



Duct Mount



Wall Mount

Product Data Sheet

CO₂ Sensors

**Part numbers: (Duct Mount) X13790423010, VACO2DUCT010, SEN01092
(Wall Mount) X13790422010, VACO2ZONE010, SEN01087**

The maintenance-free carbon dioxide (CO₂) sensor is primarily designed for return air based demand-controlled ventilation applications. The exceptional stability and reliable performance comes from advanced silicon-based Non-Dispersive InfraRed (NDIR) technology combined with Automatic Background Calibration (ABC) and passive gas diffusion (no moving parts). The CO₂ sensor is designed to operate from either a 24 Vac or 24 Vdc power supplied from the HVAC controller.

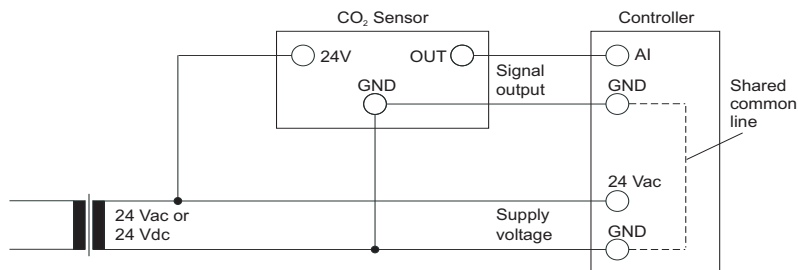
Features and Benefits

Features	Benefits
High accuracy	Reduced energy costs and improved environmental quality
0–2000 ppm range	Effective control of CO ₂ levels for optimized energy efficiency and air quality
Multiple outputs (0–10VDC or 4–20 mA)	Flexible for use with a wide range of Trane direct digital control (DDC) control
Automatic self-diagnostics	Diagnostic tools are built-in for minimized troubleshooting expenses
Maintenance-free design	Auto-calibration and reduced maintenance costs
Trane wall enclosure	Consistent enclosure designs for improved aesthetics

Specifications

Type	Description
Duct mount	3.3 in x 1.8 in x 5.6 in (84 mm x 46 mm x 142 mm)
Wall mount	4.8 in x 2.9 in x 1.1 in (121 mm x 74 mm x 28 mm)
Probe length	8.00 in (203 mm)
CO ₂ range	0–2000 ppm CO ₂
Accuracy at 25°C	±30 ppm CO ₂ +3% of reading (includes repeatability)
Pressure dependence of output	+1.6% of reading per kPa
Annual zero drift	±10 ppm
Recommended calibration interval	None (auto-calibrated)
Response time	< 3 minutes
Operating temperature	From 32°F to 122°F (0°C to 50°C)
Storage temperature	From -40°F to 158°F (-40°C to 70°C)
Humidity range	0–85% relative humidity (RH)
Airflow range	0–33 ft/s (0–10 m/s)
Output signals	- OUT1 (V): 0–10 VDC - OUT2 (I): 4–20 mA or 2–10 VDC (jumper controlled) Note: Sensor is capable of both simultaneously
Resolution of analog outputs	2ppm CO ₂ Voltage: R _{out} < 100 Ω, R _{Load} > 5 kΩ
Recommended external load	Current: R _{Load} > 500 Ω
Power supply	Nominal 24 Vac or 24 Vdc
Power consumption	< 1 watt average
Warm-up time	≤ 1 min @full spec ≤ 15 min
Housing material	ABS (duct), polycarbonate/ABS blend (wall)

Wiring Schematic



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