

GE Sensing

Features

- Primary dew point measurement
- High accuracy
- Wide operating range
- No drift
- No hysteresis
- Direct dew point and temperature signals

Applications

- Precision HVAC/BAS
- Clean rooms
- Museums
- Film storage
- Pharmaceutical

Dew-10

General Eastern Chilled Mirror Dew Point Transmitter

Dew-10 is a General Eastern product. General Eastern has joined other GE high-technology sensing businesses under a new name—GE Industrial, Sensing.



GE Sensing

Primary Dew Point Measurement with 4 to 20 mA or PRTD Output

The Dew-10 series is a family of cost effective chilled mirror dew point transmitters comprising of wall, duct and pipe mounted models. These instruments provide accurate and reliable dew point measurements over a wide range for building automation, mission critical environments and clean industrial applications.

Dew-10s provide accuracy of $\pm 1^{\circ}\text{F}$ ($\pm 0.5^{\circ}\text{C}$) over a range of -40°F to 136°F (-40°C to 58°C) dew point. The range is dependent on the ambient temperature. At 77°F (25°C) the units provide approximately 72°F (40°C) depression. The wall mount version is also available with an air temperature measurement capability over the same range.

The Dew-10 measures dew point by utilizing a solid state heat pump to cool a metallic mirror. When the mirror temperature reaches the dew point of the surrounding air, a thin dew layer condenses on the mirror surface. The condensation is optically detected. A feedback loop keeps

the mirror at the exact dew point by continuously controlling the mirror temperature. A precision PRTD (Platinum Resistance Temperature Detector) is embedded just beneath the surface of the mirror, allowing the dew point temperature to be precisely measured.

Maintenance is straight-forward. Filter replacement and cleaning the mirror with a cotton swab restores the transmitter to its original condition. Since the wetted components are inert and the RTD is hermetically sealed, Dew-10s provides many years of drift-free measurement.

Each transmitter is calibrated to National Institute of Standards and Technology (NIST) traceable reference standards. A certificate of conformance with functional test data is supplied. Our manufacturing and quality system certified to ISO-9001 standards and Six-Sigma methodology is applied.

Contact our applications engineers to discuss your precision humidity measurement requirements.



Dew-10 Specifications

Wall Mounted Unit

Accuracy

±1.0°F (±0.5°C)

Repeatability

±0.1°F (±0.05°C)

Hysteresis

None

Dew Point Output

Platinum RTD, four-wire, 100 Ω at 32°F (0°C) or
4 to 20 mA signal

Temperature Output

Platinum RTD, four-wire, 100 Ω at 32°F (0°C) or
4 to 20 mA signal

Power Supply

24 VDC, 24 VAC, 115 VAC, 230 VAC, 10 watts maximum

Dew Point Range

-10°F to 136°F (-24°C to 58°C)

Operating Temperature

32°F to 140°F (0°C to 60°C)

Pressure

One atmosphere nominal

Weight

5.0 lb (2.5 kg)

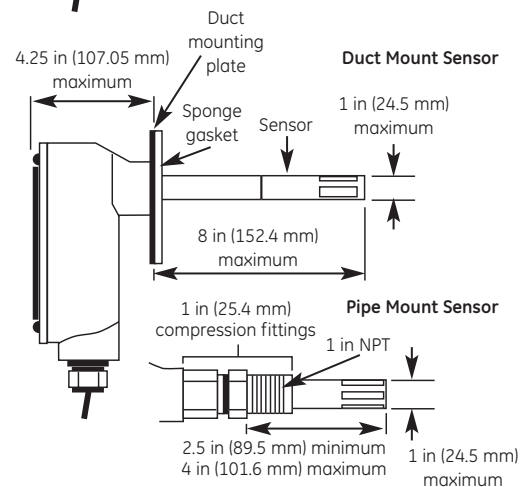
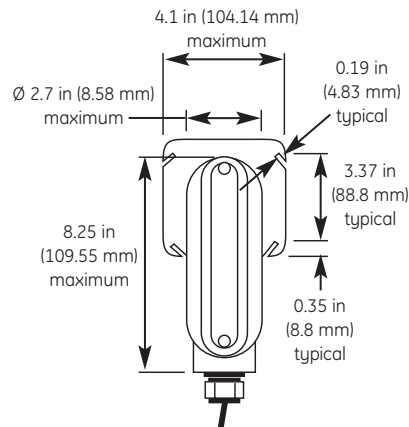
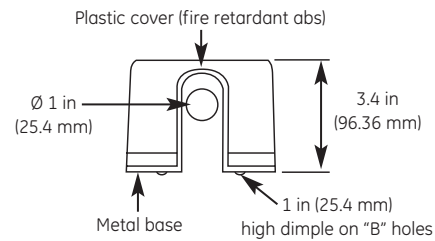
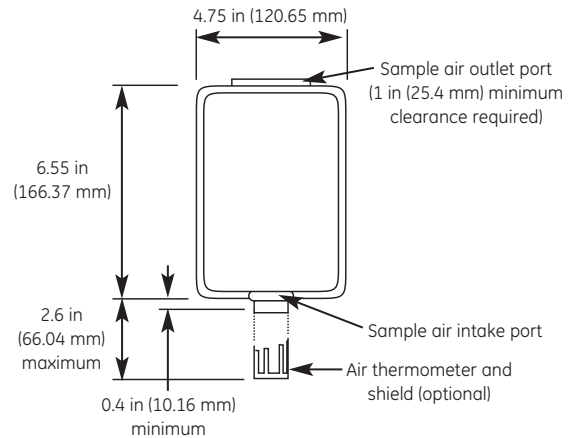
Pipe/Duct Mounted Unit

Accuracy

±1.0°F (±0.5°C)

Repeatability

±0.1°F (±0.05°C)



Dew-10 dimensions

Dew-10 Specifications

Hysteresis
None

Output
Platinum RTD, four-wire, 100 Ω at 32°F (0°C) or
4 to 20 mA signal

Power Supply
24 VDC, 24 VAC, 115 VAC, 230 VAC 10 watts maximum

Dew Point Range
-40°F to 155°F (-40°C to 68°C)

Pressure
10 ft (3 m) water column

Duct Air Velocity
500 to 3,000 ft/min (50 to 900 m/min)

Operating Temperature

- Electronics: 32°F to 122°F (0°C to 50°C)
- Probe: -40°F to 155°F (-40°C to 68°C)

Weight
5.0 lb (2.5 kg)

Ordering Information

The code number to be ordered may be specified as follows:

Dew-10	
Code	Power
0	24 VDC (standard)
1	24 VAC
2	115 VAC
3	230 VAC
Code	Output Signal
A	RPT direct; 100 W, 32°F (0°C)
B	4 to 20 mA (15 VDC) 0°F to 100°F (-17°C to 37°C)
C	4 to 20 mA (15 VDC) 32°F to 122°F (0°C to 50°C)
D	4 to 20 mA (15 VDC) 40°F to 140°F (4°C to 60°C)
X	4 to 20 mA (15 VDC) user specified
Code	Mounting
0	Wall
0	Wall with temperature
1	Duct
2	Pipe

Dew-10 - _____ - _____ - _____ Typical model number

For wall mounted unit with temperature, select two output signals. Example: Dew-1-OCC0 is a wall mounted unit with 24 VDC power supply, dual 4 to 20 mA signals (dew point and temperature) scaled for 32°F to 122°F (0°C to 50°C).



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