



Mechanical Equipment Rooms

Gas Detection for Safety Compliance

Application Guide

Mechanical Room Gas Detector Selection Guide

	MGS-400	MGS-250	MGS-550	MULTI-ZONE
Sampling Type	Diffusion			Aspirated
Temperature Range	-40 °C to +50 °C	-30 °C to +40 °C	-40 °C to +50 °C	System: 0 °C to 50 °C Sample Points: -40 °C to +50 °C
Combustible Gases	•	—	•	—
Stability & Accuracy	Standard	High	Standard	High
Sensor Channels	1	1	2	16
Minimum Detection Level	50 or 200 ppm typical	10 ppm	50 or 200 ppm typical	1 ppm
User Interface	Mobile App	Local Display		
Parasense Cloud Portal	—			Optional

MGS-400 Series

Gas Detection Controller & Multi-Device Platform for a Wide Range of Applications



MGS-450



MGS-410



MGS-460

Remote Sensor

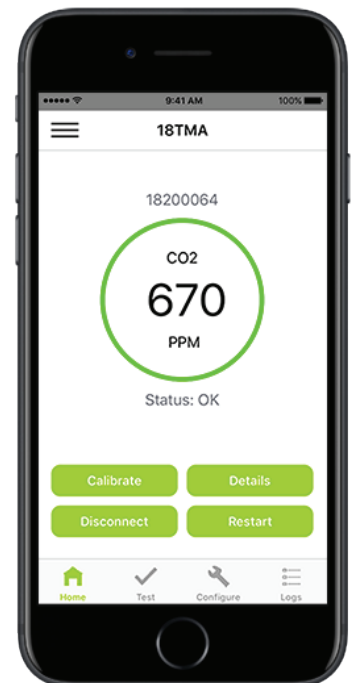
	MGS-410	MGS-450	MGS-460
Enclosure Rating	IP66	IP41 / IP66	IP66
Configurable Relays	—	3	3
Digital Communications	Modbus RTU		
Analog Output	—	Analog	
Sensor	Integrated	Integrated	Remote

MGS-400 Series Gas Detectors

- Mobile user app interface
- Plug-and-play pre-calibrated sensor modules
- Temperature-compensated measurements down to -40° F/C
- Digital and analog communications
- Onboard A/V alarms
- IP41 and IP66 versions
- Remote sensor capability

MGS-400 Mobile App

- **Configuration** (Rename device, define alarm thresholds, adjust Modbus settings, configure relay behavior and manage analog output settings.)
- **Maintenance** (Test LED / buzzer function, relays, and analog output level.)
- **Calibration** (View sensor type, serial number and "Calibration Due" timer and initiate zero / span calibrations with customizable field calibration certificate.)
- **Intuitive Interface** (View current gas measurement and acknowledge alarm / fault status.)



MGS-400 Mobile App



BLUETOOTH CONNECTIVITY.

Optional External Strobe



MGS-408 Gas Detection Controller

8-Channel Controller

- Centralized power and alarming for up to 8 gas sensors, including the MGS-410, MGS-450, MGS-460, MGS-250 and MGS-550
- LEDs and display screen provide a real-time at-a-glance visualization of entire gas detection system alarm status
- Modbus master and slave capabilities allow device to gather full set of data from connected gas detectors and relay to facility's BMS / BAS
- 3 Relays (*fault, low alarm, high alarm*) and integrated horn / strobe allow controller to activate ventilation or other counter measures.

Integrated Perimeter Strobe



MGS-402 Gas Detection Controller

2-Channel Controller

- Centralized power and alarming for up to 2 MGS-410 gas detectors
- Modbus RTU Master / Slave provides seamless integration from connected gas detectors to many third-party BMS / BAS
- Audible and visual alarms enable compliance with AHSRAE 15 / EN 378 - no additional hardware required.

MGS-250

Infrared Gas Detector



- Long-life, infrared (NDIR) sensor
- Detects CFCs, HFCs, HCFCs and HFOs
- No cross interference to other gases, humidity or temperature
- Modbus RTU interface, analog output,
- Set all parameters and outputs without opening the unit
- Works with MGS-408

MGS-550

Dual-Gas Detector with Remote Sensors



- Flexible two-sensor capability, local and / or remote
- Two analog outputs and Modbus RTU interface
- Three fully configurable, user-assignable relays
- Magnetic wand enables easy, non-intrusive configuration / calibration
- IP66-rated ABS enclosure provides protection from dust and water
- Works with MGS-408

Multi-Zone Refrigerant Monitor

High-Performance, Multi-channel System for Early Warning and Low-Level Leak Detection



- Active sampling for 4-16 zones
- 1 ppm Minimum Detection Level (MDL)
- Proprietary infrared sensor accurately detects 60+ different refrigerants, including CFCs, HFCs, HCFCs, HFOs and natural refrigerants
- No calibration required
- Sample distance up to 1200 feet (365 m)
- Optional connectivity to Parasense cloud platform



