PERGAMON
PERCEPTIVE TECHNOLOGIES

MULTI-GAS MONITORING SYSTEM

CP-MGMS-S40

Features

- Supports up to 40 electrochemical, PID, NDIR and pellistor sensors
- Interchangeable smart calibrated sensing modules
- Plug-and-play smart sensors
- Auto-addressable and self-conf gurable sensors
- Modbus or BACnet communication protocol
- Intuitive web-based graphic user interface
- Visual and audible alarm with mute button
- Fully programmable alarm levels
- Fan override timers
- Sequential, time-based ventilation controls
- maintenance modes
- Unlimited datalogger
- Low power consumption

Applications

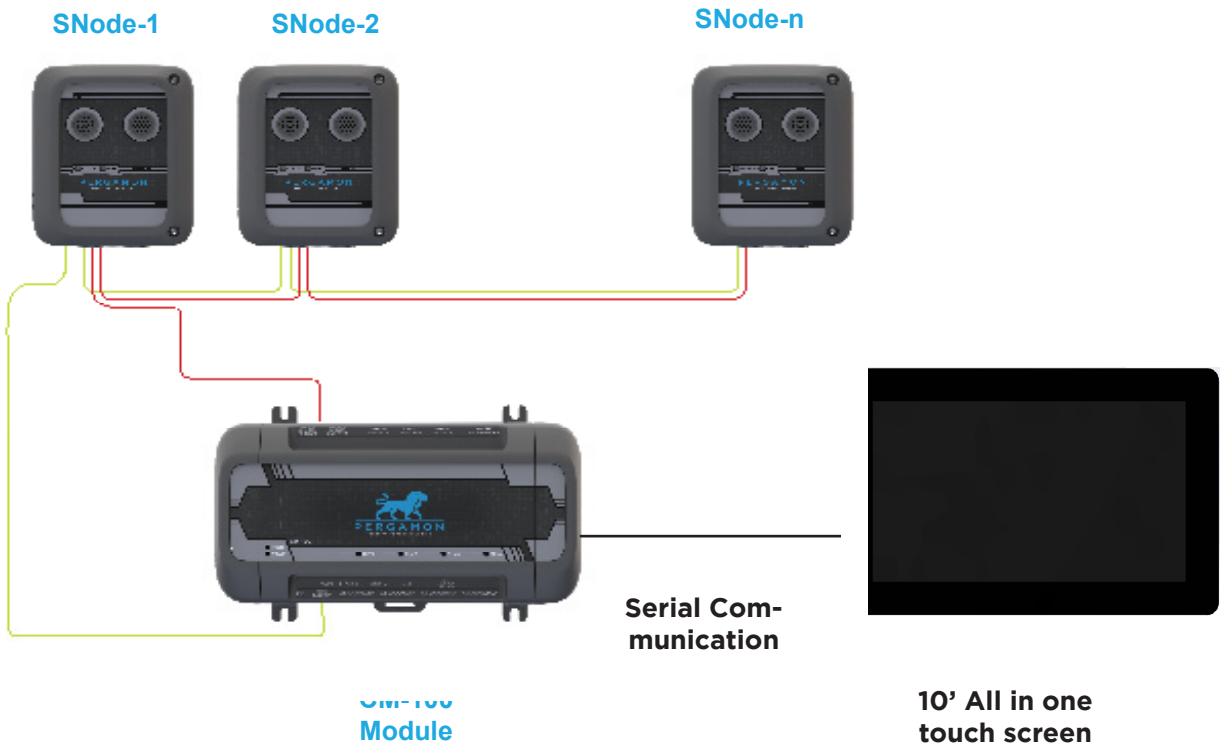
- Parking garages and loading docks
- Warehouses
- Fire stations
- Indoor sports complexes and arenas
- Car dealerships and maintenance facilities
- Airports, schools and hospitals
- Farms and greenhouses
- Battery and boiler rooms
- Chemical storage
- Indoor air quality
- Laboratory contaminant monitoring
- Welding shops
- HVAC-R mechanical rooms

General Description

The CP-MGMS-S40 is a Multi-Gas Monitoring System designed to ensure occupant safety in enclosed areas, maintain indoor air quality at satisfactory levels and reduce energy costs through a demand-controlled ventilation system.

It is a scalable-architecture, low-maintenance, cost-effective system that uses remote hardwired sensors to communicate with a central control module, remote relay modules and remote analog modules and operate ventilation equipment and activate remote alarms.

The CP-MGMS-S40 controls gas levels suitable for different applications, notably combustible and toxic gases. The controller can monitor up to 40 sensors, including assorted sensor technologies such as electrochemical, infrared, pellistor and PID, or any combination thereof. The system contains three main modules: the “CM-100” control module,All in one touch screen PC , and “SNode” node module. For each module, competitive features offer an unmatched combination of accuracy, reliability, robustness and ease of use.



General Specifications

CP-MGMS-S40

Dimensions	20 in x 16in x 7in (508mm x 406mm x 178mm)
Weight	29lb (13kg)
Power Supply	120 –240 VAC
Power Consumption	500 mA max.
Specifications	• Aeration louvers on both sides. • 10 in Screen. • Alarm (Buzzer). • Silencer push botton. • Handle lock • CM-100 controller module • Processing data computer • 3 Branches RS-45 • Strob horn terminal blocks . • Dry contact terminal blocks output. • Analog terminal blocks output. • 120 VAC terminal blocks input.
Number of Supported SNode Modules	20 SNodes
Number of Supported Sensors	40 sensors
Relay Outputs	4 dry contact relays, 2 A @ 240 V each
Alarm	Audible and visual alarm with mute switch (rated 85 dB @ 2 ft.)

