

# Smart 3G-C2

## SIL2 Gas Detector

- Optional relay output and RS485 interface
- Optional interface for ATEX II2GD approval
- Ongoing system self-diagnosis
- Wide range of sensor options



## Specification

	with catalytic sensor	with electrochemical sensor	intrinsically safe detector
Size	H120 x W184 x D90 mm (4.7 x 7.2 x 3.5ins)		H138 x W200 x D119 mm (5.4 x 7.9 x 4.7ins)
Weight	1.25kg		2.7kg
Enclosure material	Aluminium pressure die-casting with epoxy paint chromating and chemically resistant		
Ingress Protection	IP65		
Connection	3 x 3/4" NPT		
Power	12-24 Vdc		
Electrical output	Analogue 4-20 mA output; 1 or 3 relay board (optional); serial RS485 output (optional)		
Operating temperature	-40 / +60°C	-30 / +55°C	-20 / +50°C
Humidity	20 / 90% RH @40°C	15 / 90% RH non condensing	15 / 90% RH non condensing
Response time	t90 < 60 s ; t50 < 20 s		
Functional safety	SIL2 hardware and SIL3 software		
Approvals	EMC, ATEX, IECEx		

## Refrigerants

Refrigerant	Sensor type	Refrigerant	Sensor type
R152a	Infrared sensor	R404A	Infrared sensor
R454B	Infrared sensor	R407A	Infrared sensor
R32	Infrared sensor	R407F	Infrared sensor
R134A	Infrared sensor	R449A	Infrared sensor
SF6	Infrared sensor	R507	Infrared sensor
R125	Infrared sensor	R410A	Infrared sensor
R1234YF	Infrared sensor	R417A	Infrared sensor
R1234ZE	Infrared sensor	R448	Infrared sensor

## Gases

Gas	Sensor type	Gas	Sensor type
Acetic Acid (CH <sub>3</sub> COOH)	Catalytic sensor	ISO Butane (C <sub>4</sub> H <sub>10</sub> )	Catalytic sensor / Infrared sensor
Acetone (C <sub>3</sub> H <sub>6</sub> O)	Catalytic sensor / Infrared sensor	ISO Butyl Alcohol ((CH <sub>3</sub> ) <sub>2</sub> CHCH <sub>2</sub> OH)	Catalytic sensor
Acetylene (C <sub>2</sub> H <sub>2</sub> )	Catalytic sensor	ISO Pentane (C <sub>5</sub> H <sub>12</sub> )	Catalytic sensor
Ammonia (NH <sub>3</sub> )	Catalytic sensor / Electrochemical sensor	ISO Propyl Alcohol (C <sub>3</sub> H <sub>8</sub> O)	Catalytic sensor / Infrared sensor
Benzene (C <sub>6</sub> H <sub>6</sub> )	Catalytic sensor	Isobutylene (C <sub>4</sub> H <sub>8</sub> )	Infrared sensor
Butadiene (C <sub>4</sub> H <sub>6</sub> )	Infrared sensor	JP8	Catalytic sensor
Butane (C <sub>4</sub> H <sub>10</sub> )	Catalytic sensor / Infrared sensor	LPG	Catalytic sensor / Infrared sensor
Carbon Dioxide (CO <sub>2</sub> )	Infrared sensor	Methane (CH <sub>4</sub> )	Catalytic sensor / Infrared sensor
Carbon Monoxide (CO)	Electrochemical sensor	Methanol (CH <sub>3</sub> OH)	Catalytic sensor
Chlorine (CL <sub>2</sub> )	Electrochemical sensor (intrinsically safe detector)	Methyl Ethyl Ketone (MEK)	Catalytic sensor
Cyclohexane (C <sub>6</sub> H <sub>12</sub> )	Catalytic sensor / Infrared sensor	Nitric Oxide (NO)	Electrochemical sensor
Cyclopentane (C <sub>5</sub> H <sub>10</sub> )	Catalytic sensor	Nitrogen Dioxide (NO <sub>2</sub> )	Electrochemical sensor (intrinsically safe detector)
Dimethyl ether (CH <sub>3</sub> OCH <sub>3</sub> )	Infrared sensor	Nonane (C <sub>9</sub> H <sub>20</sub> )	Catalytic sensor
Ethane (C <sub>2</sub> H <sub>6</sub> )	Catalytic sensor / Infrared sensor	Oxygen (O <sub>2</sub> )	Electrochemical sensor
Ethanol (C <sub>2</sub> H <sub>6</sub> O)	Catalytic sensor / Infrared sensor	Pentane (C <sub>5</sub> H <sub>12</sub> )	Catalytic sensor / Infrared sensor
Ethyl Acetate (C <sub>4</sub> H <sub>8</sub> O <sub>2</sub> )	Catalytic sensor / Infrared sensor	Petrol Vapours	Catalytic sensor / Infrared sensor
Ethyl Ether ((C <sub>2</sub> H <sub>5</sub> ) <sub>2</sub> O)	Catalytic sensor	Propane (C <sub>3</sub> H <sub>8</sub> )	Catalytic sensor / Infrared sensor
Ethylene (C <sub>2</sub> H <sub>4</sub> )	Catalytic sensor	Propyl alcohol (C <sub>3</sub> H <sub>8</sub> O)	Catalytic sensor
Ethylene Oxide (C <sub>2</sub> H <sub>4</sub> O)	Catalytic sensor	Propylene (C <sub>3</sub> H <sub>6</sub> )	Catalytic sensor / Infrared sensor
Formaldehyde (CH <sub>2</sub> O)	Catalytic sensor	Styrene (C <sub>8</sub> H <sub>8</sub> )	Catalytic sensor
Heptane (C <sub>7</sub> H <sub>16</sub> )	Catalytic sensor / Infrared sensor	Sulphur Dioxide (SO <sub>2</sub> )	Electrochemical sensor (intrinsically safe detector)
Hexane (C <sub>6</sub> H <sub>14</sub> )	Catalytic sensor / Infrared sensor	Toluene (C <sub>7</sub> H <sub>8</sub> )	Catalytic sensor
Hydrogen (H <sub>2</sub> )	Catalytic sensor / Electrochemical sensor	Tri-Methylbenzene (C <sub>9</sub> H <sub>12</sub> )	Catalytic sensor
Hydrogen Cyanide (HCN)	Electrochemical sensor (intrinsically safe detector)	Vinyl Acetate (C <sub>4</sub> H <sub>6</sub> O <sub>2</sub> )	Catalytic sensor
Hydrogen Sulphide (H <sub>2</sub> S)	Electrochemical sensor	Xylene (C <sub>8</sub> H <sub>10</sub> )	Catalytic sensor