Critical Environment Technologies

Digital Transmitter with Electrochemical Carbon Monoxide (CO) Sensor (standard range)

Dimensions:	Size	5.0 x 5.0 x 3.0 in (127 x 127 x 76 mm) without optional splash guard (Option –S)
	Weight	14 oz / 400 g
Construction:		Black ABS / Polycarbonate blend, water/dust tight, corrosion resistant
Sensor:	Type	Electrochemical
	Life Span	Approximately 3 years (application dependent)
	Complies With	UL2075, 2nd Edition, Standard for Gas and Vapour Detectors and Sensors
Gases Detected:		Carbon Monoxide (CO)
Sensor Range:		0 – 200 ppm (standard)
System Power:		4-wire: 16-30 VDC, 3W, Class 2 Peak Power Draw: 1.2 watts*
		4-wire: 12-27 VAC, 50-60 Hz, 3 VA, Class 2 *add 0.15 watts for relay if installed
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 90% non-condensing
Indicators:		LCD digital display, 2 line x 16 character, backlit
Communication		BACnet® MS/TP (version 1 rev 14) RS-485, or
		Modbus® RTU (version 1.1b3) RS-485
Relay (Option RLY) or Relay and Audible (Option RBZ)		Internal 1 SPDT relay rated 30 volts, 2 amp max
		Internal buzzer rated 90 dB @ 10 cm / 4 in, enable/disable
Minimum Detection:		2 ppm (with regular calibration maintenance of sensor)
Accuracy:		<1ppm
Repeatability:		< ±3% CO equivalent
Sensitivity Drift:		<5 % per year
Response Time:		<30 seconds
Resolution:		Display resolution 1 ppm Sensor resolution: <1 ppm
Warm Up Time:		3 minutes after power up (to full operation)
Cross Sensitivity:		H2@1000 ppm = <35ppm, NO@50ppm = <10ppm, C2H6O@200ppm = <1ppm, CL2@15 = <1ppm, C2H4@100ppm = <96ppm, C2H2@100ppm = <90ppm
Safety:		Automatic resetting thermal overload fuse (reset capabilities to 500 times)
Wiring:		VDC or VAC (ground referenced) 4-conductor shielded, 16 AWG stranded within conduit, network wiring (daisy-chain)
Sensor Mounting:		Breathing Zone - slightly lighter than air
		4 to 6 ft (1.2 to 1.8 m) from finished floor
Monitoring Area:		7,000 to 10,000 ft² / 464 to 929 m²
		40 to 56 foot / 12 to 17 meter radius, application dependent
Suggested Alarm Setpoints		Low Alarm: 25 ppm / Mid Alarm: 50 ppm / High Alarm: 100 ppm
Certifications: (tested to)		CSA: C22.2 NO.205-12 UL: UL508 (Edition 18): 2018
		CE: EMC Directive 2014/30/EU, EN50270:2015, Type 1, EN61010
		UL 2075 Listed
		Listed by BTL
		RoHS compliant circuit boards
		This device complies with part 15 of the FCC Rules
Note:		Never install gas detectors in the direct path of moving air.

Conditions Affecting Electrochemical Sensors:

- Typically designed to operate between -10°C and +50°C, do not exposed to extreme temperatures for prolonged periods of time. Repeated or prolonged exposure to temperatures like 60-65°C / 140-149 can lead to evaporation of the electrolyte and shifts in baselines readings.

- Do not expose to high moisture for extended periods of time.

- Prolonged exposure to extremely high gas concentrations can compromise sensor performance.

- Paint fumes, cleaning products, dust, sand, water, insects can reduce lifespan and compromise performance. Avoid exposure to high concentrations of solvent vapours both during storage and operation.

- Before initial use after production may be stored at room temperature ideally at 20°C / 68°F and 60%RH or preferably in the fridge for up to 6 months. Beyond this period, the sensor performance is likely to deteriorate, such as with longer response time and lower sensitivity regardless of whether sensor has been used or not.

- The more exotic gases (chlorine, ozone etc.) tend to have shorter life spans than the more common gases (CO, nitrogen dioxide)

- 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.