



The cGas Detector Analog Transmitter is a low maintenance gas monitoring device designed for use in non-explosion rated, commercial applications and is ideal for monitoring toxic, combustible and refrigerant gases.

Powered by 24 VDC or ground referenced AC, the cGas Detector has an LCD display, temperature compensation and the firmware and configuration can be upgraded in the field using the USB connection. Pre-calibrated sensors with true Plug & Play Smart Sensor technology makes replacing sensors quick and easy.

The cGas Detector comes in a standard water / dust tight, corrosion resistant ABS/ polycarbonate enclosure with a hinged, secured door. With the optional, factory installed splash guard the enclosure is IP54 rated and provides protection in water spray or wash down applications.

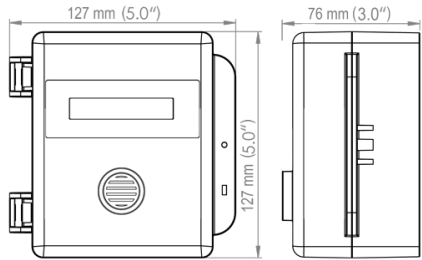
### KEY FEATURES

- » One 4-20 mA analog output
- » Easy Plug & Play Smart Sensor replacement at end of life, comes pre-calibrated
- » Bright LCD display
- » USB port for configuration changes and firmware upgrades
- » Optional 2A SPDT dry contact relay (Option -RLY)\*
- » Optional low temperature operation package (Option -LT)\*
- » Optional factory installed splash guard (Option -S or Option -SN)
- » Standard water / dust tight, corrosion resistant enclosure (drip proof)
- » Sensor Calibration Extending Firmware (CEF) for parking applications
- » Standard water / dust tight, corrosion resistant enclosure (drip proof); IP54 rated with optional splash guard installed
- » 24 VDC or VAC power (ground referenced)
- » RoHS compliant circuit board

### APPLICATIONS

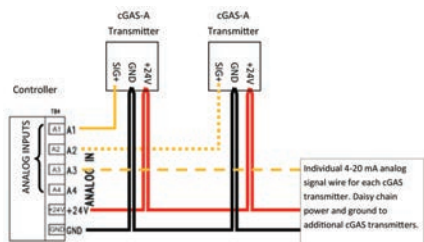
- » Parking Garages/Car Parks
- » Vehicle Repair Shops
- » Ice Arenas
- » Commercial Pools
- » Battery Charging Rooms
- » Manufacturing Plants
- » Maintenance Facilities
- » ... and many more

### TECHNICAL DRAWING



### WIRING DIAGRAMS

CGAS-A connected to an FCS Controller (3-wire VDC)



### TECHNICAL SPECIFICATIONS

#### TARGET GAS

Electrochemical - Ammonia, Carbon Monoxide, Chlorine, Ethylene, Formaldehyde, Hydrogen, Hydrogen Sulphide, Nitrogen Dioxide, Nitric Oxide, Oxygen, Ozone, Sulphur Dioxide

Combustibles (catalytic) - Hydrogen, Methane, Propane, Ethanol or Dimethyl Ether, Methanol

Infrared - Carbon Dioxide

Solid State - R22, R134A, R402A, R404A, R407C, R410A, R422D, R438A, R448A, R449A, R507A, R513A, R514A, TVOC

PID - TVOC

#### MECHANICAL

Enclosure	Black ABS / Polycarbonate, copper coated interior to reduce RF interference, IP54 rated with splash guard installed
Weight	400 g / 14 oz
Size	127 x 127 x 76 mm / 5.0 x 5.0 x 3.0 in

#### USER INTERFACE

Display (standard)	2-line by 16 character graphic LCD Operating Temp: 0°C to 40°C / 32°F to 104°F
Display (low temp) (Option -LT)	2-line by 16 character OLED display Operating Temp: -40°C to 40°C / -40°F to 104°F

### TECHNICAL SPECIFICATIONS

Push Buttons	Initiate calibration and menu options with internal UP, DOWN and ENTER push buttons
USB Port	Internal port for USB memory stick for field configuration updated / firmware upgrades

