

DewPro® MMY31 Dew Point Transmitter

The DewPro MMY31 measures dew point or ppm_v in gases. It is a cost-effective, loop-powered dew point transmitter designed for “in-line” installation where trace moisture measurement is required. The planar aluminum oxide sensor provides excellent corrosion resistance, longer calibration stability, quick response times, and an exceptionally low temperature coefficient.

The DewPro MMY31 mounts directly in-line in your process gas, where a bypass installation is not appropriate. It is easily installed via a variety of adjustable insertion length compression fittings. The optional integrated display with user interface provides full programming and diagnostic capability.

Applications include glove boxes, environmental chambers, test chambers, and other locations where direct insertion is required.

Features

- Loop-powered, 4 to 20 mA transmitter
- Fast response planar aluminum oxide sensor
- Trouble-free indoor or outdoor mounting
- Field validation with the MMY245 moisture analyzer
- Microcontroller electronics in Type 4X/IP67 enclosure



Options

- Integrated display with user interface
- FM approved intrinsically safe/explosion-proof, Class I,II,III, Division 1 and 2, Groups A,B,C,D,E,F&G hazardous (classified) locations
- English or metric fittings
- External display available with loop-power supply and alarm contacts



DewPro MMY31 Specifications

Sensing Element

Planar aluminum oxide sensor

Measurement Range

-130°F to 50°F (-90°C to 10°C) dew point temperature;
0 to 10 ppm_v, 0 to 1000 ppm_v (fully adjustable with integral display)

Recommended Recalibration Cycle

12 months, depending on the application

Calibration Accuracy

±3.6°F (±2°C) dew point at 77°F (25°C)

Maximum Sensor Relative Humidity

50% at dew point temperatures >32°F (>0°C)

Operating Temperature Range

Process: -40°F to 122°F (-40°C to 50°C)

Electronics: -40°F to 185°F (-40°C to 85°C)

Element Filter

100 micron, sintered stainless steel

Standard Operating Pressure

0 to 1750 psig (0 to 120 bar, 12 MPa)

Helium Leak-rate

<10⁻⁶ mbar/s

Output

4 to 20 mA loop-powered, 16 µA resolution

Electronics

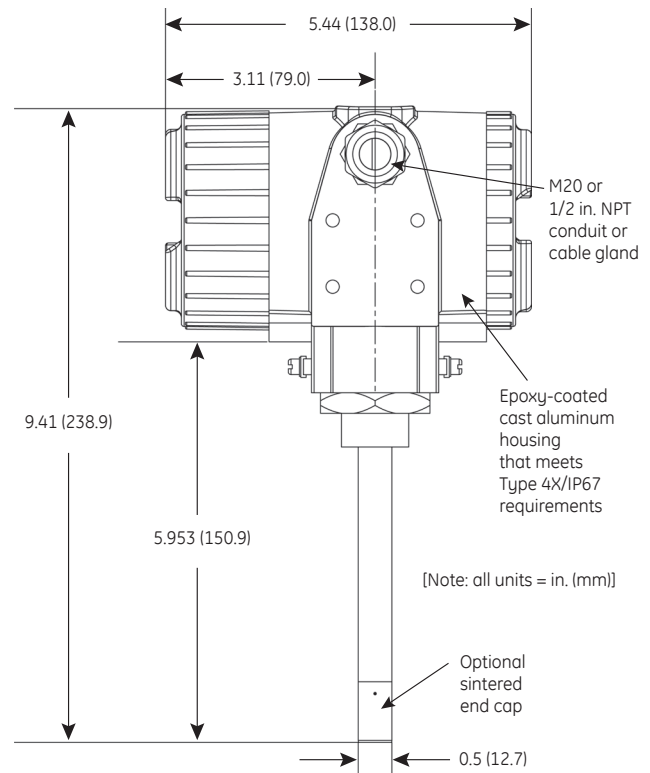
Microcontroller operated

Optional Display

Four-digit numeric display with bar graph and matrix position indication; four user interface keys for unit selections, output adjustments and ranging

Power Supply

24 VDC nominal, 12 to 30 VDC



DewPro MMY31 with Display Option

Protection

Type 4X/IP67

Weight

3.3 lb (1.5 kg)

Probe Tube

316 stainless steel, 1/2 in. (12.7 mm) diameter, insertion length 2 in. (50 mm) to 3.5 in. (90 mm)

Typical Probe Mounting

1/2 in NPT-M, 3/4 in NPT-M, 3/4-16 O-ring, G 1/2 compression fittings. Others available, consult factory.

European Compliance

Complies with EMC Directive 89/336/EEC and PED 97/23/EC for DN<25

Optional Certifications/Approvals

- FM IS Class I,II,III, Division 1, Groups A,B,C,D,E,F&G, T5
- FM XP-IS Class I, Division 1, Groups A,B,C&D, T5
- FM NI Class I, Division 2, Groups A,B,C&D, T4A
DIP Class II,III, Division 1, Groups E,F&G, T5
- ATEX II 3G EEx nA IIC T4



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