

INTRODUCTION

The 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 transmitter has four measurement variables which include dewpoint, dry-bulb temperature, wet-bulb temperature and enthalpy which are available BACnet signal to provide the most efficient monitoring and control solution.

BEFORE INSTALLATION

Read these instructions carefully before installing and commissioning the dewpoint transmitter. Failure to follow these instructions may result in product damage. Do not use in an explosive or hazardous environment, with combustible or flammable gases, as a safety or emergency stop device or in any other application where failure of the product could result in personal injury. **Take electrostatic discharge precautions during installation and do not exceed the device ratings.**

MOUNTING

The dewpoint 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. **Mount the sensor at least 1.5 m (5') in either direction from elbows, dampers, filters or other duct restrictions. Avoid areas where the transmitter is exposed to vibrations or rapid temperature changes.**

Drill or punch a 32-35mm (1.25" x 1.375") hole in the duct at the preferred location and insert the probe into the hole to mark the enclosure mounting holes. Remove the unit and drill the four mounting holes. Clean all drilled holes of debris before mounting the device. Mount the enclosure to the duct with four #10 sheet metal screws (not included). To prevent air leaks, ensure the gasket is compressed around the probe between the device enclosure and the air duct. As shown in Figure 1.

The enclosure has a hinged cover with latch. Open the cover by pulling slightly on the latch on the right side of the enclosure and at the same time pulling on the cover, as illustrated in Figure 2.

A 21 mm (0.8125") hole is provided for connection of either a 1/2" conduit connector or a cable gland style connector. Insert the conduit or cable gland connector through the hole and securely fasten using a locknut as shown in Figure 3.

Make wire connections as per the "Wiring" illustrations on Page 2.

Two security screws are provided which can be installed to help secure the cover once settings and wiring connections are complete. See Figure 4.

