

GAS & SPECIALTY SENSORS



VAISALA CARBON DIOXIDE SENSORS GMD20, GMW86 SERIES

VAISALA

DESCRIPTION

The **Vaisala GMW86** 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.

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



GMW86

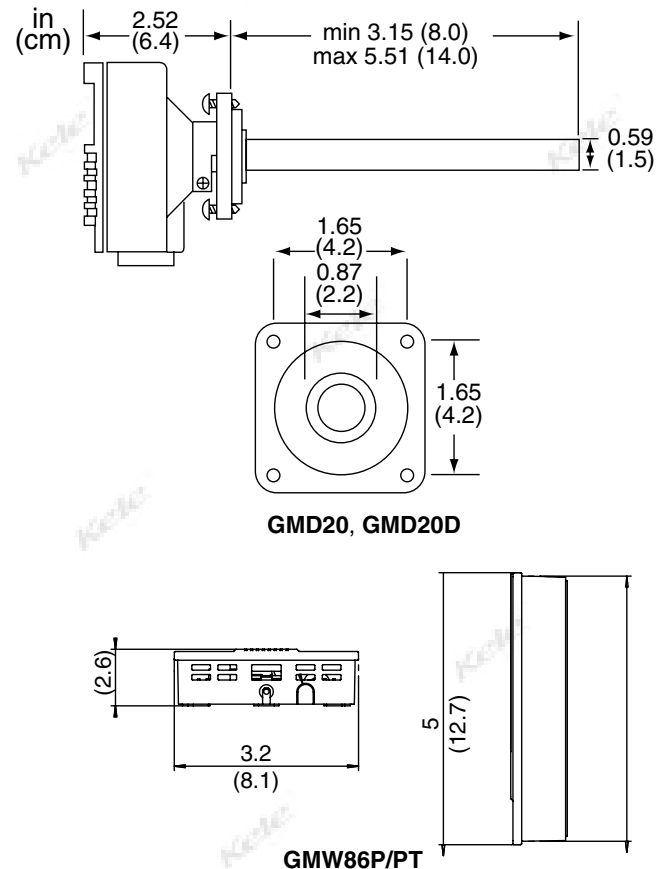


GMD20D

SPECIFICATIONS

| | |
|------------------------------|---|
| Supply Voltage | |
| GMD20 | 24 VAC @ 2.5 VA or 24 VDC @ 104 mA |
| GMW86 | 24 VAC @ 1 VA or 18-35 VDC @ 45 mA |
| Accuracy | 2% of reading ±30 ppm |
| Signal Output | |
| GMD20 | 0/4-20 mA @ 600Ω, and 0-10 VDC @ 1kΩ minimum |
| GMW86 | Temp. 1000Ω 385 RTD, 32° to 122°F (0° to 50°C) Humidity 4-20 mA or 0-10 VDC |
| 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 Type | SPST, 50 VAC/VDC @ 0.5 A |
| Relay Setpoint | 1000 ppm (adjustable with calibration software) |
| Operating Temperature | 23° to 113°F (-5° to 45°C) |
| Operating Humidity | 0% to 85% non-condensing |
| Enclosure Rating | NEMA 1, ABS Plastic |
| Weight | |
| Wall | 0.25 lb (0.11 Kg) |
| Duct | 0.75 lb (0.34 Kg) |
| Approvals | CE |
| Warranty | 2 years |

DIMENSIONS





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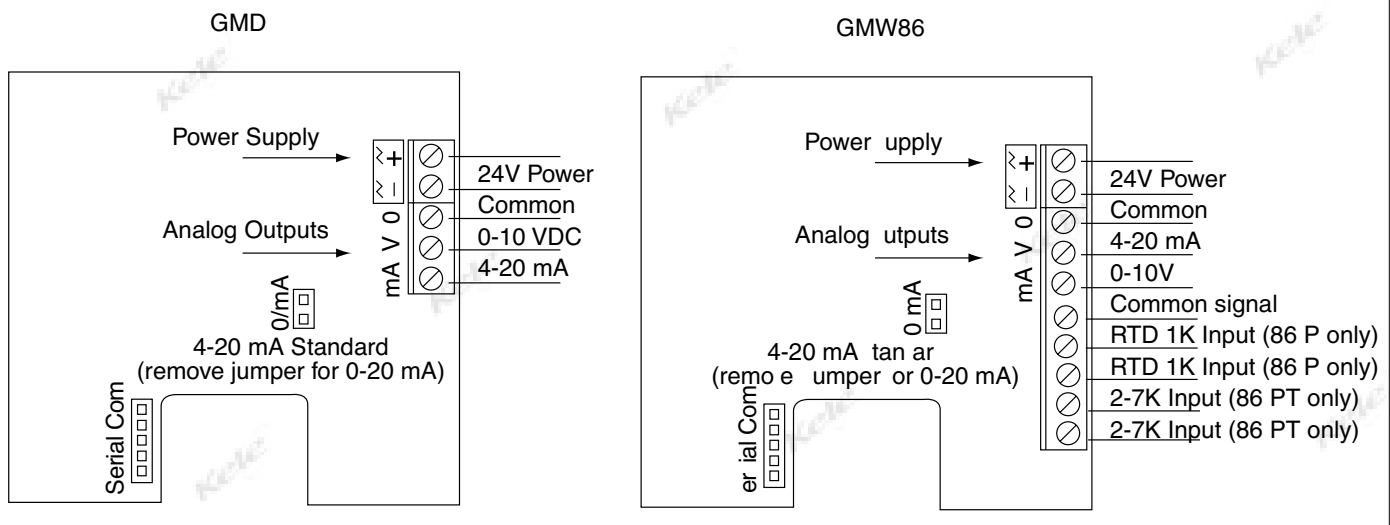
INSTALLATION

The wall-mount **GMW86 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.

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WIRING



ORDERING INFORMATION

| MODEL | DESCRIPTION |
|----------------|---|
| GMD20 | Duct-mount CO ₂ transmitter |
| GMD20D | Duct-mount CO ₂ transmitter with relay and display |
| GMW86P | Wall-mount CO ₂ transmitter |
| GMW86PT | Wall-mount CO ₂ transmitter with setpoint |

| ACCESSORIES | |
|---------------------|---|
| 691-K0A | Control transformer, 120:24 VAC, 40 VA, Class 2 |
| DCP-1.5-W | Power supply, 24 VAC IN to 24 VDC OUT |
| DCPA-1.2 | Power supply, 120 VAC IN to 24 VAC/24 VDC OUT |
| GAS-CO2-2000 | 2000 ppm carbon dioxide (CO ₂) in nitrogen (N ₂), 17L |
| GMR20 | Relay option (GMD20 only) |
| UCK-1 | Universal calibration kit for non-corrosive gases (N ₂ , CO ₂ , CH ₄ , H ₂ , O ₂ , CO, and refrigerants) |