

Digital Transmitter with Catalytic Methane (CH₄) Sensor

Dimensions: Size	4.9 x 4.9 x 2 in / 124.9 x 124.9 x 50 mm	
Weight	286 g / 10 oz	
Construction:	Polycarbonate, white, low profile	
Sensor: Type	Catalytic	
Life Span	Approximately 5 years (application dependent)	
Gases Detected:	Methane (CH ₄)	
Sensor Range:	0 – 100% LEL	
System Power:	4-wire: 16-30 VDC, 3W, Class 2 4-wire: 12-27 VAC, 50-60 Hz, 3 VA, Class 2	Peak Power Draw: 1.2 watts* *add 0.15 watts for relay if installed
Operating Temperature:	0°C to +40°C (32°F to 104°F)	
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):	1 SPDT relay rated 30 volts, 2 amp max, Power Draw: 0.15 watts	
Relay and Audible (Option -RBZ):	1 SPDT dry contact relay rated 30 volts, 2 amp max Internal buzzer, rated 90 dB @ 10 cm / 4 in, enable/disable	
Audible:	none	
Minimum Detection:	1% LEL (with regular calibration maintenance of sensor)	
Accuracy:	±0.5% LEL	
Repeatability:	no data available	
Long Term Zero Drift	< 5% LEL / month	
Long Term Sensitivity Drift:	< 5% signal / month	
Response Time (T₉₀):	<10 seconds	
Resolution:	Display resolution: 1% LEL Sensor resolution: no data available	
Warm Up Time:	3 minutes after power up (to full operation)	
% Relative Sensitivity:	Relative to Methane = 100%, Hydrogen = 106%, Ethylene = 96%, Propane = 82%, Isobutane = 74%, n-Pentane = 67%, Hexanes = 50%	
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:	Typically on or near the ceiling, Methane is lighter than air (application dependent)	
Monitoring Area:	5000 ft ² / 465 m ²	
Suggested Alarm Setpoints	Low Alarm: 10% LEL / Mid Alarm: 15% LEL / High Alarm: 20% LEL	
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 Sensor complies with UL2075, 2 nd Edition 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.	

Test conditions: flow rate of 300 mL/min using methane; conditions at 23°C ±2°C, 60% RH and 1 atm

Conditions Affecting Catalytic Sensors:

- Typically designed to operate within specific temperature ranges. High temperatures can accelerate wear and reduce lifespan.
- Excessive humidity can affect sensor components, leading to corrosion or malfunction. Maintaining optimal humidity levels is crucial.
- Paint fumes, cleaning products, sand, water, insects can reduce lifespan and compromise performance.
- Dust and dirt can compromise sensor performance lifespan, both during storage and operation.
- Silicone, lead and chlorinated hydrocarbon vapours can poison catalytic sensors. Other compounds, especially hydrogen sulphide and halogenated hydrocarbons can be absorbed or form compounds that are absorbed by sensor which can result in the temporary loss of sensitivity and in most cases a sensor will recover after a period of operation in clean air. Even when the sensor is not powered, exposure to compounds that poison or inhibit the sensor can impact its lifespan.
- Excessive vibration or impact can damage the sensor.
- When storing, package securely in a sealed container.
- Requires calibration gas with air balance.
- 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.