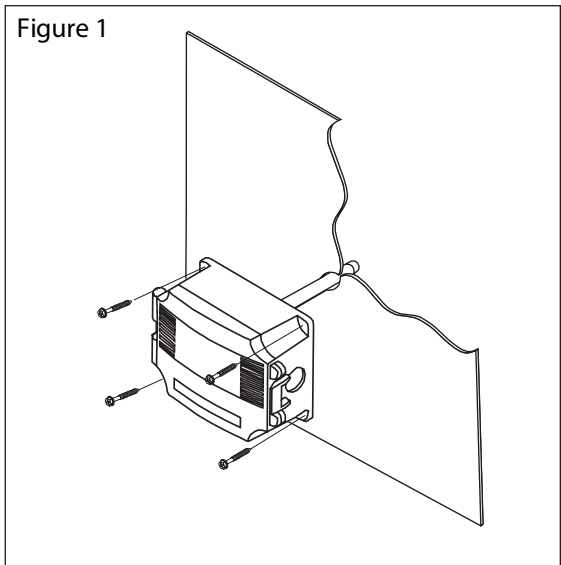


Figure 1

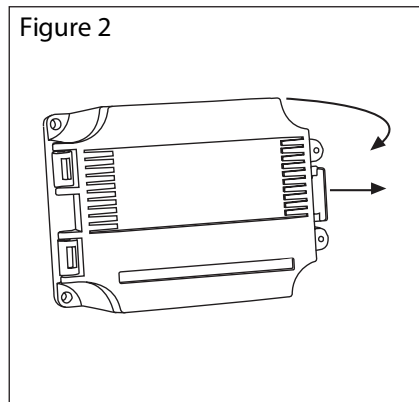


Figure 2

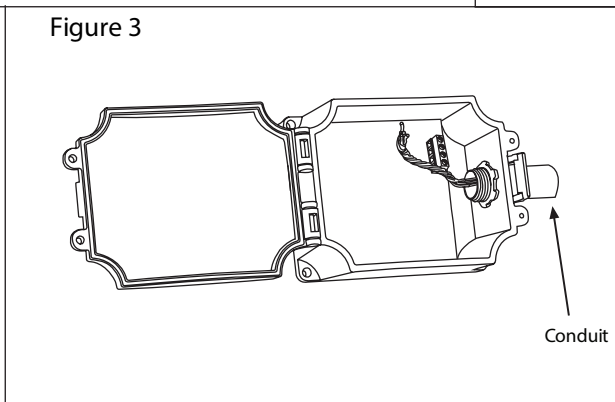


Figure 3

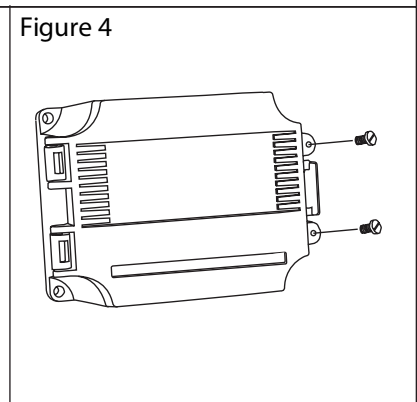


Figure 4

WIRING

- Deactivate the 24 Vac/dc power supply until all connections are made to the device to prevent electrical shock or equipment damage.
- Follow proper electrostatic discharge (ESD) handling procedures when installing the device or equipment damage may occur.
- Use 22 AWG shielded wiring for all connections and do not locate the device wires in the same conduit with wiring used to supply inductive loads such as motors.
- Make all connections in accordance with national and local codes.

Connect the 24 Vac/dc power supply to the terminals labeled PWR (power) and COM (common) as shown in Figure 6. This device has a half-wave type power supply so use caution when wiring multiple devices so that the circuit ground point is the same on all devices and the controller. Use caution if 24 Vac power is used and one side of the transformer is earth-grounded. In general, the transformer should NOT be connected to earth ground when using devices with RS-485 network connections. The device is reverse voltage protected and will not operate if connected backwards.

Connect the RS-485 network with twisted shielded pair to the terminals marked A-, B+ and SHLD (shield) as shown in Figure 6. The positive wire connects to B(+) and the negative wire connects to A(-) and the cable shield must be connected to the SHLD terminal on each device. If the device is installed at either end of the network, an end-of-line (EOL) termination resistor (121 ohm) should be installed in parallel to the A(-) and B(+) terminals. This device includes a network termination jumper and will connect the resistor correctly on the pcb. Simply move the pcb jumper to the EOL position and no external resistor is required as shown in Figure 7. The ground wire of the shielded pair should be connected to earth ground at the end of the network and the master is not grounded. Do not run bus wiring in the same conduit as line voltage wiring.

A network segment is a single shielded wire loop run between several devices (nodes) in a daisy chain configuration. The total segment length should be less than 4000 feet (1220 meters) and the maximum number of nodes on one segment is 127. Nodes are any device connected to the loop and include controllers, repeaters and sensors such as the RH/T Sensor but does not include the EOL terminators. To install more devices, or to increase the network length, repeaters will be required for proper communication. The maximum daisy chain length (segment) depends on transmission speed (baud rate), wire size and number of nodes. If communication is slow or unreliable, it may be necessary to wire two daisy chains to the controller with a repeater for each segment.

