NOVEL

Critical Environment Technologies™

PRODUCT SPECIFICATION

CGAS-D-CCH4O-100 Transmitter

Digital Transmitter with Catalytic Methanol (CH_4O) Sensor

Dimensions: Size **Weight**	5.0 x 5.0 x 3.0 in (127 x 127 x 76 mm) (without optional splash guard) 14 oz / 400 g
Construction:	Black ABS / Polycarbonate blend, water/dust tight, corrosion resistant
Sensor: Type **Life Span**	Catalytic Approximately 5 years (application dependent)
Gases Detected:	Methanol (CH_4O)
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
Operating Temperature:	0°C to +40°C (32°F to 104°F), -40°C (-40°F) with low temperature Option -LT
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:	1% LEL (with regular calibration maintenance of sensor)
Accuracy:	±2.0% LEL
Repeatability:	no data available
Long Term Zero Drift	< 5% LEL / month
Long Term Sensitivity Drift:	< 5% signal / month
Response Time (T_{90}):	<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:	Heavier than air 6 in / 15 cm from the floor
Monitoring Area:	3000 ft^2 / 279 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 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.

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.