

Digital Transmitter with Non-dispersive Infrared Carbon Dioxide (CO₂) Sensor
NOT FOR HUMAN HEALTH SAFETY MONITORING**

Dimensions: Size	5.0 x 5.0 x 3.0 in / 127 x 127 x 76 mm (without optional splash guard)
Weight	14 oz / 400 g
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 – 100% vol
System Power:	4-wire: 16-30 VDC, 3W, Class 2 4-wire: 12-27 VAC, 50-60 Hz, 3 VA, Class 2
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 digital display, 2-line x 16 character, backlit, user configurable alarm blink
Communication	BACnet® MS/TP (version 1 rev 14) RS-485, or Modbus® RTU (version 1.1b3) RS-485
Relay and Audible	Internal 1 SPDT relay rated 30 volts, 2 amp max Internal buzzer rated 90 dB @ 10 cm / 4 in, enable/disable
Minimum Detection:	2.0% vol
Accuracy:	±3% of FS range for readings below 50% of range ±5% of FS range above 50% of range
Repeatability:	±2% of FS range
Response Time (T₉₀):	<2 min. (diffusion)
Resolution:	Display resolution: 1% vol Sensor resolution: 1%vol
Warm Up Time:	3 minutes after power-up
Cross Sensitivity:	none
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:	Heavier than air, 3 to 5 ft / 91 to 152 cm from the floor (application dependent)
Monitoring Area:	3000 ft ² / 279 m ²
Alarm Points**	Low Alarm: 10% vol / Mid Alarm: 15% vol / High Alarm: 20% vol
Certifications:	CSA: C22.2 NO.205-12 UL: UL508 (Edition 18): 2018
(tested to)	CE: EMC Directive 2014/30/EU, EN50270:2015, Type 1, EN61010 Listed by BTL RoHS compliant circuit boards This device complies with part 15 of the FCC Rules
Notes:	Never install gas detectors in the direct path of moving air.

****WARNING:** This device is not designed to monitor CO₂ in applications requiring human health safety levels detection. The OEL for an 8-hour TWA is 0.5%. Concentrations of 10% (100,000 ppm) or more can result in unconsciousness or death.

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.

In addition to the factors listed above, most sensors will suffer general wear and tear and it may not always be easy to detect the damage caused, making regular maintenance important to help keep the sensors in good working order. Regular maintenance includes inspecting, cleaning if necessary, bump testing and calibration.