

2019-05-02

HMS112 and GMP252 with DTR250A Radiation Shield for High-Accuracy Humidity, Temperature, and CO2 Outdoor Measurements in Building Automation Applications

HMS112 Features/Benefits:



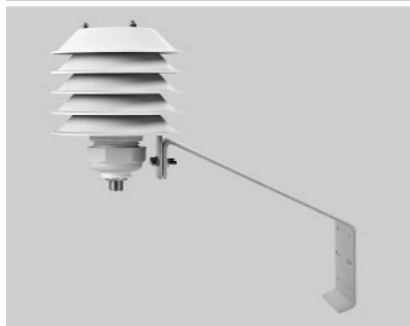
- Proven HUMICAP® 180R sensor for superior long-term stability
- Measures relative humidity and temperature; dew point temperature, wet bulb temperature, and enthalpy outputs selectable
- ± 2 %RH accuracy
- NIST traceable calibration (certificate included)
- On-site calibration with HM70 Hand-Held Meter or PC connection
- Shield protects temperature and humidity probes from scattered, as well as, direct solar radiation and rain
- Easy to install on a pole, horizontal beam or flat surface

GMP252 Features and benefits:



- IP65 classified housing
- Compensations for background gases, O₂, and humidity
- Measurement range 0 ... 10 000 ppmCO₂
- Suitable for outdoor or harsh environments when combined with DTR250A radiation shield
- Excellent accuracy and stability
- Wide operating temperature and humidity ranges

DTR250A Features and benefits:



- Protects the probe from solar radiation and precipitation in outdoor installations
- includes the DTR250 radiation shield and a pole mounting kit

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HMS 112 Summary:

Outdoor mounted transmitter shall incorporate a thin film polymer capacitive HUMICAP® relative humidity sensor that is field replaceable (re-calibration in the field also required after replacement). Electronics to be protected in a NEMA4 enclosure. Accuracy to be $\pm 2\%$ RH for the 0 to 90% RH range, and $\pm 3\%$ RH from 90 to 100% RH between $+10 \dots +30 \text{ }^\circ\text{C}$ ($+50 \dots +86 \text{ }^\circ\text{F}$). Sensor shall have a stability of $\pm 0.5 \%$ RH/year in typical HVAC applications. Transmitter to be loop powered by 10 to 28 VDC ($R_L = 0\Omega$) or 20 to 28 VDC ($R_L = 600\Omega$), provide a linear output signal of 4 to 20 mA corresponding to 0 to 100% RH, and operate over a temperature range of $40 \dots +60 \text{ }^\circ\text{C}$ ($-40 \dots +140 \text{ }^\circ\text{F}$). Temperature sensor to be a platinum 1000Ω RTD having a linear output signal of 4 to 20 mA corresponding to $-40 \dots +60 \text{ }^\circ\text{C}$ ($-40 \dots +140 \text{ }^\circ\text{F}$). Accuracy to be $\pm 0.2^\circ\text{C}$ (0.36°F) at 20°C (68°F). Transmitter shall have the ability to calibrate relative humidity, without disturbing operation, using a single point electronic field calibrator. NIST traceable calibration and certificate included. Shall have options to calculate and output additional parameters: dew point temperature, wet bulb temperature, and enthalpy.

GMP252 with DTR250A Summary:

Carbon dioxide outdoor probe shall incorporate a second generation CARBOCAP® NDIR sensor. Accuracy (including repeatability and non-linearity) at 25°C (77°F) and 1013 hPa between 0-3000 ppm shall be ± 40 ppm. Measurement range of 0-1000 ppm, 0-2000, 0-3000, 0-5000 ppm or 0-10000ppm. Operating humidity range is 0 to 100% RH, non-condensing and temperature range is -40 to 60°C (-40 to 140°F). Long term stability shall be $<\pm 60$ ppm/yr between 0...3000ppm. Analog outputs shall be 0...5V, 0...10V, 0...20mA or 4...20 mA; serial outputs shall be RS-485. Operating voltage shall be 12...30 VDC with digital or voltage output in use, and 20...30VDC with current output in use. Power consumption is typically 0.4W and no greater than 0.5W

[HMS112](#)

[GMP252 Order Guide](#)

[DTR250A](#)