

Digital Transmitter with Electrochemical Nitrogen Dioxide (NO₂) Sensor

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 & exposure dependent)
Gases Detected:		Nitrogen Dioxide (NO ₂)
Sensor Range:		0 – 10 ppm
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		Field selectable 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:		0.1 ppm (with regular calibration maintenance of sensor)
Accuracy:		±0.1 ppm @ STP, across measurement range at time of calibration and at calibration concentration + calibration gas concentration error
Repeatability:		±2% (with regular calibration maintenance of sensor)
Sensitivity Drift		Zero: <+/-0.02 ppm (with regular calibration maintenance of sensor) Span: <2% signal per month (with regular calibration of sensor)
Response Time (T₉₀):		<25 seconds
Resolution:		Display resolution: 0.1ppm Sensor resolution: ±0.1 ppm
Warm Up Time:		4 minutes after power up (to full operation)
Cross Sensitivity:		Relative to Nitrogen dioxide = 100%, Hydrogen Sulphide = <40%, Hydrogen = <1%, Sulphur Dioxide = <1%, Ammonia = <1%, Nitric Oxide = <20%, Ethanol = <1%, Carbon Monoxide = <1%, Chlorine = <70%
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:		Vehicle exhaust application: 4 - 6 ft / 1.2 - 1.8 m from the floor
Monitoring Area:		5000 ft² / 465 m²
Suggested Alarm Setpoints		Low Alarm: 0.7 ppm / Mid Alarm: 1 ppm / High Alarm: 1.5 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
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)