The cGas Detector Carbon Dioxide Transmitter is a low maintenance gas monitoring device designed for use in non-explosion rated, commercial applications that require continuous monitoring of CO₂.

It offers one 4-20 mA analog output or a user selectable in the field digital output with your choice of BACnet® or Modbus® for communicating with a Building Automation System or ventilation controller. Ideal for use for applications where compressed CO2 is used and stored, climate control in commercial buildings and other processes requiring the continuous monitoring of CO₂.

Powered by 24 VDC or ground referenced AC, the CO₂ cGas Detector has an LCD display, temperature compensation and the firmware and configuration can be upgraded in the field using the USB connection. Pre-calibrated sensors with true Plug & Play Smart Sensor technology makes replacing sensors quick and easy.

The cGas CO₂ Detector comes in a standard water / dust tight, corrosion resistant ABS/ polycarbonate enclosure with a hinged, secured door. With the optional, factory installed splash guard the enclosure is IP54 rated and provides protection in water spray or wash down applications.

**KEY FEATURES**

- One 4-20 mA analog output or user in the field configurable BACnet® MS/TP RS-485 or Modbus® RTU RS-485 digital output signal to a BAS
- Easy Plug & Play Smart Sensor replacement at end of life, comes pre-calibrated
- Bright LCD display
- USB port for configuration changes and firmware upgrades
- Optional RH & Temperature sensor (Option -RHT)*
- Standard water / dust tight, corrosion resistant enclosure (drip proof); IP54 rated with optional splash guard installed
- 24 VDC or VAC power (ground referenced)
- RoHS compliant circuit board

*NOTE:* The analog models have one analog output. If an analog model is ordered with Option -RHT, the information is for display purposes only; the one analog output would be used for the gas readings, not the RH and temperature readings.

**APPLICATIONS**

- Greenhouses
- Wineries / Breweries
- Marine Vessels
- Fruit Ripening Rooms
- CO₂ Fire Suppression
- CO₂ Storage Rooms
- CO₂ Refrigeration Systems
- Beverage Bottling Facilities
- ... and many more

**TECHNICAL DRAWING**

![Technical Drawing of cGas Detector](image)

Note: Drawings above are shown with the optional splash guard. With the splash guard, the thickness of the unit is 84 mm (3.3”).

**TECHNICAL SPECIFICATIONS**

**GAS TYPE**

- Infrared Carbon dioxide (CO₂)

**MECHANICAL**

- **Enclosure**
  - Black ABS / Polycarbonate, copper coated interior to reduce RF interference, IP54 rated with splash guard installed
- **Weight**
  - 400 g / 14 oz
- **Size**
  - 127 x 127 x 76 mm / 5.0 x 5.0 x 3.0 inches

**USER INTERFACE**

- **Display**
  - 2-line by 16 character graphic LCD, black on green
- **Push Buttons**
  - Initiate calibration and menu options with internal UP, DOWN and ENTER push buttons
- **USB Port**
  - Internal port for USB memory stick for field configuration updated / firmware upgrades

**INPUT / OUTPUT**

- **Digital Output**
  - BACnet® MS/TP (version 1 rev 14) RS-485 or Modbus® RTU (version 1.1b3) RS-485 (user configurable in the field)
- **1 Analog Output**
  - Linear 4-20 mA

*NOTE: The analog models have one analog output. If an analog model is ordered with Option -RHT, the information is for display purposes only; the analog output should be used for the gas readings, not the RH and temperature readings.*
cGas DETECTOR Carbon Dioxide (CO₂)

TECHNICAL SPECIFICATIONS... continued

ELECTRICAL

Power Requirement
- 16-30 VDC, 3W, Class 2
- 12-27 VAC, 50-60 Hz, 3 VA, Class 2

Digital Wiring
- VDC or VAC (ground referenced) 4-conductor shielded, 16 AWG stranded within conduit, network wiring (daisy-chain)

Analog Wiring
- VAC (ground referenced) 3-conductor shielded 18 AWG (or larger) stranded within conduit

Fuse(s)
- Automatic resetting thermal

ENVIRONMENTAL

Operating Temperature
- 0°C to 50°C (32°F to 122°F)

Operating Humidity
- 15 - 90% RH non-condensing

CERTIFICATION

Conforms to: CSA-C22.2 No. 205-12, UL508 (Edition 18):2018
Conforms to: EMC Directive 2014/30/EU
En 50270:2015, Type 1, EN61010
Conforms to: FCC. This device complies with Part 15 of the FCC Rules.
Listed by BTL: pending

PRODUCT CODES - STANDARD ENCLOSURE

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Lifespan</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CGAS-A-CO₂-6</td>
<td>±8yr</td>
<td>Carbon Dioxide (CO₂) sensor (0 - 5,000 ppm)</td>
</tr>
<tr>
<td>CGAS-A-CO₂-18</td>
<td>±8yr</td>
<td>Carbon Dioxide (CO₂) sensor (0 - 5% vol)</td>
</tr>
<tr>
<td>CGAS-D-CO₂-6</td>
<td>±8yr</td>
<td>Carbon Dioxide (CO₂) sensor (0 - 5,000 ppm)</td>
</tr>
<tr>
<td>CGAS-D-CO₂-18</td>
<td>±8yr</td>
<td>Carbon Dioxide (CO₂) sensor (0 - 5% vol)</td>
</tr>
</tbody>
</table>

OPTIONS (Factory installed). Add at the end of the “Part Number” above.

- RHT
  - RH & Temperature sensor (communication back to a controller is available with digital models only)
- S
  - Splash Guard

ACCESSORIES

CET-SGC
- Calibration clip for splash guard

CET-715A-CK1
- Calibration Kit for 17, 34, 58, 74, 100 L cylinders, 0.5 LPM flow regulator & adapter to fit 17 L cylinder

DUCT KIT 301A
- Twin probe assembly for fixed system, two lengths of 1.23 m / 4 ft tubing, adapter plug and dust filter

SCS-8000-RSG
- Metal protective guard, small, 16 gauge


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