

# Murco Gas Detector (MGD)

## Robust, gas monitoring solution which detects most gases

The Murco Gas Detector (MGD) is a reliable fixed gas detector which can detect a wide range of different gases. The MGD is a stand-alone set-point alarm system, which can also connect to external systems using its relay outputs.

It is a straight-forward proven 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:

- buildings/areas that require reliable, real-time continuous monitoring
- customers who want to add gas detection solutions to an existing environment, e.g. chiller installations to meet new legislation and refrigerants, energy and building regulations



### 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

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

### Optional Housings Available

Murco also supply a variety of housings to suit all industry applications so that you can have your ideal solution. See overleaf for the full range.



### Benefits

#### Increase Efficiency, Minimise Costs

Murco is committed to delivering highly competitive quality products and solutions. Early detection minimises costs of replacing refrigerant and increases efficiency in systems with a reduced charge. ✓

#### Compliance

The MGD series enables compliance with all the necessary regulatory, legal and insurance requirements. ✓  
Legislation: F Gas Regulation, EH40  
Standards: EN378, Lloyd's Approval,  
Regulatory Approvals: UL, CE

#### Environmental Considerations

The early detection of gas minimises emissions. Also Murco Gas Detectors enable compliance with all relevant environmental legislation and the product itself is fully recyclable. ✓  
Green Building Programmes – BREEAM, LEED, Energy Technology List (UK).

#### Better Performance

Murco Gas Detectors offer reliable, real-time and continuous monitoring. ✓




#### Tailored to Task, Tailored to Gas

Each detector can be individually specified to meet your requirements in terms of the type of gas to be detected. ✓  
You select the output preferred to integrate the sensor into your system. The relay output can be used to integrate the MGD into your overall control system or BMS.

#### Increased Connectivity/Control

The MGD can interface with most Control and Building Management Systems using its digital outputs (Relays). ✓  
A relay expander box with a relay for each sensor and alarm level is available for 4 and 6 sensor 2 level models.

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

Specification	Description			
Power Supply	Available in 230V a.c. 50Hz/120V a.c. 60Hz/12V d.c.			
	1- and 2-channel systems		4- and 6 channel systems	
Audible Alarm (Buzzer)	Internal, continuous	Internal, intermittent (low), continuous (high)	External, continuous	External continuous
Alarm Silence	Jumper	Key Switch	Jumper	Key Switch
Alarm Levels	1 Level	2 Levels	1 Level	2 Levels
Alarm Reset	Automatic	Automatic (low alarm), manual (high alarm)	Automatic	Automatic (low alarm), manual (high alarm)
Alarm Delay	Selectable	Preset 25 sec (low) 30 sec (high)	Selectable	Preset 25 sec (low) 30 sec (high)
Visual Alarm LED(s)	Red	Yellow, Red	Red	Yellow, Red
Fault Indications	Red LED, Relay		Red LED, Relay	
Power Monitoring LED	Green		Green	
Alarm Relay(s)	10 A, 120V.230V		10 A, 120V/230V	
Communications Wiring	4-conductor cable 200 ft (61 m) max w/ 22AWG		4-conductor cable 500 ft (152 m) max, 22AWG	
Warm-up Dealy	Minimum of 3 minutes			
Standard Enclosures Ratings	MGD: IP41 Controller: IP51		MGD: IP41 Controller: IP51	
Standards Compliance	  		UL 61010-1, CSA C22.2 No. 61010-1, IEC 61010-1, EN 61010-1, EN55011, EN 50270, FCC Part 15, Subpart B, WEEE RoHS EuP	

## CONTROLLER OPTIONS

1 & 2 Channel Controller  
192 x 100 x 75mm  
1.3 Kg



4 & 6 Channel Controller  
262 x 255 x 82mm  
2.6 Kg



16 Channel ST-Mon Controller  
253 x 196 x 63 mm  
1.6 Kg



## OPTIONAL HOUSINGS

								
<b>Standard</b>	<b>IP66</b>	<b>IP66 Splash Guard Fitted</b>	<b>Splash Guard</b>	<b>IP66 / Remote Head</b>	<b>Exd**</b>	<b>Exd Remote Head / IP66</b>	<b>PRV / IP66</b>	<b>Airflow / Duct Mount IP66</b>
86x140x53mm	175x165x82mm	175x225x82mm	75x50	175x155x82	130x160x90mm	175x155x82mm	175x155x82mm	175x125x82mm
150g	600g	672g	72g	760g	4200g	1153g	810g	553g

Typical Sensor Information	Semiconductor with filter (multigas) SC	Infrared for CO2 (specific) IR	Infrared for Hydro-carbon IR
Typical Measurement Range	10-1,000ppm	0-10,000ppm - %	0-10%
Standard Humidity Range (non condensing)	0 to 95%	0 to 95%	0 to 95%
Sensor Life Time * Alarm Threshold	5 to 8 yrs 24 sec	5 yrs 30 sec	5 yrs 30 sec 210 sec
Calibration	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.		

INFRARED		Standard Set Points
Carbon Dioxide	CO <sub>2</sub>	5,000/9,000ppm
Hydrocarbons (selected)	Butane, Propane	10/20%

SEMICONDUCTOR		Standard Set Points
HFC's	R134a, R404A, R407, R410A, R507	100/1,000ppm
HFC's	R22	100/1,000ppm
CFC's	R, R12	100/1,000ppm
Hydrocarbons	Methane(Natural gas), Propane, Butane, LPG, Isobutane, Ethylene	2,000/5,000ppm
Ammonia	NH <sub>3</sub>	500-1,000ppm 5,000/10,000ppm
Hydrogen	H <sub>2</sub>	2,000/4,000ppm
VOC's	Acetone, Chloroform, Ethanol, Methanol, Methyl and Methylene Chloride, Ethyl and Ethylene Chloride	500/1,000ppm

Temperature Range	Sensor Types	
	Semi Conductor	IR
Standard Enclosure	-20 to +50°C	-20 to +50°C
IP 66	-40 to +50°C	-40 to +50°C

For temperatures lower than -40°C please contact us for our solution.

\* Response times may vary based on temperature of operation, enclosure and environmental conditions.

\*\* The hazardous area Exd Gas Monitor products are designed with individually certified EXD main housing enclosure and certified EXD sensor enclosures. The final Exd Gas Monitor assemblies (main enclosure and sensor assembly) have not been certified as a complete unit.