### INPUT / OUTPUT

Output	Linear 4-20 mA analog
Relay	Option -RLY* one SPDT dry contact relay, rated 30 volts, 2 amps max

### ELECTRICAL

Power Requirement	16-30 VDC, 3W, Class 2 12-27 VAC, 50-60 Hz, 3 VA, Class 2
Wiring	VAC (ground referenced) 3-conductor shielded 18 AWG (or larger) stranded within conduit
Fuse(s)	Automatic resetting thermal

### ENVIRONMENTAL

Operating Temperature	0°C to 40°C (32°F to 104°F) temperatures below 0°C / 32°F require Option-LT
Operating Humidity	15 - 90% RH non-condensing

### CERTIFICATION

Conforms to: CSA-C22.2 No. 205-12, UL508 (Edition 18):2018
Conforms to: EMC Directive 2014/30/EU EN 50270:2015, Type 1, EN61010
Conforms to: FCC. This device complies with Part 15 of the FCC Rules.



### PRODUCT CODES

Single Channel - Electrochemical Sensors	Lifespan
<b>CGAS-A-NH3</b> Ammonia (NH <sub>3</sub> ) sensor (0 - 500 ppm)	~2yr
<b>CGAS-A-CO<sup>1</sup></b> Carbon Monoxide (CO) sensor (0 - 200 ppm)	~6yr
<b>CGAS-A-CO-100<sup>1</sup></b> Carbon Monoxide (CO) sensor (0 - 100 ppm)	~6yr
<b>CGAS-A-CO-250<sup>1</sup></b> Carbon Monoxide (CO) sensor (0 - 250 ppm)	~6yr
<b>CGAS-A-CO-300<sup>1</sup></b> Carbon Monoxide (CO) sensor (0 - 300 ppm)	~6yr
<b>CGAS-A-CO-500<sup>1</sup></b> Carbon Monoxide (CO) sensor (0 - 500 ppm)	~6yr
<b>CGAS-A-CL2</b> Chlorine (Cl <sub>2</sub> ) sensor (0 - 5 ppm)	~3yr
<b>CGAS-A-CL2-10</b> Chlorine (Cl <sub>2</sub> ) sensor (0 - 10 ppm)	~3yr
<b>CGAS-A-C2H4</b> Ethylene (C <sub>2</sub> H <sub>4</sub> ) sensor (0 - 200 ppm)	~2yr

### PRODUCT CODES

<b>CGAS-A-CH20</b> Formaldehyde (CH <sub>2</sub> O) sensor (0 - 5 ppm)	~2yr
<b>CGAS-A-EH2</b> Hydrogen (H <sub>2</sub> ) sensor (0 - 2,000 ppm)	~2yr
<b>CGAS-A-H2S</b> Hydrogen Sulphide (H <sub>2</sub> S) sensor (0 - 50 ppm)	~2yr
<b>CGAS-A-NO</b> Nitric Oxide (NO) sensor (0 - 100 ppm)	~2yr
<b>CGAS-A-NO2</b> Nitrogen Dioxide (NO <sub>2</sub> ) sensor (0 - 10 ppm)	~3+yr
<b>CGAS-A-O2</b> Oxygen (O <sub>2</sub> ) sensor (0 - 25% volume)	~3yr
<b>CGAS-A-O3</b> Ozone (O <sub>3</sub> ) sensor (0 - 1 ppm)	~2yr
<b>CGAS-A-SO2</b> Sulphur Dioxide (SO <sub>2</sub> ) sensor (0 - 20 ppm)	~2yr

Single Channel - Internal Infrared Sensors	Lifespan
<b>CGAS-A-CO2-2K</b> Carbon Dioxide (CO <sub>2</sub> ) sensor (0 - 2,000 ppm)	~8yr
<b>CGAS-A-CO2-5K</b> Carbon Dioxide (CO <sub>2</sub> ) sensor (0 - 5,000 ppm)	~8yr
<b>CGAS-A-CO2-5%</b> Carbon Dioxide (CO <sub>2</sub> ) sensor (0 - 5% vol)	~8yr
<b>CGAS-A-CO2-10K</b> Carbon Dioxide (CO <sub>2</sub> ) sensor (0 - 10,000 ppm)	~8yr