Figure 5

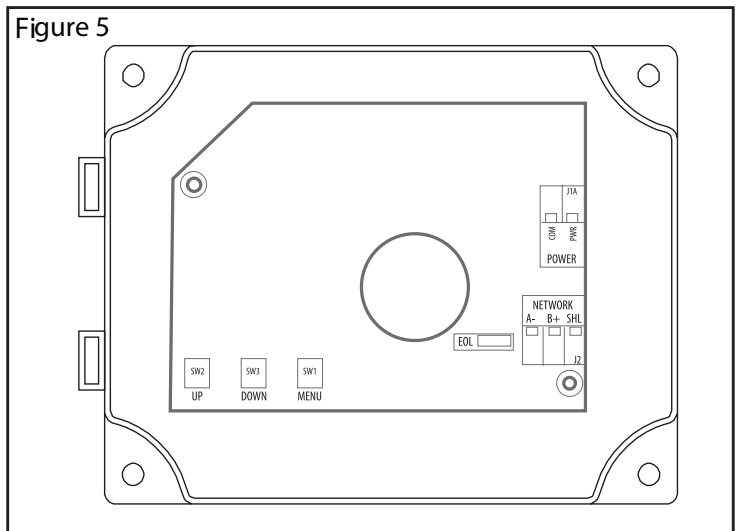


Figure 6

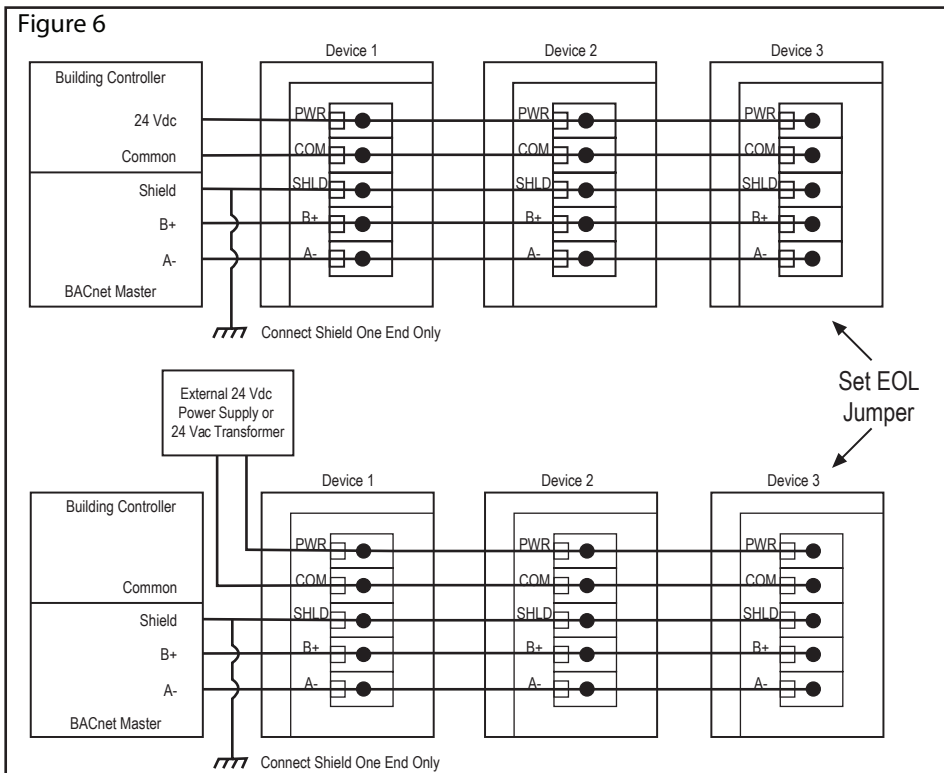
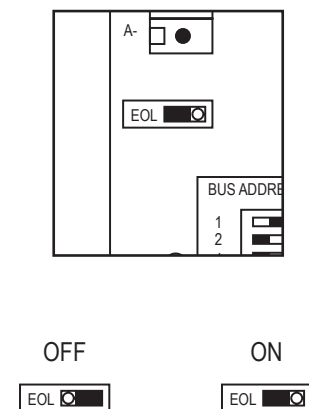


Figure 7



OPERATION

Start-Up Mode

When the device is powered on, it will go through a brief start-up mode. The LCD will display a sequence of information depending on the model. At the end of the start-up sequence, normal operation will begin.

STEP 1 LCD Test

All segments lit for 2 seconds



STEP 2 Model

Displays the model type (bacnet) for 2 sec.



STEP 3 Software Version for 2 sec



STEP 4 Address for 2 sec



STEP 5 Baud rate for 2 sec



MENU

The device has several parameters that can be configured locally via the User menu using the keypad and LCD. All parameters default to typical values but the installer may want to change some values. In some cases, such as the device network address, the installer MUST change the settings before operation. Any changes made are saved in non-volatile memory and are restored in case of a power loss. Only the menu items relevant to the device model will be shown. The menu can be accessed at any time after the start-up mode and if there is 5 minutes of inactivity the menu will close and normal operation will continue.

User Menu – Network Device

To enter the menu, press and release the <MENU> key. This will enter the User menu step 1, pressing the <MENU> key a second time advances to step 2. Each press of the <MENU> key saves the current setting and advances the menu item. The <UP> and <DOWN> keys are used to make changes to program variables by scrolling through the available options. When a value is changed, use the <MENU> key to save it to memory and advance to the next menu item.

<MENU> Press and release to enter the User menu.

ADDRESS (default = 1)

Use <UP> or <DOWN> to set the address
0-127. °C and Td blink to indicate the mode.



<MENU>

BAUD RATE (default = 9600)

Use <UP> or <DOWN> to select a baud rate
of 960 (9600), 192 (19200), 384 (38400),
576 (57600), 768 (76800) or 115 (115200).
°F and Tw blink to indicate the mode.



<MENU> Exits the menu and returns to normal operation.

