

Product overview

The AX-HUMI-x transmitters are rugged, compact and ideally suited for monitoring dew point, wet bulb, enthalpy or temperature in building automation and process application.

Using a capacitive RH sensor, the unit's microprocessor computes the dew point, wet bulb or enthalpy.

Separate models are available for Space (wall Mount), Duct and Outside Air.



Products Features

- Cost-Effective Solution
- Microprocessor Based
- 4-20mA, 0-5Vdc and 0-10Vdc (Selectable)
- Weather Resistance Duct & Outside Air Mounting
- Field Replaceable RH Sensors

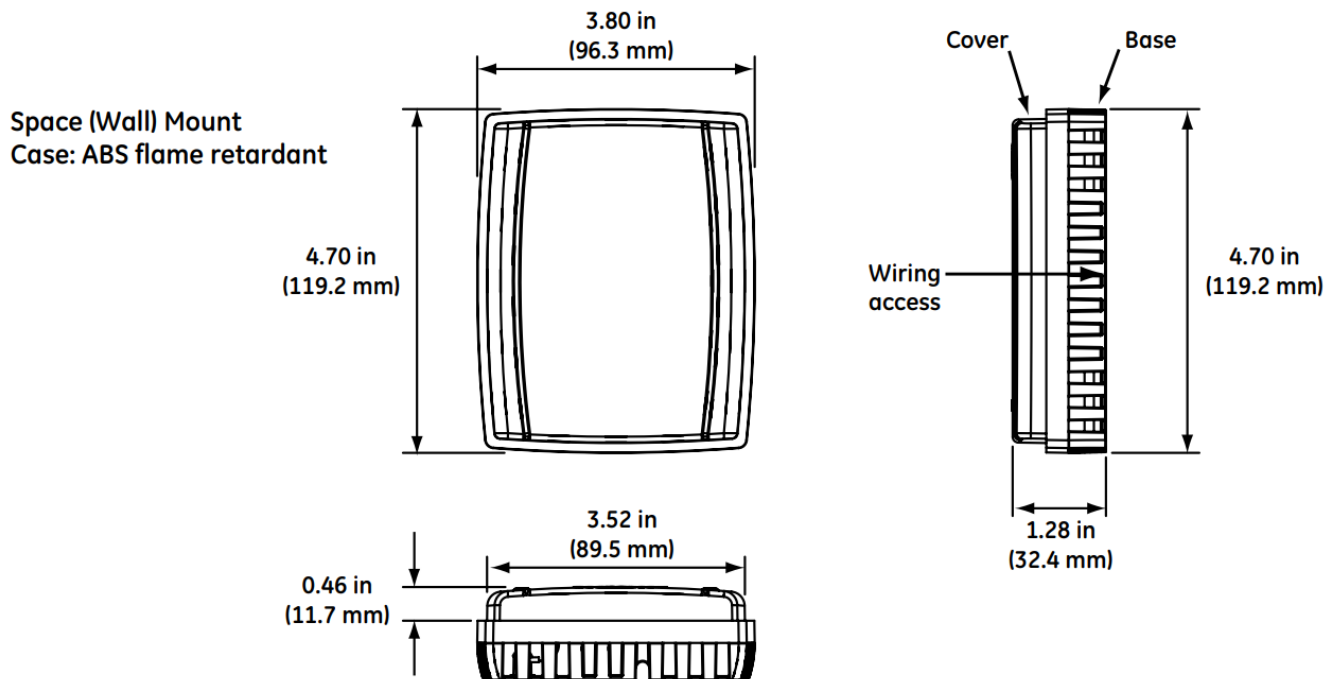
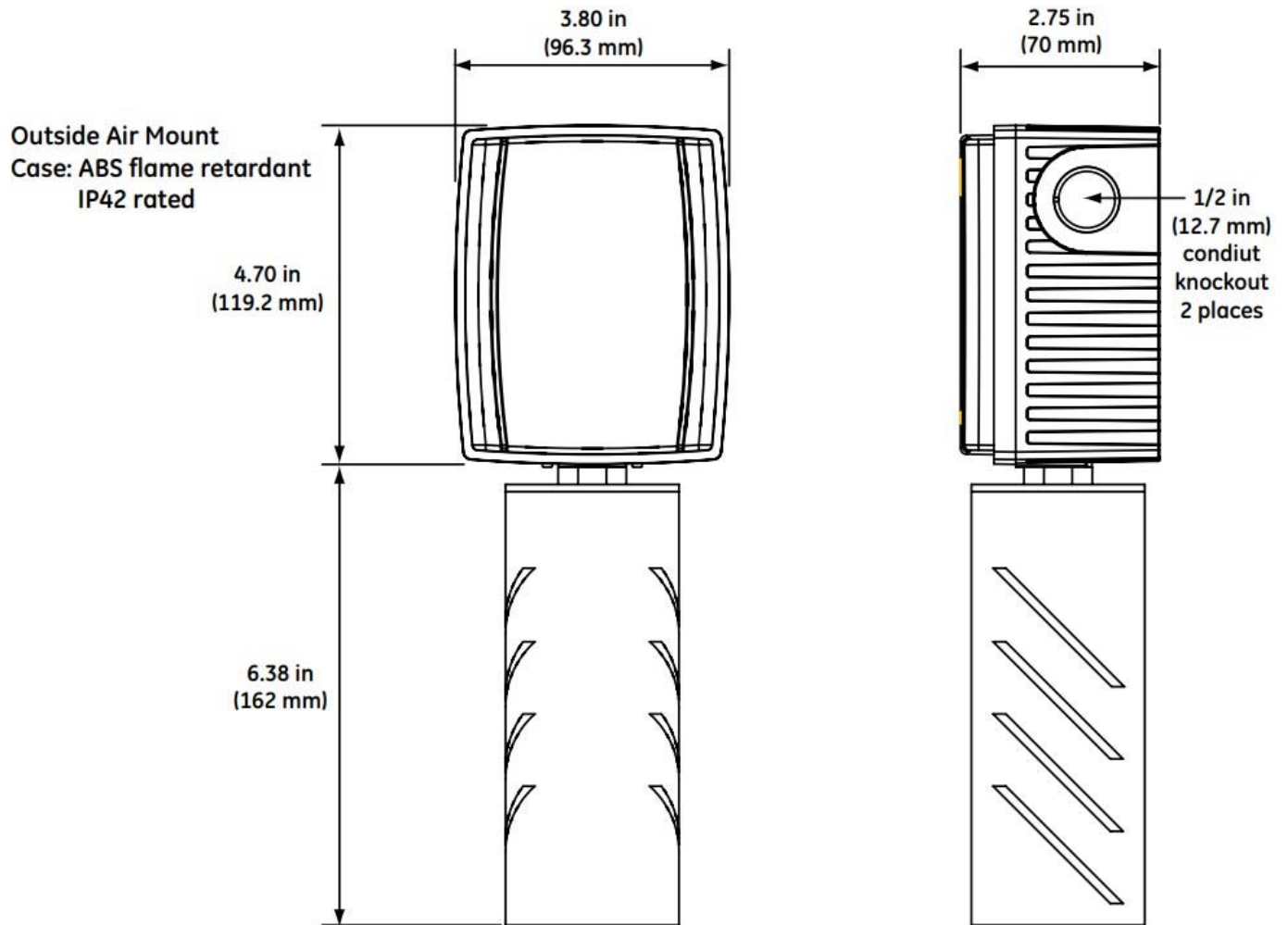
Product Specifications

