

CGAS-D-STVOC Transmitter

Digital Transmitter with Solid State Total Volatile Organic Compounds (TVOC) 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	MOS Semi-conductor Solid State
Life Span	Approximately 5 years (application & exposure dependent)
Gases Detected:	TVOCs (non-specific) target & span gas use by factory is Isobutylene
Sensor Range:	0 – 500 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
Communication	Field selectable 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
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
Minimum Detection:	10 ppm isobutylene (with regular calibration maintenance of sensor)
Accuracy:	< +/- 10% (with regular calibration maintenance of sensor)
Repeatability:	+/- 10% of range @ STP (with regular calibration maintenance of sensor)
Response Time (T₉₀):	<60 seconds
Resolution:	Display resolution: 1 ppm Sensor resolution: 10 ppm (isobutylene)
Warm Up Time:	5 minutes after power up (to full operation)
Cross Sensitivity:	Most common TVOCs & many compounds and gases
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: 50 ppm / Mid Alarm: 100 ppm / High Alarm: 200 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 BLT 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.

CGAS-D-STVOC Transmitter

Conditions Affecting Solid State Sensors:

- Typically designed to operate within a range of -20 to 50°C / -4 to 122°F.
- Sensitive to changes in temperature and humidity. Changes of 10°C / 50°F or 10% RH can impair sensor performance requiring a couple hours of re-stabilization. Calibration should be done after any significant changes in temperature and/or humidity. If the location of the sensor has seasonal changes in temperature or humidity a recalibration after each change will be required to meet published specification.
- Wet environments will shorten lifespan.
- Dirty and dusty environments will shorten lifespan and require more frequent calibration.
- Requires oxygen, minimum 18% vol, for proper functioning.
- Sensitive to many other gases, vapours and chemicals such as silicone, paint, alcohol-based cleaners, fumes from running engines, fuel storage containers, etc.
- Moderately resistant to poisoning but continuous exposure to gas will make the sensor reading unreliable (will read higher than calibrated value).
- Must be calibrated in the environment it will be operating in.
- Requires calibration gas with air balance and a humidification chamber during calibration.
- Requires regular calibration to compensate for drift/aging.
- 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.