Controller Module (CM-100 Module)

Dimensions	8.5 in. x 5.5 in. x 3 in. (216 mm x 140 mm x 76 mm)
Weight	0.44 lb. (200 g)
Power Supply	120 V–240 V and +24 V DC/AC
Power Consumption	280 mA max.
Communication	• 3 x RS485, Modbus RTU, Modbus TCP, BACnet MS/TP, BACnet IP • 2 x Ethernet, HDMI, 2 x USB3 • LoRa gateway
Data Loggers	5GB storage

Gas Transmitter Sensor (SNode-2 Module)

Dimensions	6 in. x 5 in. x 2 in. (152 mm x 127 mm x 51 mm)
Weight	0.44 lb. (200 g)
Power Supply	+24 V DC
Power Consumption	18 mA max.
Sensors	• Plug & play dual sensors • Temperature & humidity sensors built in
Supported Technology	Electrochemical, PID, NDIR & pellistor
Communication	Shielded RS485 or LoRa wireless
Indication	power and status LEDs

Optional:

Remote Relay Output Module (RM-8 Module)

Dimensions	8.5 in. x 5.5 in. x 3 in. (216 mm x 140 mm x 76 mm)
Weight	0.44 lb. (200 g)
Power Supply	+24 V DC/AC
Power Consumption	190 mA max.
Outputs	8 dry contact relays, 8 A @ 240 V each
Communication	Shielded RS485 or LoRa wireless
Indication	power and status LEDs and 8 Relays LEDs

Remote Analog Output Module (AM-8 Module)

Dimensions	8.5 in. x 5.5 in. x 3 in. (216 mm x 140 mm x 76 mm)
Weight	0.44 lb. (200 g)
Power Supply	+24 V DC/AC
Power Consumption	340 mA max.
Outputs	8 current and voltage universal outputs Voltage: 0–2 V, 0–5 V, 0–10 V Current: 0–20 mA, 4–20 mA
Communication	Shielded RS485 or LoRa wireless
Indication	power and status LEDs and 8 Analog LEDs

Operating Conditions

Operating Temperature	0 °C to 50 °C (32 °F to 122 °F)
Operating Humidity	0 to 90% RH non-condensing
Total Current Consumption	1 A max.

Web-based Software

Multi-platform web-based HMI live-monitoring software provides real-time alerts for hazardous conditions and alarms, allowing you to see what is happening and respond to incidents as they occur. With this software interface, you can be confident that operators are kept informed of site conditions even when they are miles away.

The web-based CP-MGMS-40 system with a strong communication backbone can continuously monitor and transmit sensor data and events, as well as look for issues and generate alerts when required. With immediate notification, operators can ensure that problems are quickly addressed.

Additionally, the software has the following features:

- Automatic sensor plug-in/pull-out detection
- Alarm and gas concentration indications
- User management
- Sensing node, relay module and analog module configuration.
- Data logging
- maintenance modes
- Override start/stop , sequencer base timer relays.

Supported Gas Sensors

Gas		Sensor Technology	Range	Sensor Lifespan	Coverage Radius
Combustible					
Butane	C_4H_{10}	Catalytic bead	0–60% LEL	3 years	20 ft. (6 m)
Hydrogen	H_2	Catalytic bead	0–60% LEL	3 years	20 ft. (6 m)
Methane	CH_4	Catalytic bead	0–60% LEL	3 years	20 ft. (6 m)
Propane	C_3H_8	Catalytic bead	0–60% LEL	3 years	20 ft. (6 m)
Oxygen Deficiency					
Oxygen	O_2	Electrochemical	0–25%	5 years	20 ft. (6 m)
Refrigerant					
Refrigerant	R-407C	Infrared	0–1,000 ppm	10 years	20 ft. (6 m)
Refrigerant	R-134A	Infrared	0–1,000 ppm	10 years	20 ft. (6 m)
Refrigerant	R-410A	Infrared	0–1,000 ppm	10 years	20 ft. (6 m)
Refrigerant	R-404A	Infrared	0–1,000 ppm	10 years	20 ft. (6 m)
Refrigerant	R-22	Infrared	0–1,000 ppm	10 years	20 ft. (6 m)
Toxic					
Ammonia	NH_3	Electrochemical	0–100 ppm	2 years	20 ft. (6 m)
Carbon dioxide	CO_2	Infrared	0–5,000 ppm	10 years	50 ft. (15 m)
Carbon monoxide	CO	Electrochemical	0–200 ppm	7 years	50 ft. (15 m)
Hydrogen sulfide	H_2S	Electrochemical	0–20 ppm	3 years	20 ft. (6 m)
Nitrogen dioxide	NO_2	Electrochemical	0–10 ppm	2 years	50 ft. (15 m)
Formaldehyde	CH_2O	Electrochemical	0–10 ppm	2 years	20 ft. (6 m)
Chlorine	CL_2	Electrochemical	0–10 ppm	2 years	20 ft. (6 m)
Nitric oxide	NO	Electrochemical	0–250 ppm	2 years	20 ft. (6 m)
Sulfur dioxide	SO_2	Electrochemical	0–2,000 ppm	2 years	20 ft. (6 m)

Other GASES and RANGES are available

For more information

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