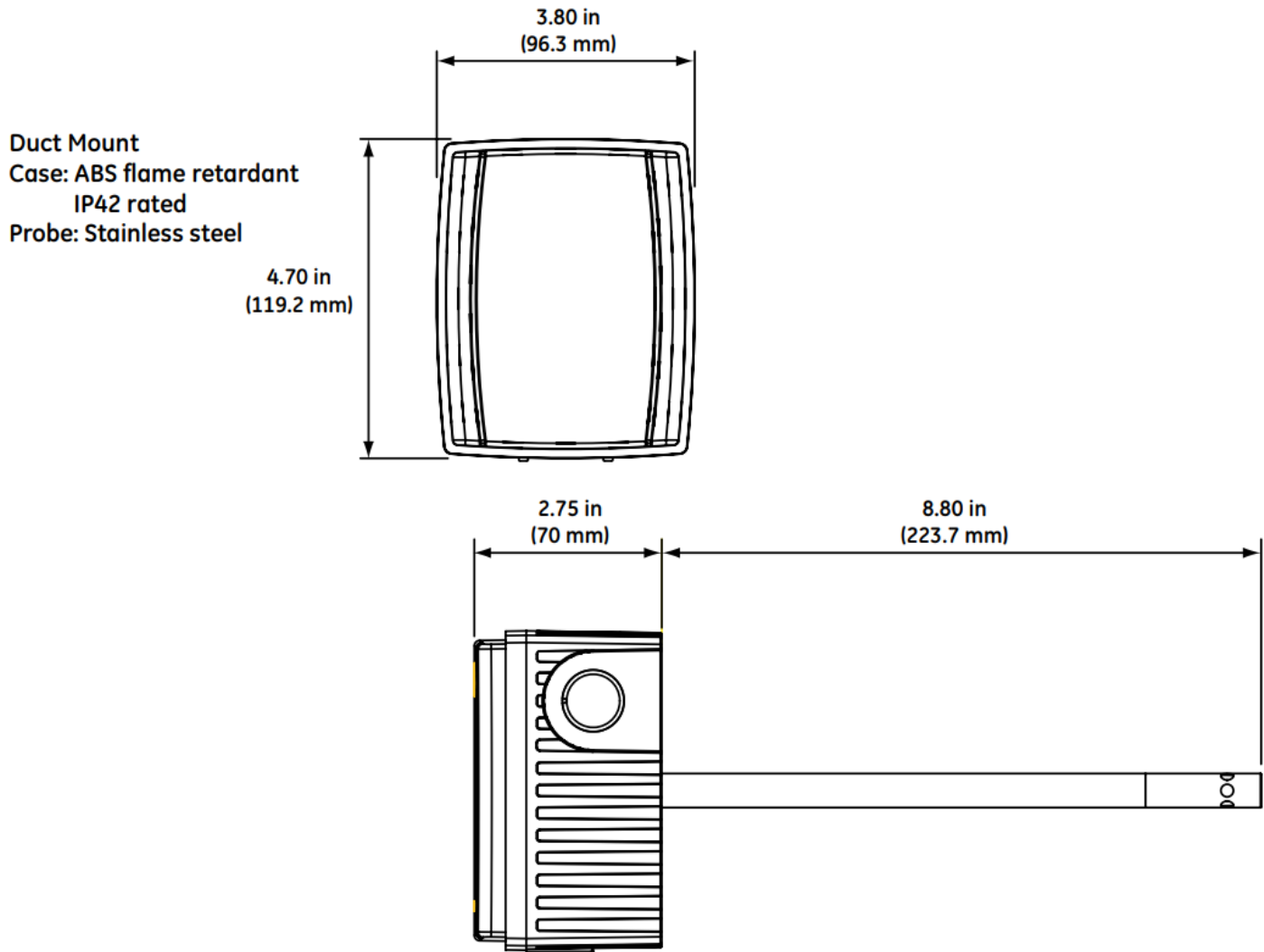
Operating Range:		-40°F to 140°F (-40°C to 60°C) 0% to 99% RH (Non Condensing)
Storage Temp:		-67°F to 185°F (-55°C to 85°C)
Supply Voltage:		-12 to 30 Vdc
Signal Outputs:		4-20mA, 0-5V or 0-10V (Selectable)
Max Load (Current Output Only):		(Ω) = Supply Vol - 10/ 0.02
Sensing Element:		Capacitive Polymer Sensor
Protection:		IP42 Rating For Duct Mount & Outside Air Transmitter
Space (Wall Mount) Range:	Dew Point	40°F to 90°F (4.4°C to 32.2°C)
	Enthalpy	0-50 BTU/lb (0 to 116.3 kJ/kg)
	Wet Bulb	40°F to 90°F (4.4°C to 32.2°C)
	Dry Bulb	40°F to 90°F (4.4°C to 32.2°C)
Duct Mount/ Outside Air Range:	Dew Point	-20°F to 120°F (-28.8°C to 49°C)
	Enthalpy	0-50 BTU/lb (0 to 116.3 kJ/kg)
	Wet Bulb	0°F to 100°F (-17.8°C to 37.8°C)
	Dry Bulb	-20°F to 120°F (-28.8°C to 49°C)
Accuracy at 77°F (25°C) at RH 40-90%:	Dew Point	±1.8°F(±1°C)
	Enthalpy	±2 BTU/lb (±4.7 kJ/kg)
	Wet Bulb	±3°F(±1.7°C)
	Dry Bulb	±0.5°C ((±0.9°F)

