



CARBON DIOXIDE SENSORS GMD20, GMW21 SERIES



DESCRIPTION

The Vaisala GMW21 and GMD20 Series Carbon Dioxide Sensors are specially designed for demand-controlled ventilation. The transmitters use the silicon-based CARBOCAP sensor. The simple structure and reference measurement capabilities make these single-beam, dual-wavelength NDIR sensors extremely stable and reliable. The temperature and flow dependence is negligible. Models are available with a temperature output.



GMW21D

GMD20D

FEATURES

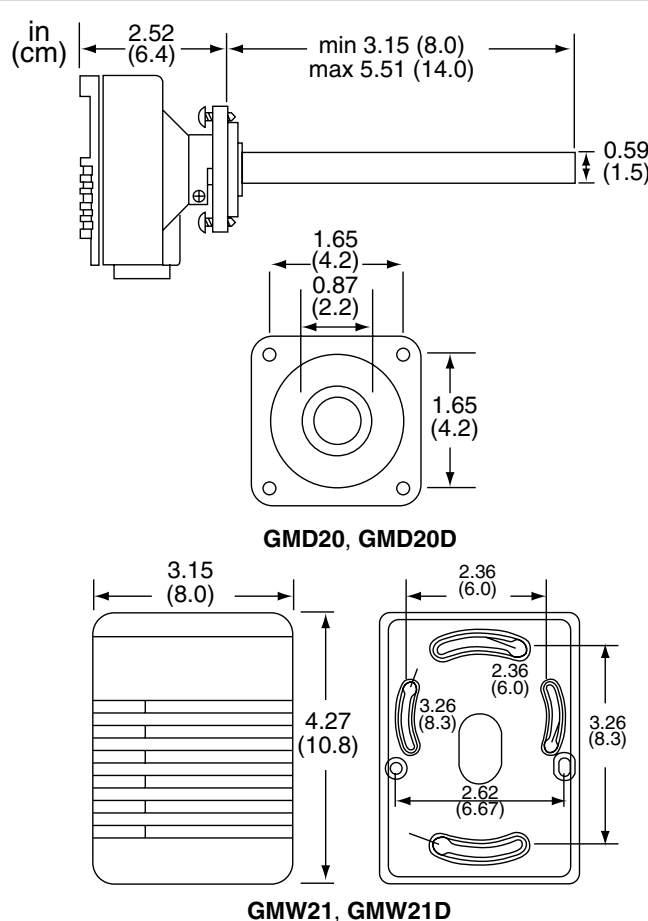
- Silicon-based NDIR sensor
- Excellent long-term stability
- Negligible temperature dependence
- Easy installation
- Five-year recommended calibration interval
- Duct sensor measurement in the duct



SPECIFICATIONS

Supply Voltage	24 VAC @ 2.5 VA or 24 VDC @ 104 mA
Signal Output	0-20 mA or 4-20 mA, and 0-10 VDC
Maximum Output Impedance mA	500Ω maximum
Minimum Output Impedance VDC	1 kΩ minimum
Accuracy	2% of reading ±30 ppm
Linearity	±1% FS
Stability	<5% FS for 5 years
Air Velocity	0-2000 fpm (0-10 mps)
Measurement Range	0-2000 ppm
Warm Up Time	15 minutes
Response Time	1 minute
Relay Setpoint	1000 ppm (adjustable with calibration software)
Operating Humidity	0% to 85% non-condensing
Operating Temperature	23° to 113°F (-5° to 45°C)
Approvals	CE
Weight	
Wall	0.35 lb (0.16 kg)
Duct	0.75 lb (0.34 kg)
Warranty	2 years

DIMENSIONS





GAS & SPECIALTY SENSORS

CARBON DIOXIDE SENSORS

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INSTALLATION

The wall-mount **GMW21 Series** must be placed in an area representative of the entire conditioned space. Recommended mounting height is 5' (1.5m), and the unit may be mounted onto a wall box or surface mounted.

The duct-mount **GMD20 Series** mounts directly to the duct. The duct probe insertion depth is adjustable using the mounting plate. Since the CO₂ level is sensed in the duct, there are no minimum airflow requirements.

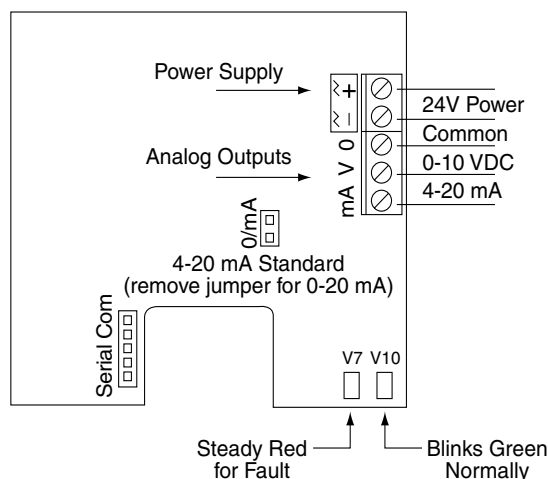
CALIBRATION

The GM Series is factory calibrated. A recalibration is recommended every five years. A field check can be done with a calibration gas and multimeter. A calibration adjustment requires the Model 19222 GM calibration software.

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GAS & SPECIALTY SENSORS

WIRING



ORDERING INFORMATION

MODEL	DESCRIPTION
GMD20	Duct-mount CO ₂ transmitter
GMD20D	Duct-mount CO ₂ transmitter with relay and display
GMW21	Wall-mount CO ₂ transmitter
GMW21D	Wall-mount CO ₂ transmitter with relay and display
GML20	Wall-mount CO ₂ transmitter with LONworks

	ACCESSORIES	PAGE
19222GM	Calibration software kit (includes disk and serial adapter)	
691-K0A	Control transformer, 120:24 VAC, 40 VA, Class 2	979
DCP-1.5-W	Power supply, 24 VAC IN to 24 VDC OUT	995
DCPA-1.2	Power supply, 120 VAC IN to 24 VAC/24 VDC OUT	994
GAS-CO2-2000	2000 ppm carbon dioxide (CO ₂) in nitrogen (N ₂), 17L	
GMA20T	Analog temperature option (GMW21 only)	
GMR20	Relay option (GMW21 or GMD20 only)	
UCK-1	Universal calibration kit for non-corrosive gases (N ₂ , CO ₂ , CH ₄ , H ₂ , O ₂ , CO, and refrigerants)	