Murco Gas Sensor (MGS)

murco
gas detection solutions

A state-of-the-art gas sensor, which detects most gases

The Murco Gas Sensor (MGS) is a state-of-the-art fixed gas detector which can detect a wide range of different gases. The sensors can be used on a stand-alone basis or integrated into Controls or Building Management Systems (BMS) using its digital or analog output.

It is a high-specification product available at a competitive price and it offers customers absolute confidence that both safety and compliance requirements are met or exceeded. It is ideal for:

- new buildings/areas that require continuous monitoring with high tech gas sensor transmitters
- customers who want to add gas detection solutions to an existing system.

APPLICATIONS

Typical applications include:

Refrigerant gases all refrigerant gases including: Ammonia, Carbon Dioxide, Hydrocarbons, Halocarbons - HFCs, HCFCs, CFCs.

Combustible gases such as: Methane, LPG, Propane, Butane, and Hydrogen

Toxic gases such as: Carbon Dioxide and Ammonia in refrigeration, Hydrogen Sulphide in sewage treatment and Carbon Monoxide in underground car parks

Volatile Organic Compounds such as: Acetone, Benzene, Carbon Tetrachloride, Chloroform, Ethanol, Toluene, Trichloroethylene.

Control Panels Available

Murco also supply Control Panels if you wish to have a stand-alone gas detection system. Models are available with 2, 4, 6... and up to 16 channels using the ST-MON panel.

Benefits

Cost Effective Detection

Murco is committed to delivering highly competitive quality products and solutions. The early detection of gases afforded by Murco Gas Sensors minimises the cost associated with leaks.

Legal Compliance

The MGS series enables compliance with all the necessary regulatory, legal and Insurance requirements.

Environmental Considerations

The early detection of gas minimises emissions. Also Murco Gas Sensors enable compliance with all relevant environmental legislation and the product itself is fully recyclable.

Better Performance

Because Murco Gas Sensors offer reliable, real-time and continuous monitoring, you can avoid all the usual problems that occur with aspirated systems as a result of blocked filters, damaged tubes and delayed sample analysis.

Tailored to Task, Tailored to Gas

Each sensor can be individually specified to meet your requirements in terms of the type of gas to be detected, the range and alarm level. You select the output preferred to integrate the sensor into your system.

Increased Connectivity

The MGS can integrate with most Control and Building Management Systems (including the ST-MON and MGD series panels), using one of it's linearised analogue outputs and digital (relay) output.

Whatever your business and whatever your budget, Murco has a gas detection system to suit you.

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Murco Gas Sensor **(MGS)** Data Sheet

Technical Specification	MGS Standard
Power Supply	12/24V AC/DC ± 20%(IR 24V AC/DC)
Power Consumption	EC (24V): 45.7mA, SC: 91mA, IR:63mA
Power Monitoring*	Green LED
Visual Alarm*	Red LED
Audible Alarm*	Sounder, enabled/disabled
Fault monitoring Fault state	Red LED ON – Green OFF 0-1V, 0-2mA (IR 1V, 2mA)
Analogue Outputs	0-5V, 1-5V, 0-10V, 2-10V, 4-20mA (IR 0-10, 2-10, 4-20mA)
Digital Outputs*	1 Relay rated 1 Amp/24 V d.c /120 V a.c
	Selectable delay: 0,1,5,10min
IP Rating	IP41
Dimensions and Weight	86 x 142 x 53 mm 180 g
Standard Compliance	CE Ex WEEE RoHS EuP

Sensor Information	Electrochemical EC	Semiconductor with filter (multigas) SC	Infrared IR
Typical Measurement Range	0-1,000 ppm	10-1,000 ppm	ppm - %
Temperature Range	A: -20ºC to +40ºC B: -40ºC to +40ºC	-40ºC to +50ºC	-40ºC to +50ºC
Humidity Range non condensing	0 to 95%	0 to 95%	0 to 95%
Typical Sensor Life Alarm threshold T50 T90 Recovery Time	3 yrs 19 sec 47 sec 900 sec	5-8 yrs 76 sec(filtered) 215sec(filtered) 600 sec	5yrs 25 sec 90sec 210 sec
Linearity	Linear over calibrated range		
Calibration Requirements	Local regulations may specify the procedure and frequency required. Standards generally require at least annual testing or calibration. Refer to Murco for instructions. Semiconductor sensors are non-selective, but calibrated to a specific gas.		

OPTIONAL HOUSINGS

Standard

86x142x53mm

180g

IP66

175x165x82mm

629g

IP66 with Splash Guard

175x225x82mm

700g

M42 Thread

Splash Guard

75x50mm

72g

IP66 / Remote Head

175x155x82mm

790g

Exd

30x160x90mm

2234g

Exd Remote Head / IP66

175x155x82mm

1185g

PRV / IP66

175x155x82mm

916g

Airflow / Duct Mount IP66

175x125x82mm

578g

Remote / Face Plate

86x86mm

86g

Typical Gases/Ranges we detect:

ELECTROCHEMICAL		
Ammonia	NH_3	0-100ppm 0-1,000ppm 0-5,000ppm
Carbon Monoxide	CO	0-100ppm 0-500ppm 0-1,000ppm
Chlorine	Cl_2	0-20ppm
Chlorine Dioxide	ClO_2	0-1ppm
Ethylene Oxide	C_2H_4O	0-20ppm
Ethylene	C_2H_4	0-20ppm, 1,000ppm
Fluorine	F_2	0-1ppm
Hydrazine	N_2H_4	0-1ppm
Silane - Hydride	SiH_4	0-5ppm
Hydrogen	H_2	0-1,000ppm 0-10,000ppm 0-100% LEL
Hydrogen Chloride	HCl	0-50ppm
Hydrogen Cyanide	HCN	0-50ppm
Hydrogen Sulphide	H_2S	0-30ppm 0-200ppm
Nitric Oxide	NO	0-100ppm 0-500ppm
Nitrogen Dioxide	NO_2	0-50ppm
Oxygen	O_2	0-30%
Ozone	O_3	0-2ppm
Phosgene	$COCL_2$	0-1ppm
Phosphine	PH_3	0-5ppm
Sulphur Dioxide	SO_2	0-100ppm

Patent: S84887

INFRARED		
Carbon Dioxide	CO2 standard model	0-10,000ppm, (0-1%vol)
Carbon Dioxide	CO2 special request	0-1,000ppm 0-2,000ppm 0-20,000ppm 0-5% 0-10%

SEMICONDUCTOR		
HFC's - typical examples	R134a, R404A, R407, R410A, R507	10-10,000ppm
HCFC's - typical examples	R22	10-10,000ppm
CFC's - typical examples	R11,R12	10-10,000ppm
Hydrocarbons -typical examples	Methane(Natural gas), Propane, Butane, LPG, Isobutane, Ethylene	0-10,000ppm
Ammonia	NH_3	0-10,000ppm
Hydrogen	H_2	0-10,000ppm
VOC's - typical examples	Acetone, Chloroform, Ethanol, Methanol, Methyl and Methylene Chloride, Ethyl and Ethylene Chloride	0-10,000ppm

Temperature Range	Sensor Types		
	Semi Conductor	Electrochemical	Infrared
Standard Enclosure-	20 - +50ºC	-20 - +40ºC	-20 - +50ºC
IP 66	-40 - +50ºC	-40 - +40ºC	-40 - +50ºC
IP 55 Low Temp	-50 - +50ºC	-50 - +40ºC	-50 - +50ºC

Represented in Canada by:

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