Product Order Code

AX-HUMI-DP-XR-x	Dew Point Transmitter
AX-HUMI-EN-XR-x	Enthalpy Transmitter
AX-HUMI-WB-XR-x	Wet Bulb Transmitter
	-S Space (Wall Mount)
	-D Duct Mount
	-O Open Air

Dimensions





Duct Mount
Case: ABS flame retardant
IP42 rated
Probe: Stainless steel

4.70 in
(119.2 mm)

3.80 in
(96.3 mm)

2.75 in
(70 mm)

8.80 in
(223.7 mm)

Installation

The device should be installed by a suitably qualified technician in accordance with prevailing regulations and any guidelines for the equipment to which it is to be connected. Damages due to improper installation or not adhering to the product specifications will not be covered under warranty.

For your convenience, the transmitters can be mounted using the base as a mounting template (see Figure 1 or 2).

Wall Mount

Locate the transmitter where it will be exposed to an unrestricted air circulation that is representative of the average humidity and/or temperature of the controlled space. Avoid locations where excessive moisture, corrosive fumes, vibration, or high ambient temperatures are present.

The wall mount transmitter is designed to install onto a standard electric switch box. Mount the transmitter on an indoor wall approximately 4 to 6 feet above the floor. The base assembly should be positioned with the letters FR/ABS

located on the left side.

Duct Mount

The transmitter should be mounted away from fans, corners, heating and cooling coils, and other equipment that will affect the measurement of relative humidity. It should be mounted in a location that receives adequate air flow for proper operation.

The duct mount transmitter should be mounted so that the sensor probe is in the centre of the duct.

Outside Air Mount

The transmitter should be mounted in a sheltered area that is protected from rain. Ideally, the transmitter should be located on the north side of the building (under an eave) to prevent sun-heated air from rising up the building's wall and affecting the relative humidity of the sensor.

The outside air mount transmitter should be mounted with the sensor pointing down to prevent water collection in the sensor cavity.