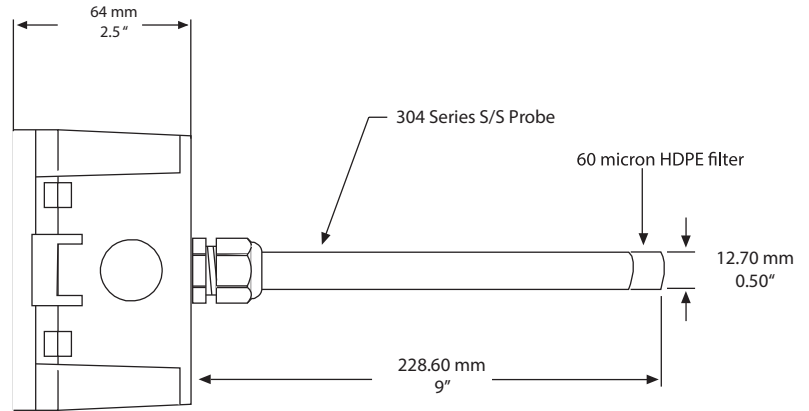
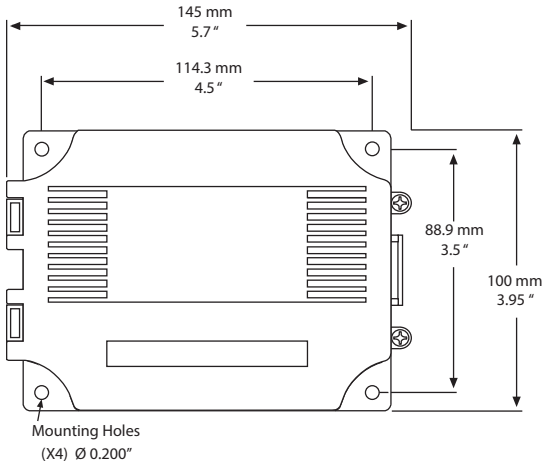
Normal Mode

In normal operation the device:

- reads the temperature and RH sensors
- calculates values for dewpoint, wet bulb and enthalpy
- updates the LCD values
- updates the BACnet object values
- monitors the menu key for activity

If the <MENU> key is pressed, normal operation is suspended while the menu functions are serviced. The program will automatically exit the menu after a period of inactivity.

DIMENSIONS



SENSOR TYPE:

RH Sensor Thermoset polymer based capacitive
Temperature Sensor NTC Thermistor

MEASUREMENT RANGE:

Relative Humidity 0 - 100 %RH
Dry Bulb Temperature -30 - 50 °C (-22 - 122 °F)

CALCULATED VALUES:

Dewpoint Temperature -30 - 50 °C (-22 - 122 °F)
Wet Bulb Temperature -30 - 50 °C (-22 - 122 °F)
Enthalpy 0 - 340 kJ/kg (0 - 146 BTU/lb)

ACCURACY:

Relative Humidity (RH) ± 2% RH, 10 - 90 %RH @ 25 °C
Dry Bulb Temp.(T) ± 0.2 °C (± 0.4 °F) / 0 - 50 °C (32 - 122 °F)
Dewpoint Temp. (Td) ± 1.0 °C (± 1.8 °F) @ 40 %RH / 25 °C
Wet Bulb Temp.(Tw) ± 1.0 °C (± 1.8 °F) @ 50 %RH / 25 °C
Enthalpy (En) ± 2 kJ/kg (± 1 BTU/lb) @ 50 %RH / 25 °C

INTERFACE:

BACnet Protocol MS/TP, 2-wire RS-485 9600, 19200, 38400,
57600, 76800 or 115200 baud 0-127 slave
address range

SPECIFICATIONS:

Power Supply 20 - 27 Vdc, 16 - 27 Vac
(non-isolated half-wave rectified)
Consumption 50 mA max @ 24 Vdc, 1.5 VA max @ 24 Vac
Operating Conditions -30 - 50 °C (-22 - 122 °F),
0 - 95 %RH non-condensing
Storage Conditions -40 - 70 °C (-40 - 158 °F),
0 - 95 %RH non-condensing
Wiring Connections 14 - 22 AWG terminal block
Enclosure Dimensions 145W x 100H x 64D mm (5.7W x 3.95H x 2.5D in)
Material Grey ABS, UL94-V0
Ratings IP65 (NEMA 4X)
Probe 230 mm (9") L x 12.7 mm (1/2") D
304 S/S with porous filter
Weight 320 gm (11.3 oz)
Approvals CE, RoHS

LCD DISPLAY VALUES:

Temperature -30.0 - 50.0 °C (0.5 °C resolution)
or -22 - 122 °F (1 °F resolution)
Dewpoint -30.0 - 50.0 °C Td (0.5 °C resolution)
or -22 - 122 °F Td (1 °F resolution)
Wet Bulb -20.0 - 50.0 °C Tw (0.5 °C resolution)
or -4 - 122 °F Tw (1 °F resolution)
Enthalpy 0 - 340 kJ/kg (1 kJ/kg resolution)
or 0 - 146 BTU/lb (1 BTU/lb resolution)

BACnet

OBJECT TYPE	DYNAMICALLY CREATABLE	DYNAMICALLY DELETABLE	OBJECT IDENTIFIER	OBJECT NAME
Device	No	No	381001	DP 001
Analog Input	No	No	AI 1 AI 2 AI 3 AI 4 AI 5	Temperature Relative Humidity Dewpoint Temperature Wet Bulb Temperature Enthalpy
Analog Value	No	No	AV 1 AV 2 AV 3 AV 4 AV 5	Temperature Offset RH Offset Atmospheric Pressure Altitude Display Mode
Binary Value	No	No	BV 1 BV 2	Temperature Unit Enthalpy Unit

The BACnet Device object allows configuration of the device. Device object properties are shown below.

