

PRODUCT DESCRIPTION

The DPRC Series room dewpoint sensors 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.

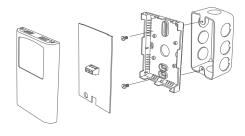
The DP Series has four measurement variables which include dewpoint, dry-bulb temperature, wet-bulb temperature and enthalpy which are available by either an analog, BACnet® or Modbus signal to provide the most efficient monitoring and control solution.

TYPICAL INSTALLATION

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

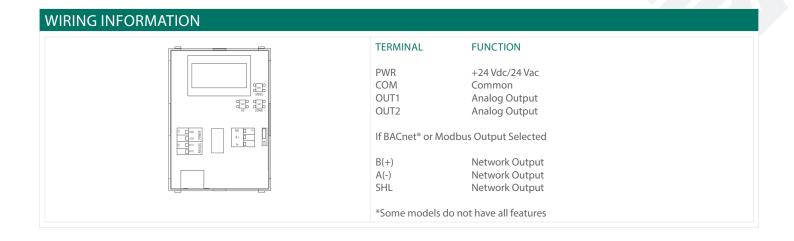
The DPRC series can be mounted directly to a single gang electrical box or directly to a wall. The backplate includes many mounting hole congurations to allow for mounting on a variety of electrical boxes.

The DPRC has a screw block terminal provided for connection to the Building Automation System.



SPECIFICATIONS			
SENSOR TYPE	Thermoset polymer based capacitive		
TEMPERATURE SENSOR TYPE	NTC Thermistor		
MEASUREMENT RANGE	Relative Humidity: 0 to 100 %RH Dry Bulb Temperature: 0 to 50°C (32 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)		
ОИТРИТ	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 35°C (32 to 95°F) En Range 1: 0 to 340 kJ/kg (0 to 146 BTU/lb) En Rnage 2: 0 to 250 kJ/kg (0 to 107 BTU/lb) Impedance @ 24 Vdc: Current: 500Ω max Voltage: 10,0000Ω minimum		
BACnet® PROTOCOL	MS/TP, 2-wire RS-485 <i>Baud rate</i> - 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 Vc, 1 VA		
OPERATING CONDITIONS	0 to 50°C (32 to 122°F), 0 to 95 %RH non-condensing		
STORAGE CONDITIONS	-20 to 70°C (-4 to 158°F), 0 to 95 %RH non-condensing		
WIRING CONNECTIONS	Terminal block (14 to 22 AWG)		
ENCLOSURE	Material: White ABS, UL94-V0 Weight: 105 gm (3.7 oz) Dimensions: 84mm W x 117mm H x 29mm D (3.3" x 4.6" x 1.15") Approvals: CE, RoHS		
APPROVALS	CE		
COUNTRY OF ORIGIN	Canada		





ORDERING			
PRODUCT	DPRC	Room Dewpoint Transmitter	
OUTPUT	I V B M	4-20 mA 0-5 / 0-10 Vdc (field selectable) BACnet® communication Modbus communication	
LCD DISPLAY	N L	Concealed LCD Viewable LCD	



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