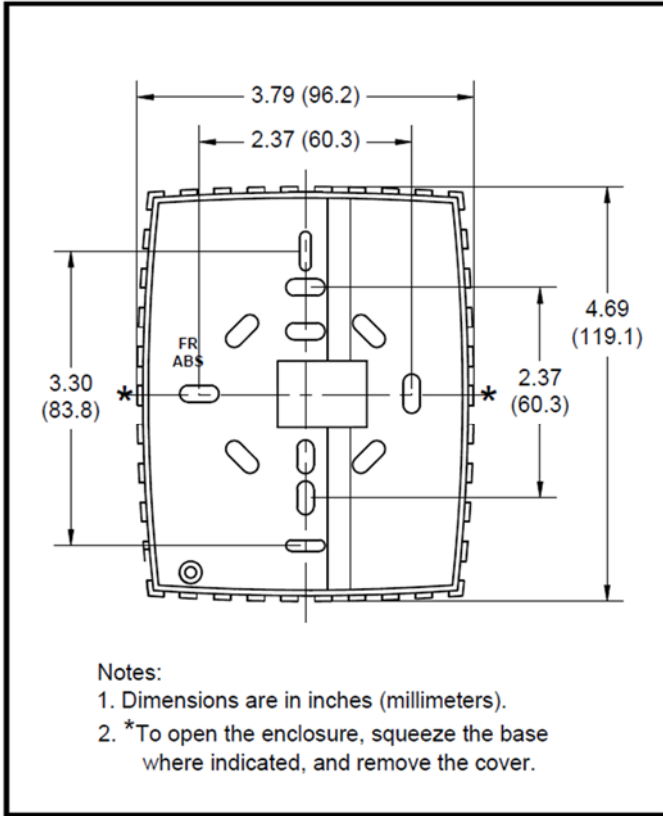


Figure 1: Wall Mount - Mounting Dimensions

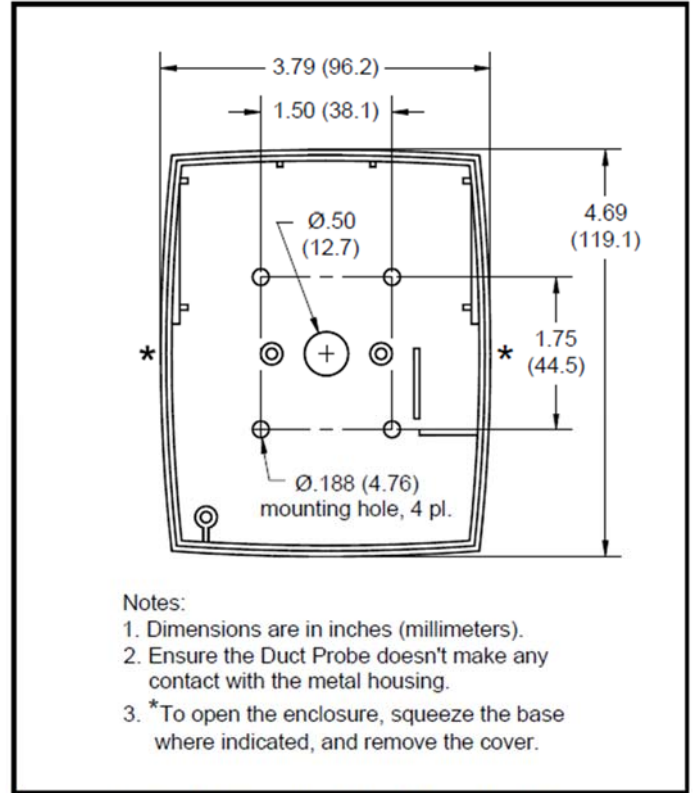


Figure 2: Duct / Outside Air - Mounting Dimensions

Wiring

Match your transmitter with the corresponding diagrams (Figure 4 through Figure 9), set the switches and wire accordingly. (See Figure 3 below for switch and terminal block locations.) Ensure that all the installation and wiring is in compliance with all national and local codes.

Note: All Voltage Outputs are measured with respect to the POWER SUPPLY / CONTROLLER GROUND.

Wiring for the transmitter should be in a single shielded twisted pair cable or multiple pairs if needed. Use only copper conductors. Do not run transmitter wires and AC power wires



