for use in environmental monitoring and control systems where high performance and stability are demanded. It's state-of-the-art design combines digital linearization and temperature compensation with a highly accurate and reliable humidity sensor and curve-matched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

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	**Relative Humidity:** 0 to 100% RH (1% Resolution) **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	**Analog Signals (2X):** 4-20 mA or 0-5/0-10 Vdc (field selectable) **Impedance @ 24 Vdc:** Current: 500Ω max Voltage: 10,0000Ω minimum **Network Communication:** BACnet® or Modbus
OUTPUT PARAMETERS (Field Selectable)	**Dewpoint Temperature:**..... 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) **Dry Bulb Temperature:**..... T Range 1: -30 to 50°C (-22 to 122°F) T Range 2: 0 to 50°C (32 to 122°F) **Wet Bulb Temperature:**..... Tw Range 1: -20 to 50°C (-4 to 122°F) Tw Range 2: 0 to 50°C (32 to 122°F) **Relative Humidity:**..... Rh Range: 0 to 100% **Enthalpy:**..... 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)
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" 2.11")
APPROVALS	CE
COUNTRY OF ORIGIN	Canada

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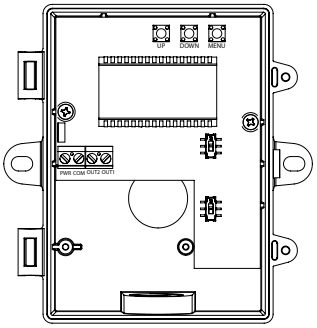
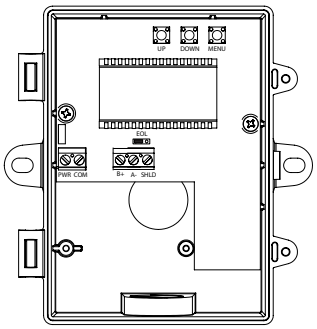
WIRING INFORMATION



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 +	To + of communications bus
A -	To - of communications bus
SHLD	To communications bus shield

ORDERING

PRODUCT	**DWOS**	Outside Dewpoint Transmitter
ENCLOSURE	**B**	Polycarbonate, with hinged and gasketed cover
OUTPUT	**A** **B** **M**	Analog 4-20 mA, 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.

RoHS COMPLIANT

MADE IN CANADA

ISO9001

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