PROPERTY	DEFAULT VALUE	PROPERTY DATA TYPE	ACCESS
Object Identifier	381001	BACnetObjectIdentifier(numeric)	Read / Write
Object Name	DP 001	CharacterString (32)	Read / Write
Object Type	DEVICE (8)	BACnetObjectType	Read
System Statu	OPERATIONAL (0)	BACnetDeviceStatus	Read
Vendor Name	Greystone Energy Systems	CharacterString	Read
Vendor Identifier	381	Unsigned16	Read
Model Name	DP	CharacterString	Read
Firmware Revision	1.2	CharacterString	Read
Application Software Version	V1.0	CharacterString	Read
Location	150 English Dr, Moncton, NB	CharacterString (32)	Read / Write
Description	Greystone Dewpoint Sensor	CharacterString (32)	Read / Write
Protocol Version	1	Unsigned	Read
Protocol Revision	14	Unsigned	Read
Protocol Services Supported	See description below	BACnetServicesSupported	Read
Protocol Object Types Supported	See description below	BACnetObjectTypesSupported	Read
Object List	See description below	BACnetArray	Read
Maximum APDU Length Accepted	50, B'0000'	Unsigned	Read
Segmentation Supported	NO_SEGMENTATION (3)	BACnetSegmentation	Read
APDU Timeout	6,000	Unsigned	Read / Write
Number of APDU Retries	3	Unsigned	Read / Write
Max Master	127	Unsigned	Read / Write
Max Info Frames	1	Unsigned	Read
Device Address Binding	empty	BACnetAddressBinding	Read
Database Revision	0	Unsigned	Read
Property List		BACnetArray	Read

OBJECT IDENTIFIER

Initial default number is 381001, where 381 is the vendor ID and 001 is the default network MAC address. When the MAC address is initially changed the value is updated and saved. For example, if the MAC address is set to 50 via the menu for startup, then the device instance will be set to 381050. This property is also writable via BACnet. If the Device:Object_Identifier is written to via BACnet then the MAC address is no longer appended to the vendor ID to create this value.

OBJECT NAME

Initial string is "DP 001" where DP is the device model name and 001 is the default network address. Can be written with a new string of maximum length of 32 characters and the value is saved. The "001" is the MAC address and is automatically changed if the MAC address is changed. Once written to via BACnet, the MAC address no longer gets appended to the value.

Protocol Services Supported	readProperty, writeProperty, deviceCommunicationControl, who-Has, who-Is Binary bit string = {00000000 00001001 01000000 00000000 01100000 0}
Protocol Object Types Supported	Analog_Input, Analog_Value, Binary_Value, Device Binary bit string = {10100100 10000000 00000000 00000000 00000000 00000000 00000000}
Object List	((Device, Instance 1), (Analog Input, Instance 1), (Analog Input, Instance 2), (Analog Input, Instance 3), (Analog Input, Instance 4), (Analog Input, Instance 5), (Analog Value, Instance 1), (Analog Value, Instance 2), (Analog Value, Instance 3), (Analog Value, Instance 4), (Analog Value, Instance 5), (Binary Value, Instance 1), (Binary Value, Instance 2))
APDU Timeout	Value is 6,000. Can be modified from 1 to 10,000.
Number Of APDU Retries	Value is 3. Can be modified from 1 to 10.
Max Master	Value is 127. Value is saved. Can be modified from 1 to 127.
Database Revision	Value is 0 to 255.

The analog input BACnet objects allow reading of sensor values. Analog input object properties are shown below.