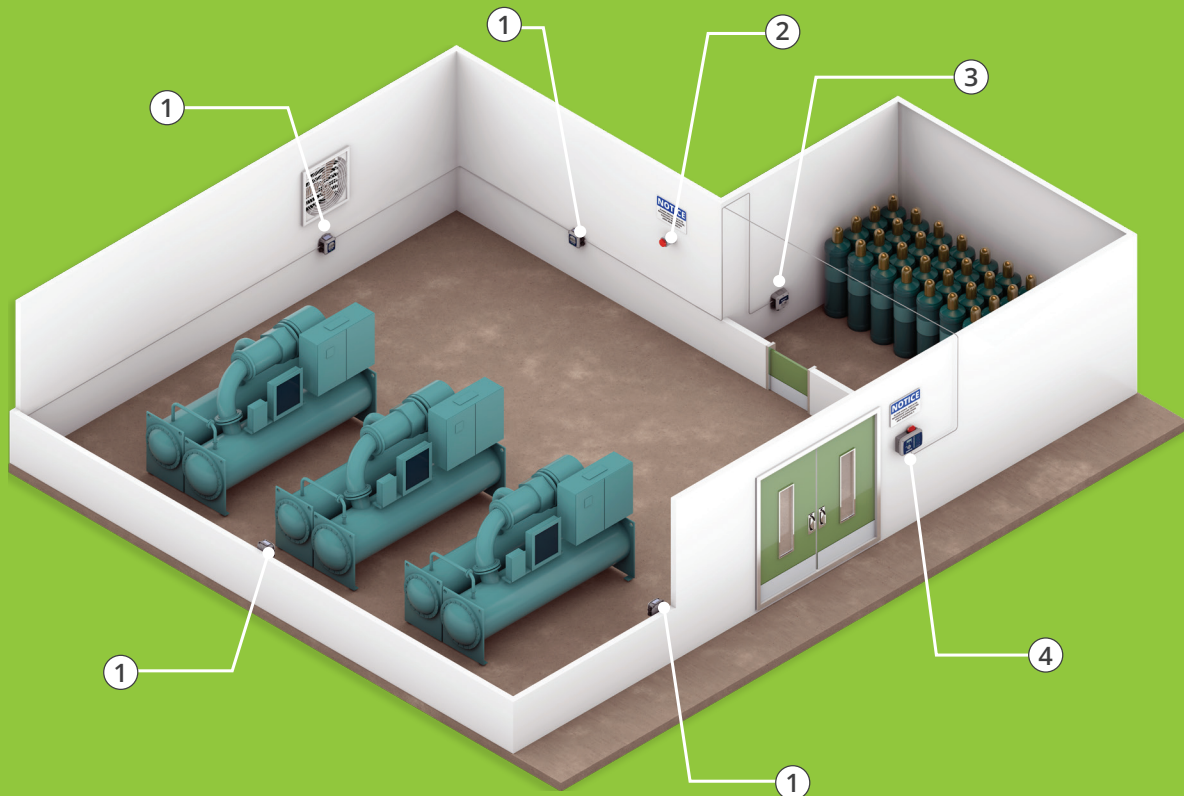
Parasense Platform

Supported Gas Detection by Product

● MGS-400 (410 / 450 / 460) ● MGS-550 ● MGS-250 ● Multi-Zone

CO	●	●	●	N7300	●	R-236fa	●	R-438A	●
CO ₂	●	●	●	N7600	●	R-245fa	●	R-448A	●
Ethylene (C ₂ H ₄)	●			R-717 (Ammonia)	●	R-290 (Propane)	●	R-449A	●
FA188			●	NO ₂	●	R-32	●	R-450A	●
FC72			●	O ₂	●	R-401A	●	R-452A	●
H1211			●	O ₂ (Low Alarm)	●	R-402A	●	R-452B	●
H1301			●	R-11	●	R-402B	●	R-454A	●
H2402			●	R-113	●	R-404A	●	R-454B	●
HFO1233zd(E)	●		●	R-114	●	R-407A	●	R-454C	●
HFO1234YF	●	●	●	R-12	●	R-407C	●	R-455A	●
HFO1234ZE	●		●	R-123	●	R-407F	●	R-500	●
HFO1336E			●	R-1233zd	●	R-408A	●	R-502	●
HFO1336Z			●	R-1234yf	●	R-409A	●	R-503	●
HFP			●	R-1234ze	●	R-410A	●	R-507	●
LPG	●			R-124	●	R-422	●	R-507A	●
R-50 (Methane)	●	●		R-125	●	R-422A	●	R-508B	●
N1230			●	R-134a	●	R-422D	●	R-513A	●
N4710			●	R-21	●	R-424A	●	R-514A	●
N5110			●	R-22	●	R-426A	●	R-600 (Butane)	●
N7100			●	R-227	●	R-427A	●		
N7200			●	R-23	●	R-434A	●		

MGS-400 SERIES EXAMPLE: MECHANICAL ROOM CONFIGURATION



- ① MGS-410 ② HORN / STROBE ③ MGS-450 ④ MGS-408 CONTROLLER WITH HORN / STROBE