



Leak Detection

GAS DETECTOR

MGS-450 Stationary leak detector



Non-contractual photo

The **MGS-450** is a refrigerant leak detector for all air conditioning and refrigeration installations.

The device consists of 1 built-in probe with 2 alarm levels which can be used either as a standalone detector or connected to a control system (BMS for example) via a Modbus link.

It can also be connected to an MGS-408 controller to form a true central detection unit for up to 8 detectors.

It is provided with 3 relays which can actuate external safety equipment such as valves, fans, general alarms, etc.

The MGS-400 application allows the **MGS-450** to be configured, commissioned and maintained using a smartphone. The application can also be used to view measurements in real time, test outputs and calibrate the detector, etc.

It detects HFO / mixtures (HFO-HFC) / HFC HCFC / HC / NH₃ / CO₂

Fluid	Sensor	Detection range	Operating conditions		
			Temperature	Relative humidity	Pressure
HFO HFO+HFC HFC HCFC	Semiconductor service life 4 to 6 years*	0-1,000 ppm	-40 °C to +50 °C	5 to 90%	0.8 to 1.1 bars
CO ₂	Infra-red service life 5 to 7 years*	0-5,000 ppm 0-10,000 ppm 0-20,000 ppm 0-30,000 ppm 0-40,000 ppm 0-50,000 ppm			
R-290 R-600a	Infra-red service life 5 to 7 years*	0-100% LEL			
NH ₃	Electrochemical service life 2 to 3 years*	0-100 ppm 0-300 ppm 0-1,000 ppm			
		0-5,000 ppm	-20 °C to +40 °C		

*under normal usage conditions



ALL DETECTORS IN THE MGS 400 SERIES

MGS-410



Non-contractual photo

MGS-450



Non-contractual photo

MGS-460



Non-contractual photo

Properties	MGS-410	MGS-450	MGS-460
Power supply	24 V AC, 4 W maximum		
Visual indicators and alarm status	Tri-colour LED: green, orange, red		
Probe	Fixed, built into the casing		Remote, up to 5 m 115 x 136 x 68 mm
Buzzer	Intensity 72 dB at 10 cm		
Time delay before alarm is triggered after detection	Configurable - 0 to 15 min		
Configurable relays	/	3 relays: high level/low level/fault	
Analogue output	/	1 output 4 to 20 mA	
Modbus RTU digital output	RS-485 terminal Transmission speed in baud: 9600 or 19200, to be configured Data bits: 8 Parity: None, odd or even to be configured Stop bits: 1 or 2, to be configured Repetition duration: 200 ms (minimum)		
Casing	IP66 130 x 130 x 68 mm 260 g	IP66 165 x 165 x 87 mm 480 g	IP66 165 x 165 x 87 mm 758 g
Bluetooth®	Bluetooth® Low Energy, BLE 4.2 for MGS 400 application		

REGULATORY INFORMATION

European standard NF EN 378-3 dated 1st April 2017 specifies safety requirements for refrigeration systems and heat pumps. When the refrigerant concentration is liable to exceed the practical limit defined in EN 378-1:2016, Appendix C, the detectors must be compliant with the specified requirements and trigger at least one alarm.

MGS-450 gas detectors meet the requirements of European standard NF EN 378-3: 2017 (section 9 on leak detectors), along with the DEEE (Electrical and electronic equipment wastes) and NF EN 14624 (performance of portable leak detectors and halogenated refrigerant gas detectors).

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