Analog Input Object Temperature (Present Value = temperature sensor reading in °F or °C, resolution = 0.1°, range = -30-50 °C or -22-122 °F)

PROPERTY	DEFAULT VALUE	PROPERTY DATA TYPE	ACCESS
Object Identifier	AI1 (Analog Input 1)	BACnetObjectIdentifier	Read
Object Name	Temperature	CharacterString (32)	Read
Object Type	ANALOG_INPUT (0)	BACnetObjectType	Read
Present Value	current reading	Real	Read
Description	Temperature	CharacterString (32)	Read
Device Type	Temperature Sensor	CharacterString (32)	Read
Status Flags	{false, false, false, false} (0000)	BACnetStatusFlags	Read
Event State	NORMAL (0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED (0)	BACnetReliability	Read
Out of Service	FALSE (0)	Boolean	Read
Units	degrees-Celsius (62) or degrees-Fahrenheit (64)	BACnetEngineeringUnits	Read
Property List		BACnetArray	Read

**Analog Input Object
Relative Humidity**

(Present Value = RH sensor reading in %RH, resolution is 0.1%, range = 0-100 %RH)

PROPERTY	DEFAULT VALUE	PROPERTY DATA TYPE	ACCESS
Object Identifier	AI2 (Analog Input 2)	BACnetObjectIdentifier	Read
Object Name	Relative Humidity	CharacterString (32)	Read
Object Type	ANALOG_INPUT (0)	BACnetObjectType	Read
Present Value	current reading	Real	Read
Description	Relative Humidity	CharacterString (32)	Read
Device Type	RH Sensor	CharacterString (32)	Read
Status Flags	{false, false, false, false} (0000)	BACnetStatusFlags	Read
Event State	NORMAL (0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED (0)	BACnetReliability	Read
Out of Service	FALSE (0)	Boolean	Read
Units	Percent-relative-humidity (29)	BACnetEngineeringUnits	Read
Property List		BACnetArray	Read

**Analog Input Object
Dewpoint Temperature**

(Present Value = dewpoint temperature calculation in °F or °C, resolution = 0.1°, range = -30-50 °C or -22-122 °F)

PROPERTY	DEFAULT VALUE	PROPERTY DATA TYPE	ACCESS
Object Identifier	AI3 (Analog Input 3)	BACnetObjectIdentifier	Read
Object Name	Dewpoint Temperature	CharacterString (32)	Read
Object Type	ANALOG_INPUT (0)	BACnetObjectType	Read
Present Value	current reading	Real	Read
Description	Dewpoint Temperature	CharacterString (32)	Read
Device Type	Dewpoint Temperature Sensor	CharacterString (32)	Read
Status Flags	{false, false, false, false} (0000)	BACnetStatusFlags	Read
Event State	NORMAL (0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED (0)	BACnetReliability	Read
Out of Service	FALSE (0)	Boolean	Read
Units	degrees-Celsius (62) or degrees-Fahrenheit (64)	BACnetEngineeringUnits	Read
Property List		BACnetArray	Read

**Analog Input Object
Wet Bulb Temperature**

(Present Value = wet bulb temperature calculation in °F or °C, resolution = 0.1°, range = -30-50 °C or -22-122 °F)

PROPERTY	DEFAULT VALUE	PROPERTY DATA TYPE	ACCESS
Object Identifier	AI4 (Analog Input 4)	BACnetObjectIdentifier	Read
Object Name	Wet Bulb Temperature	CharacterString (32)	Read
Object Type	ANALOG_INPUT (0)	BACnetObjectType	Read
Present Value	current reading	Real	Read
Description	Wet Bulb Temperature	CharacterString (32)	Read
Device Type	Wet Bulb Temperature Sensor	CharacterString (32)	Read
Status Flags	{false, false, false, false} (0000)	BACnetStatusFlags	Read
Event State	NORMAL (0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED (0)	BACnetReliability	Read
Out of Service	FALSE (0)	Boolean	Read
Units	degrees-Celsius (62) or degrees-Fahrenheit (64)	BACnetEngineeringUnits	Read
Property List		BACnetArray	Read

**Analog Input Object
Enthalpy**(Present Value = enthalpy calculation in J/kg or BTU/lb, resolution = 1, range = 0-340 kJ/k
or 0-146 BTU/lb)

PROPERTY	DEFAULT VALUE	PROPERTY DATA TYPE	ACCESS
Object Identifier	AI5 (Analog Input 5)	BACnetObjectIdentifier	Read
Object Name	Enthalpy	CharacterString (32)	Read
Object Type	ANALOG_INPUT (0)	BACnetObjectType	Read
Present Value	current reading	Real	Read
Description	Enthalpy	CharacterString (32)	Read
Device Type	Enthalpy Sensor	CharacterString (32)	Read
Status Flags	{false, false, false, false} (0000)	BACnetStatusFlags	Read
Event State	NORMAL (0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED (0)	BACnetReliability	Read
Out of Service	FALSE (0)	Boolean	Read
Units	kilojoules-per-kilogram-dry-air (149) or btus-per-pound-dry-air (24)	BACnetEngineeringUnits	Read
Property List		BACnetArray	Read

The analog value BACnet objects allow sensor calibration and parameter selection. Analog value object properties are shown below.

