

QPM Series Indoor Air Quality Duct Sensors

Description

The QPM Series Indoor Air Quality Duct Sensors optimize room comfort by enabling demand-controlled ventilation. Models are available that measure CO₂, CO₂ and temperature, or CO₂, temperature and relative humidity.

For models with humidity, a capacitive humidity sensing element changes capacitance as a function of the relative humidity. An electronic measuring circuit converts the humidity signal to a voltage or current (field selectable) signal that corresponds to a relative humidity range of 0 to 100%. For models with temperature, the sensor acquires room temperature with a sensing element that changes electrical resistance as a function of the temperature. The resistance is converted to a voltage or current output signal that corresponds to a temperature range of 32°F to 122°F (0°C to 50°C) or -31°F to 95°F (-35°C to 35°C).

The QPM2102 models measure both CO₂ and volatile organic compounds (VOC) for optimized indoor air quality. A single output signal is automatically adjusted to reflect the higher of the two values. A secondary output provides CO₂ data. This enables the combination CO₂ + VOC sensor to be easily substituted for a CO₂ sensor in any demand control ventilation control system.



QPM Series Air Quality Duct Sensors and QPM21xxD Indoor Air Quality Duct Sensor with Display.

Features

- Non-Dispersive Infrared (NDIR) CO₂ sensing technology is ideal for use in facilities that are occupied 24/7.
- Combination units enable a single sensor to take the place of up to three individual sensors.
- Maintenance-free infrared CO₂ sensing element never requires recalibration.
- Field-selectable output provides 0 to 10V, 0 to 5V, or 4 to 20 mA output signal(s).

Ordering Information

Part Number	Description
QPM2100	Duct CO ₂ Sensor
QPM2102	Duct CO ₂ + VOC Sensor*
QPM2102D	Duct CO ₂ + VOC Sensor w/Display*
QPM2160	Duct CO ₂ + Temperature Sensor
QPM2160D	Duct CO ₂ + Temperature Sensor w/Display
QPM2162	Duct CO ₂ + Temperature + RH Sensor
QPM2162D	Duct CO ₂ + Temperature + RH Sensor w/Display

* Siemens CO₂ + VOC sensors are designed to help maximize occupant comfort and are not suitable for use in life safety applications.

General Specifications

Output Signal:

0-10V, 0-5V, or 4-20 mA, selectable, linear

CO₂ Measuring:

Range: 0-2000 ppm

Accuracy: $\leq \pm 50$ ppm +2% of measured value*

Temperature dependency: ± 2 ppm/°C (typical)

Long term drift: $\leq \pm 5\%$ measuring range/5 yrs

* Allow up to 96 hours for unit to reach published accuracy.

Temperature Measuring:

Range: -31°F to 113°F (-35°C to 45°C)

Accuracy: ± 1.4 °F (± 0.8 °C)

Humidity Measuring

Range: 0 to 100% rh

Accuracy: $\pm 3\%$ rh (typical 30 to 70% rh)

Power Supply:

Operating voltage (SELV): 24 Vac or 15 to

35 Vdc $\pm 20\%$ Frequency: 50/60 Hz

Power consumption: ≤ 2 VA

Electrical:

Screw terminals: 2 x 16 AWG or 1 x 14 AWG

Environmental:

Transport:

Temperature: -13°F to 158°F

(-25°C to 70°C)

Humidity: < 95% rh

Physical:

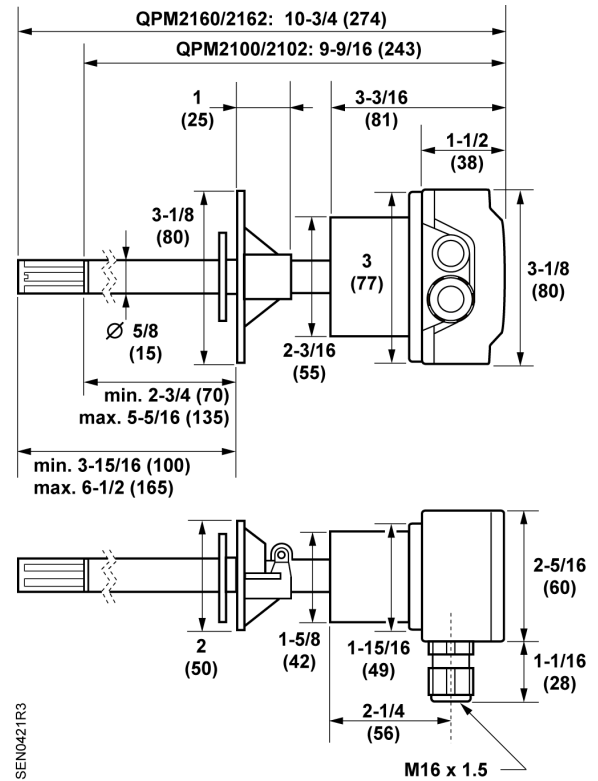
Weight (including packaging):

0.60 lb (0.272 kg)

Miscellaneous:

No calibration required for 8 years

Dimensions



Dimensions in Inches (mm).

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