Single Channel - Internal Solid State Sensors	Lifespan
<b>CGAS-A-SR22</b> Refrigerants (R22) sensor (0 - 2,000 ppm)	~5yr
<b>CGAS-A-SR134A</b> Refrigerants (R134A) sensor (0 - 2,000 ppm)	~5yr
<b>CGAS-A-SR402A</b> Refrigerants (R402A) sensor (0 - 2,000 ppm)	~5yr
<b>CGAS-A-SR404A</b> Refrigerants (R404A) sensor (0 - 2,000 ppm)	~5yr
<b>CGAS-A-SR407C</b> Refrigerants (R407C) sensor (0 - 2,000 ppm)	~5yr
<b>CGAS-A-SR410A</b> Refrigerants (R410A) sensor (0 - 2,000 ppm)	~5yr
<b>CGAS-A-SR422D</b> Refrigerants (R422D) sensor (0 - 2,000 ppm)	~5yr
<b>CGAS-A-SR438A</b> Refrigerants (R438A) sensor (0 - 2,000 ppm)	~5yr
<b>CGAS-A-SR448A</b> Refrigerants (R448A) sensor (0 - 2,000 ppm)	~5yr
<b>CGAS-A-SR449A</b> Refrigerants (R449A) sensor (0 - 2,000 ppm)	~5yr
<b>CGAS-A-SR507A</b> Refrigerants (R507A) sensor (0 - 2,000 ppm)	~5yr
<b>CGAS-A-SR513A</b> Refrigerants (R513A) sensor (0 - 2,000 ppm)	~5yr
<b>CGAS-A-SR514A</b> Refrigerants (R514A) sensor (0 - 2,000 ppm)	~5yr
<b>CGAS-A-STVOC</b> TVOCs sensor (0 - 500 ppm)	~5yr

Single Channel - Internal Catalytic Sensors	Lifespan
<b>CGAS-A-CC2H6O-100</b> Ethanol or Dimethyl Ether (C <sub>2</sub> H <sub>6</sub> O) sensor (0 - 100% LEL)	~5yr
<b>CGAS-A-CH2-100</b> Hydrogen (H <sub>2</sub> ) sensor (0 - 100% LEL)	~5yr
<b>CGAS-A-CCH4-100</b> Methane (CH <sub>4</sub> ) sensor (0 - 100% LEL)	~5yr
<b>CGAS-A-CCH4O-100</b> Methanol (CH <sub>3</sub> O) sensor (0 - 100% LEL)	~5yr



# ANALOG GAS DETECTORS DATASHEET

## cGas DETECTOR Analog Transmitter

FIXED SYSTEMS

### PRODUCT CODES

CGAS-A-CC3H8-100	Propane (C <sub>3</sub> H <sub>8</sub> ) sensor (0 - 100% LEL)	~5yr
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#### Single Channel - Internal PID Sensors

CGAS-A-SPL	TVOC sensor (0 - 30 ppm)	
CGAS-A-SPH	TVOC sensor (0 - 300 ppm)	

#### Single Channel - Remote Detection

CGAS-A-R	No internal sensor, add an ESH-A Remote Sensor	
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#### Single Channel - RH and Temperature Sensor

CGAS-A-RHT	Internal Relative Humidity and Temperature sensor	
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#### ESH-A Remote Sensors