**Analog Value Object
Temperature Offset**(Present Value defaults to 0 for no offset. Can be set from -10 to +10 D°F or -5.0 to +5.0 D°C)
(Units depend on the device units, either °C or °F), (°C resolution = 0.5, °F resolution = 1)

PROPERTY	DEFAULT VALUE	PROPERTY DATA TYPE	ACCESS
Object Identifier	AV1 (Analog Value 1)	BACnetObjectIdentifier	Read
Object Name	Temperature Offset	CharacterString (32)	Read
Object Type	ANALOG_VALUE (2)	BACnetObjectType	Read
Present Value	0	Real	Read / Write
Description	Temperature Offset	CharacterString (32)	Read
Status Flags	{false, false, false, false} (0000)	BACnetStatusFlags	Read
Event State	NORMAL (0)	BACnetEventState	Read
Out of Service	FALSE (0)	Boolean	Read
Units	delta-degrees-Fahrenheit (120) or D°C (121)	BACnetEngineeringUnits	Read
Property List		BACnetArray	Read

**Analog Value Object
RH Offset**

(Present Value defaults to 0 for no offset. Can be set from -10 to +10 %RH, resolution = 1)

PROPERTY	DEFAULT VALUE	PROPERTY DATA TYPE	ACCESS
Object Identifier	AV2 (Analog Value 2)	BACnetObjectIdentifier	Read
Object Name	RH Offset	CharacterString (32)	Read
Object Type	ANALOG_VALUE (2)	BACnetObjectType	Read
Present Value	0	Real	Read / Write
Description	RH Offset	CharacterString (32)	Read
Status Flags	{false, false, false, false} (0000)	BACnetStatusFlags	Read
Event State	NORMAL (0)	BACnetEventState	Read
Out of Service	FALSE (0)	Boolean	Read
Units	percent-relative-humidity (29)	BACnetEngineeringUnits	Read
Property List		BACnetArray	Read

Analog Value Object Atmospheric Pressure (Present Value = 1013 hectopascals. Can be set from 812 to 1013 hPa, resolution = 1 hPa)
(Atmospheric pressure is directly linked with Altitude)

Property	Default Value	Property Data Type	Access
Object Identifier	AV3 (Analog Value 3)	BACnetObjectIdentifier	Read
Object Name	Atmospheric Pressure	CharacterString (32)	Read
Object Type	ANALOG_VALUE (2)	BACnetObjectType	Read
Present Value	1013	Real	Read / Write
Description	Atmospheric Pressure	CharacterString (32)	Read
Status Flags	{false, false, false, false} (0000)	BACnetStatusFlags	Read
Event State	NORMAL (0)	BACnetEventState	Read
Out of Service	FALSE (0)	Boolean	Read
Units	hectopascals (hPa) (133)	BACnetEngineeringUnits	Read
Property List		BACnetArray	Read

Analog Value Object Altitude (Present Value defaults to 0 feet. Can be set from 0 to 6000 feet, resolution = 1 ft)
(Altitude is directly linked with Atmospheric pressure)

Property	Default Value	Property Data Type	Access
Object Identifier	AV4 (Analog Value 4)	BACnetObjectIdentifier	Read
Object Name	Altitude	CharacterString (32)	Read
Object Type	ANALOG_VALUE (2)	BACnetObjectType	Read
Present Value	0	Real	Read / Write
Description	Altitude	CharacterString (32)	Read
Status Flags	{false, false, false, false} (0000)	BACnetStatusFlags	Read
Event State	NORMAL (0)	BACnetEventState	Read
Out of Service	FALSE (0)	Boolean	Read
Units	feet (33)	BACnetEngineeringUnits	Read
Property List		BACnetArray	Read

Analog Value Object Display Mode (Present Value defaults to 1. Can be changed to control what is displayed on the LCD)

Property	Default Value	Property Data Type	Access
Object Identifier	AV5 (Analog Value 5)	BACnetObjectIdentifier	Read
Object Name	Display Mode	CharacterString (32)	Read
Object Type	ANALOG_VALUE (2)	BACnetObjectType	Read
Present Value	0	Real	Read / Write
Description	Display Mode	CharacterString (32)	Read
Status Flags	{false, false, false, false} (0000)	BACnetStatusFlags	Read
Event State	NORMAL (0)	BACnetEventState	Read
Out of Service	FALSE (0)	Boolean	Read
Units	no-units (95)	BACnetEngineeringUnits	Read
Property List		BACnetArray	Read

