

Digital Transmitter with Non-dispersive Infrared Carbon Dioxide (CO₂) Sensor

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 – 5,000 ppm
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 90% 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 (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:	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:	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
Suggested Alarm Points	Low Alarm: 1,000 ppm / Mid Alarm: 1,250 ppm / High Alarm: 1,500 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 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.

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.