



PRODUCT SPECIFICATION

CGAS-SC-CO2-5K-2AO-DV Self Contained Controller

Self Contained Controller with Infrared Carbon Dioxide (CO₂) Sensor

Dimensions:	Size	8 x 6.07 x 3.16 in (20.3 x 15.4 x 8 cm) without optional splash guard (Option -S)
	Weight	750 g / 1.65 lbs
Construction:		Black ABS / Polycarbonate blend, water/dust tight, corrosion resistant
Sensor:	Type	Non-dispersive Infrared (NDIR)
	Life Span	Approximately 8 years (application dependent)
Gases Detected:		Carbon dioxide (CO ₂)
Sensor Range:		0 – 5,000 ppm
System Power:		Low voltage: 16 – 30 VDC / 12 – 28 VAC, 50/60 Hz, 10W, Class 2 Line voltage: 100 – 240V AC +/-10%, 50/60 Hz, 10W, 1-phase
Operating Temperature:		0°C to +40°C (32°F to 104°F), -40°C (-40°F) with low temperature Option -LT
Operating Humidity:		15 to 85% non-condensing
Indicators:		LCD display 2 x 16 characters with LED panel indicating alarm status 1, 2 and 3 for any channel and FAULT
Output (user selectable):		Two analog outputs jumper selectable current or voltage BACnet® MS/TP (version 1 rev 14) RS-485, or Modbus® RTU (version 1.1b3) RS-485 Horn/strobe output terminal
Relay		2 internal SPDT dry contact relays, rated 5 amps @ 240 VAC
Audible Alarm		Standard: Internal buzzer, rated 76 dB @ 3 m (10 ft) Option -A: Side mounted buzzer, rated 90 dB @ 30 cm (1 ft) Option -WA: Water tight, side mounted buzzer, rated 85 dB @ 60.96 cm (2 ft)
Minimum Detection:		300 ppm
Accuracy:		±(50 ppm+3% of reading) in the range of 300~5,000 ppm CO ₂
Repeatability:		no data available
Sensitivity Drift:		<10% per year
Response Time (T₉₀):		2 min. (diffusion)
Resolution:		Display resolution: 1 ppm Sensor resolution: ±1 ppm
Warm Up Time:		3 minutes after power-up
Cross Sensitivity:		none
Safety:		Automatic resetting thermal overload fuse (reset capabilities to 500 times)
Wiring:		Low voltage: 24 VDC or 24 VAC 2-conductor, 14 - 18 AWG stranded within conduit Line voltage: VAC 3-conductor (Line, Neutral, Protective Earth Ground), 18 AWG stranded within conduit Network wiring (daisy-chain): 4-conductor, 16 AWG, stranded within conduit
Sensor Mounting:		Heavier than air, 3 to 5 ft / 91 to 152 cm from the floor (application dependent)
Monitoring Area:		3000 ft ² / 279 m ²
Suggested Alarm Points		Low Alarm: 1,000 ppm / Mid Alarm: 1,250 ppm / High Alarm: 1,500 ppm
Certifications:		CSA-C22.2 No 61010-1, UL 61010-1 (Edition 3)
(tested to)		RoHS compliant circuit boards Listed by BTL This device complies with part 15 of the FCC Rules
Note:		Never install gas detectors in the direct path of moving air.



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Conditions Affecting Infrared Sensors:

- Do not use in locations where corrosive chemicals such as chlorine, ammonia and other oxidizers are present, especially if there is a higher humidity level.
- High humidity can affect response and promote corrosion.
- Water or vapour condensation can impair sensor performance.
- Dust and dirt can compromise sensor performance.
- Excessive vibration or impact can damage the sensor.
- Continuous exposure to gas will not poison the sensor but it may require a long time to clear before accurate readings can be taken again.
- Carbon dioxide sensors require 99.9% nitrogen (N₂) for a true zero.
- Install gas detector vertically so the display is over top of the sensor vent and device is flat against a wall or column. Never install gas detectors in the direct path of moving air.

Rev: 2024-04