* Notes This object controls the information that is displayed on the LCD in the normal operating mode.
The available settings are: 0 = no display (menu will still display if key pressed)

- 1 = Temperature
- 2 = Dewpoint temperature
- 3 = Wet Bulb temperature
- 4 = Enthalpy
- 5 = Temperature plus dewpoint toggle every 5 seconds
- 6 = Temperature plus wet bulb toggle
- 7 = Temperature plus enthalpy toggle
- 8 = Dewpoint plus wet bulb toggle
- 9 = Dewpoint plus enthalpy toggle
- 10 = Wet bulb plus enthalpy toggle

The binary value BACnet object allows configuration of the device. Binary value object properties are shown below.

Binary Value Object (Present Value defaults to 0 (INACTIVE) for Celsius. Can be set to 1 (ACTIVE) for Fahrenheit)
Temperature Units

Property	Default Value	Property Data Type	Access
Object Identifier	BV1 (Binary Value 1)	BACnetObjectIdentifier	Read
Object Name	Temperature Units	CharacterString (32)	Read
Object Type	BINARY_VALUE (5)	BACnetObjectType	Read
Present Value	INACTIVE (0)	BACnetBinaryPV	Read / Write
Description	Celsius (0) or Fahrenheit (1)	CharacterString (32)	Read
Status Flags	{false, false, false, false} (0000)	BACnetStatusFlags	Read
Event State	NORMAL (0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED (0)	BACnetReliability	Read
Out of Service	FALSE (0)	Boolean	Read
Property List		BACnetArray	Read

Binary Value Object (Present Value defaults to 0 (INACTIVE) for kJ/kg. Can be set to 1 (ACTIVE) for BTU/lb)
Enthalpy Units

Binary Value Object	(Present Value defaults to 0 (INACTIVE) for kJ/kg. Can be set to 1 (ACTIVE) for BTU/lb)	Property Data Type	Access
Enthalpy Units	BV2 (Binary Value 2)	BACnetObjectIdentifier	Read
	Enthalpy Units	CharacterString (32)	Read
Object Type	BINARY_VALUE (5)	BACnetObjectType	Read
Present Value	INACTIVE (0)	BACnetBinaryPV	Read / Write
Description	kJ/kg (0) or BTU/lb (1)	CharacterString (32)	Read
Status Flags	{false, false, false, false} (0000)	BACnetStatusFlags	Read
Event State	NORMAL (0)	BACnetEventState	Read
Reliability	NO_FAULT_DETECTED (0)	BACnetReliability	Read
Out of Service	FALSE (0)	Boolean	Read
Property List		BACnetArray	Read

BACnet Protocol Implementation Conformance Statement (PICS)

Date : Feb 21, 2017
Vendor Name : Greystone Energy Systems
Product Name : Dewpoint Sensors – Duct and Outside Air
Product Model Number : DPDDDB and DPODB
Application Software Version : 1.0
Firmware Revision : 1.4
BACnet Protocol Revision : 14

Product Description : The Greystone Dewpoint Sensors are smart duct or OSA sensors with native BACnet MS/TP protocol for network communication. They measure room temperature, dewpoint temperature, wet bulb temperature, RH and enthalpy levels and reports values back to a building automation system (BAS). The device features an LCD to display measured values and for setup.

BACnet Standardized Device Profile (Annex L) : BACnet Application Specific Controller (B-ASC)

BACnet Interoperability Building Blocks Supported (Annex K) : DS-RP-B, DS-WP-B,
DM-DDB-B, DM-DOB-B
DM-DCC-B

Segmentation Capability : Not supported

Standard Object Types Supported :

Object Type	Dynamically Creatable	Dynamically Deletable	Optional Properties Supported	Writable Properties
Device	No	No	Location, Description, Max_Master, Max_Info_Frames	Object_Identifier, Object_Name, Location, Description, APDU_Timeout, Max_Master, Number_Of_APDU_Retries
Analog Input	No	No	Description, Reliability, Device_Type	
Analog Value	No	No	Description	Present_Value
Binary Value	No	No	Description, Reliability	Present_Value

Data Link Layer Options : MS/TP master (Clause 9),
Baud rates : 9600, 19200, 38400, 57600, 76800, 115200

Device Address Binding : Not supported

Networking Options : None

Character Set Supported : ISO 10646 (UTF-8)