FIXED SYSTEMS

SMART 3G-C3

SIL2 Gas Detector

Offers optional RS485 interface, a 4-digit back-lit display and ongoing system self-diagnosis with a wide range of sensor options.

The SMART 3G-C3 from Sensitron is a rugged, high-performance fixed gas detector, ideal for industrial and classified areas. With options to detect over 50 flammable, toxic, and refrigerant gases - including oxygen levels - it delivers reliable protection in harsh environments. The SIL2 certified detector features self-diagnostics, a clear digital display, and optional RS485 Modbus communication for seamless system integration.

REFRIGERANTS

REFRIGERANT	SENSOR TYPE
R152A	Infrared
R454B	Infrared
R32	Infrared
R134A	Infrared
SF6	Infrared
R125	Infrared
R1234YF	Infrared
R1234ZE	Infrared
R404A	Infrared
R407A	Infrared
R407F	Infrared
R449A	Infrared
R507	Infrared
R410A	Infrared
R417A	Infrared
R448	Infrared

GASES

GAS	SENSOR TYPE
Acetic Acid (CH_3COOH)	Catalytic sensor
Acetone (C_3H_6O)	Catalytic sensor / Infrared sensor
Acetylene (C_2H_2)	Catalytic sensor
Ammonia (NH_3)	Catalytic sensor / Electrochemical sensor
Benzene (C_6H_6)	Catalytic sensor
Butadiene (C_4H_6)	Infrared sensor
Butane (C_4H_{10})	Catalytic sensor / Infrared sensor
Carbon Monoxide (CO)	Catalytic sensor / Electrochemical sensor
Chlorine (Cl_2)	Electrochemical sensor (intrinsically safe detector)
Cyclohexane (C_6H_{12})	Catalytic sensor / Infrared sensor
Cyclopentane (C_5H_{10})	Catalytic sensor
Dimethyl Ether (C_2H_6O)	Infrared sensor
Ethane (C_2H_6)	Catalytic sensor / Infrared sensor
Ethanol (C_2H_6O)	Catalytic sensor / Infrared sensor
Ethyl Acetate ($C_4H_8O_2$)	Catalytic sensor / Infrared sensor
Ethyl Ether ($(C_2H_5)_2O$)	Catalytic sensor
Ethylene (C_2H_4)	Catalytic sensor
Ethylene Oxide (C_2H_4O)	Catalytic sensor
Heptane (C_7H_{16})	Catalytic sensor / Infrared sensor
Hexane (C_6H_{14})	Catalytic sensor / Infrared sensor
Hydrogen (H_2)	Catalytic sensor / Electrochemical sensor
Hydrogen Cyanide (HCN)	Electrochemical sensor (intrinsically safe detector)

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GASES CONTINUED

GAS	SENSOR TYPE	GAS	SENSOR TYPE
Hydrogen Sulphide (H_2S)	Electrochemical sensor	Nonane (C_9H_{20})	Catalytic sensor
ISO Butane (C_4H_{10})	Catalytic sensor / Infrared sensor	Oxygen (O_2)	Electrochemical sensor
ISO Butyl Alcohol ($(CH_3)_2CHCH_2OH$)	Catalytic sensor	Pentane (C_5H_{12})	Catalytic sensor / Infrared sensor
ISO Pentane (C_5H_{12})	Catalytic sensor	Petrol Vapours	Catalytic sensor / Infrared sensor
ISO Propyl Alcohol (C_3H_8O)	Catalytic sensor / Infrared sensor	Propane (C_3H_8)	Catalytic sensor / Infrared sensor
Isobutylene (C_4H_8)	Infrared sensor	Propyl Alcohol (C_3H_8O)	Catalytic sensor
JP8	Catalytic sensor	Propylene (C_3H_6)	Catalytic sensor / Infrared sensor
LPG	Catalytic sensor / Infrared sensor	Styrene (C_8H_8)	Catalytic sensor
Methane (CH_4)	Catalytic sensor / Infrared sensor	Sulphur Dioxide (SO_2)	Electrochemical sensor (intrinsically safe detector)
Methanol (CH_3OH)	Catalytic sensor	Toluene (C_7H_8)	Catalytic sensor
Methyl Ethyl Ketone (MEK)	Catalytic sensor	Tri-Methylbenzene (C_9H_{12})	Catalytic sensor
Nitric Oxide (NO)	Electrochemical sensor	Vinyl Acetate ($C_4H_6O_2$)	Catalytic sensor
Nitrogen Dioxide (NO_2)	Electrochemical sensor (intrinsically safe detector)	Xylene (C_8H_{10})	Catalytic sensor

SPECIFICATIONS

	WITH CATALYTIC SENSOR	WITH ELECTROCHEMICAL SENSOR	INTRINSICALLY SAFE DETECTOR
SIZE	H120 x W184 x D90 mm (4.7 x 7.2 x 3.5 ins)		H138 x W200 x D119mm (5.4 x 7.9 x 4.7ins)
WEIGHT	1.25kg		2.7kg
ENCLOSURE MATERIAL	Aluminum 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	
RESPONSE TIME	t90 < 60s; t50 < 20s		
FUNCTIONAL SAFETY	SIL2 hardware and SIL3 software		
APPROVALS	EMC, ATEX, IECEx		

Disclaimer
Due to ongoing research and product improvement, specifications are subject to change without notice. While every effort has been made to ensure accuracy in this document, no responsibility can be accepted for errors or omissions. Data may change, as well as legislation, and you are strongly advised to obtain copies of the most recently issued regulations, standards, and guidelines. This document is not intended to form the basis of a contract.

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