Figure 4: Switch Positions for Voltage Mode

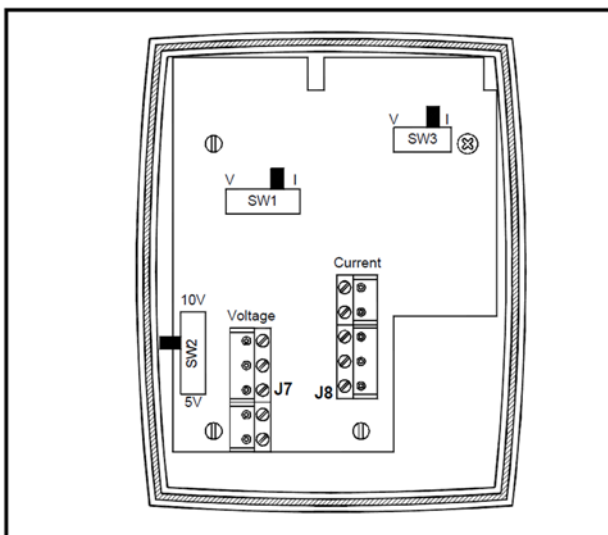


Figure 3: Connector/Switch Locations - Inside Cover

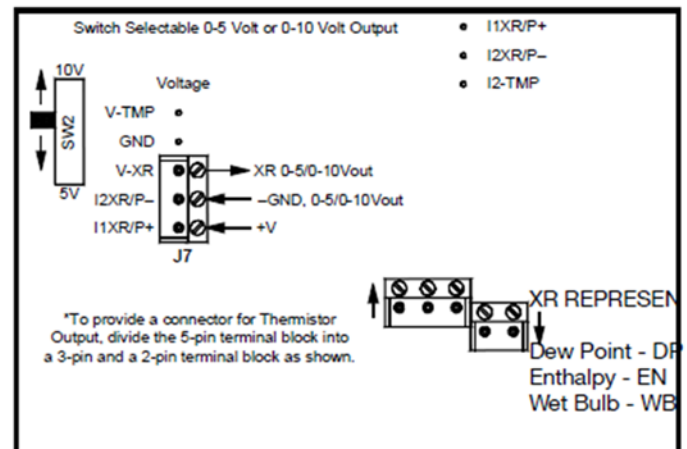


Figure 5: DP/EN/WB and Temp. (Direct Connection) - Voltage

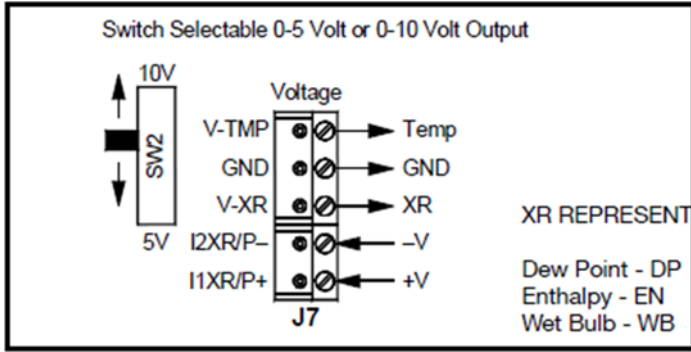


Figure 6: DP/EN/WB and Temp. (Signal Condition) - Voltage



Figure 7: Switch Positions for Current Mode

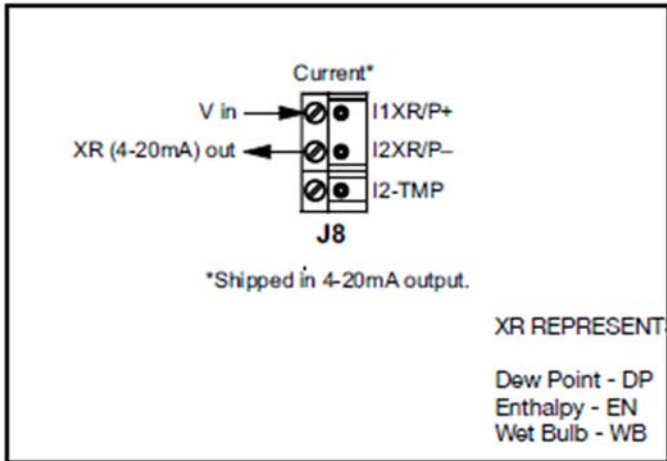


Figure 8: DP/EN/WB and Temp. (Direct Connection) - Current

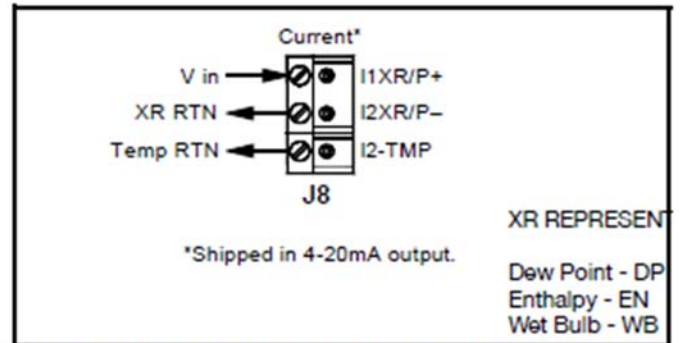


Figure 9: DP/EN/WB and Temp. (Signal Condition) - Current

Datasheet Contents

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