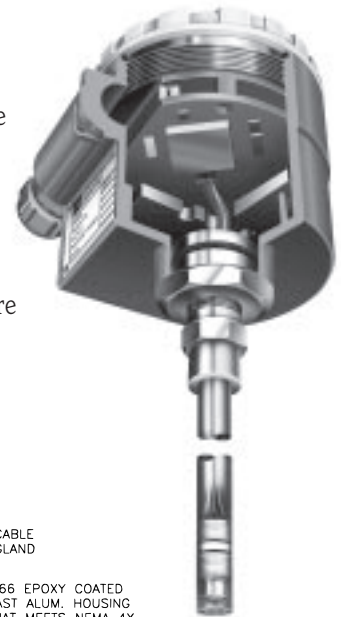


# DewPro® MMR 31

The MMR 31 Loop Powered Moisture Analyzer represents a simple, cost-effective solution for mid-range moisture measurements. Whether you need to improve product economy, increase product quality, maintain comfort levels, or preserve the properties of stored foods or other supplies, the MMR 31 allows application flexibility. The MMR 31 can also be quickly recalibrated in the field using salt bottles. A second, isolated loop for temperature is optional. (U.S. patent # 5,677,476)

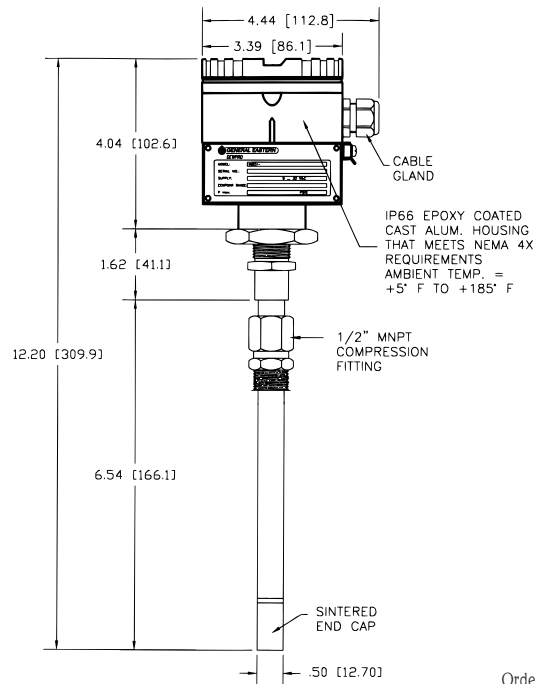


## Features:

- Economical, versatile analyzer measures relative humidity, dew point, absolute humidity, mixing ratio
- Proven polymer capacitive sensor for fast response and calibration stability
- 0 to 100% RH or dew point measurement range of -15°C to +85°C
- Simple, two-wire connection (4 to 20 mA)
- Easy mounting with standard compression fittings
- Simple field recalibration with salt bottles
- NEMA 4X (IP67) Enclosure

## Options:

- Wall mount kit
- DewPro Communication Software
- Integral Display with user interface
- Second isolated loop (patented) for temperature
- English or Metric fittings
- External display available with loop-power supply and alarm contacts



Ordering Information: See page 10

## Specifications

|                                     |  |                                    |   |
|-------------------------------------|--|------------------------------------|---|
| <b>Sensing Element:</b>             | Silicon-based polymer, capacitance principle, IC electronics   | <b>Maximum Operating Pressure:</b> | 250 psia (17 bar)   |
| <b>RH Range:</b>                    | 0 to 100%  | <b>Outputs:</b>                    | Loop current 4 to 20 mA, 16 $\mu$ A resolution<br>Optional output for temperature   |
| <b>RH Accuracy:</b>                 | $\pm 2\%$ in the range of 0% to 90%<br>$\pm 3\%$ in the range of 90% to 100%   | <b>Electronics:</b>                | Microprocessor controlled   |
| <b>Dew Point Range:</b>             | -15°C to +85°C (+5°F to +185°F)  | <b>EMI/RFI Protection:</b>         | Meets IEC 801-1 through 6   |
| <b>Dew Point Accuracy:</b>          | Better than $\pm 1^\circ\text{C}$ ( $\pm 1.8^\circ\text{F}$ ) if $T > 30^\circ\text{C}$ (86°F) and $\text{RH} > 40\%$ , $T < 30^\circ\text{C}$ (86°F) and $\text{RH} > 30\%$ | <b>Moisture Units:</b>             | % RH, dew point temperature in °F or °C, absolute humidity in g/m <sup>3</sup> , or mixing ratio in g/kg, hardware selectable |
| <b>Repeatability:</b>               | $\pm 1^\circ\text{C}$ ( $\pm 1.8^\circ\text{F}$ )  | <b>Power Supply:</b>               | 24 V DC nominal, 12 to 32 V DC range, or tolerance +8 V DC to -15 V DC  |
| <b>Operating Temperature Range:</b> | -15°C to +85°C (+5°F to +185°F); temp. signal available with second loop   | <b>Protection:</b>                 | NEMA 4X (IP 66)   |
| <b>Temperature Accuracy:</b>        | 0.5°C ( $\pm 0.9^\circ\text{F}$ )  | <b>Probe Tube:</b>                 | 316 SS, 1/2" (12.7mm) diameter, insertion length 3.0" (75mm) to 5.9" (150mm), adjustable                                      |
| <b>Absolute Humidity Range:</b>     | 1 to 350 g/m <sup>3</sup>  | <b>Typical Probe Mounting:</b>     | 1/2" tube x 1/2" MNPT or 1/2" tube x G 1/2 compression fitting  |
| <b>Mixing Ratio Range:</b>          | 1 to 830 g/kg  | <b>Weight:</b>                     | 4.4 lbs (2 kg)  |