

# MDR3

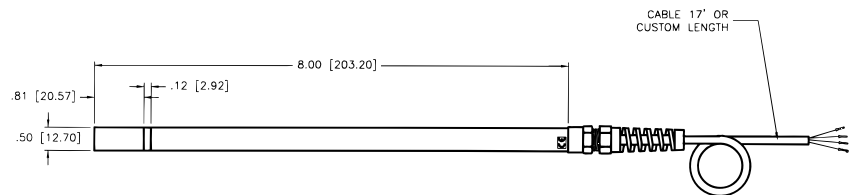
## Relative Humidity Probe

DewPro® MDR3 Series probe includes a removable filter cap for easy cleaning in dirty applications. The probe incorporates a polymer dielectric capacitance sensor for quick response times and accurate dew point measurements as well as a platinum RTD for temperature measurement. The MDR3 has been approved by SIRA (CENELEC) and FM (Factory Mutual, USA) as EEx ia IIC T4 for use in hazardous areas with intrinsic safety barriers.



### Features:

- Proven, polymer capacitive sensor
- Platinum RTD temperature sensor
- Trouble-free indoor or outdoor mounting
- Approved for use in hazardous areas with intrinsic safety barriers



Dimensional Drawing  
& Ordering Information:  
See page 14

Ordering Information: See page 8

## Probe Specifications

<b>Sensing Element:</b>	Silicon-based polymer, capacitance principle, IC electronics	<b>Signal Transmission:</b>	Moisture and temperature frequencies allowing 1000 ft. (350 meters) of standard four-wire cable (shielded to maintain EMI/RFI/ESD resistance)
<b>RH Range:</b>	0 to 100%	<b>Probe Tube:</b>	316 stainless steel; 0.5" diameter; 6.8" long (12.7 mm x 172 mm)
<b>RH Accuracy:</b>	±2% in the range of 0% to 90% ±3% in the range of 90% to 100%	<b>Typical Probe Mounting:</b>	0.5" tube x 0.5" MNPT compression fitting or ANSI flange
<b>Dew Point Range:</b>	-15°C to + 75°C (5°F to 167°F)	<b>Sensor Guard:</b>	Rugged, removable, easy-to-clean, 100 micron sintered 316 L stainless steel filter; additional hydrophobic filter on the sensor element allowing the penetration of water vapor but not water droplets
<b>Dew Point Accuracy:</b>	Better than ±1°C (±1.8°F) if T>30°C (86°F) and RH>40%, T<30°C (86°F) and RH>30%	<b>Weight:</b>	0.5 lbs. (0.23 kg)
<b>Repeatability:</b>	Better than 0.5% RH	<b>Approval:</b>	CENELEC, FM (EEx ia) IIC T4, 95°C (203°F) using the Zenar barrier kit IS 20 ST from General Eastern or equivalent
<b>Hysteresis:</b>	Less than ±0.9%		
<b>Standard Operating Temperature:</b>	-10°C to +85°C (14°F to 185°F)		
<b>Temperature Accuracy:</b>	±0.5°C (±0.9°F)		
<b>Maximum Operating Pressure:</b>	250 psig (17 bar)		
<b>Sensor Electronics:</b>	Integrated circuitry with a platinum RTD temperature sensor		