ESH-A-CC2H2-100	Catalytic combustible Acetylene (C <sub>2</sub> H <sub>2</sub> ) ESH-A Remote Sensor (0 - 100% LEL)	~5yr
ESH-A-CH2-100	Catalytic combustible Hydrogen (H <sub>2</sub> ) sensor (0 - 100% LEL)	~5yr
ESH-A-CCH4-100	Catalytic combustible Methane (CH <sub>4</sub> ) sensor (0 - 100% LEL)	~5yr
ESH-A-CC3H8-100	Catalytic combustible Propane (C <sub>3</sub> H <sub>8</sub> ) sensor (0 - 100% LEL)	~5yr
ESH-A-SPL	TVOC PID sensor (0 - 30 ppm)	
ESH-A-SPH	TVOC PID sensor (0 - 300 ppm)	
ESH-A-JET	Infrared Propane (C <sub>3</sub> H <sub>8</sub> ) sensor (0 - 100% LEL)	~8yr

### OPTIONS (Factory installed)

LT*	Low temperature package with OLED display and internal heater for cold environment applications down to -40°C / -40°F
RLY *	1 SPDT dry contact relay, rated 30 volts, 2 amps max
S	Splash Guard for non sticky gases, factory installed
SN	Splash Guard for sticky gases (Cl <sub>2</sub> , O <sub>2</sub> ) and configurations with internal NO <sub>2</sub> sensor, factory installed

#### \*IMPORTANT NOTES ON OPTIONS:

-RLY is available with all single channel configurations except CO<sub>2</sub> and sticky gas sensors (Cl<sub>2</sub>, O<sub>2</sub>)

### ACCESSORIES

CET-SGC	Calibration Adapter Clip for Option -S
CET-715A-CK1	Calibration Kit for 17, 34, 58, 74, 100 L cylinders, 0.5 LPM flow regulator & adapter to fit 17 L cylinder
DUCT KIT 301A	Metal probe assembly for fixed system, two lengths of 1.23 m / 4 ft tubing, adapter plug and dust filter (available for use with select gases)
SCS-8000-RSG	Small, 16 gauge protective guard
SCS-8000-WSG	Small, 16 gauge protective splash guard



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FIXED SYSTEMS

### CGAS-A AVAILABLE OPTIONS BY PRODUCT GAS CODE

Product Gas Code	CAN I ADD THESE OPTIONS?				
	-RLY	-RHT	-RHT + -RLY	-LT	Splash Guard
-CO2-2K	NO	YES	NO	YES	S
-CO2-5K	NO	YES	NO	YES	S
-CO2-10K	NO	YES	NO	YES	S
-CO2-5%	NO	YES	NO	YES	S
-NH3	YES	YES	NO	YES	S
-CO	YES	YES	YES	YES	S
-CL2 / -CL2-10	NO	NO	NO	YES	SN
-C2H4	YES	YES	NO	YES	S
-CH2O	YES	YES	NO	YES	S
-EH2	YES	YES	NO	YES	S
-H2S	YES	YES	NO	YES	S
-NO	YES	YES	NO	YES	S
-NO2	YES	YES	NO	YES	SN
-O2	YES	YES	NO	YES	S
-O3	NO	NO	NO	YES	SN
-SO2	YES	YES	NO	YES	S
-CH2-100	YES	YES	NO	YES	S
-CC2H6O-100	YES	YES	NO	YES	S
-CCH4-100	YES	YES	NO	YES	S
-CCH4O-100	YES	YES	NO	YES	S
-CC3H8-100	YES	YES	NO	YES	S
-SPL	YES	YES	NO	YES	S
-SPH	YES	YES	NO	YES	S
-SR22	YES	YES	NO	YES	S
-SR134A	YES	YES	NO	YES	S
-SR402A	YES	YES	NO	YES	S
-SR404A	YES	YES	NO	YES	S
-SR407C	YES	YES	NO	YES	S
-SR410A	YES	YES	NO	YES	S
-SR422D	YES	YES	NO	YES	S
-SR438A	YES	YES	NO	YES	S
-SR448A	YES	YES	NO	YES	S
-SR449A	YES	YES	NO	YES	S
-SR507A	YES	YES	NO	YES	S
-SR513A	YES	YES	NO	YES	S
-SR514A	YES	YES		YES	S
-STVOC	YES	YES	NO	YES	n/a
-R	YES	YES	NO	YES	