

Z GARD® S SENSOR

Economical and Reliable Gas Sensors



The Z Gard S Sensor is designed to detect the presence of carbon monoxide gas, nitrogen dioxide or refrigerants in air. The sensors employ solid state or electrochemical sensors, which generate a representative output signal proportional to the calibrated operating range. All Z Gard S Sensors are available with two output versions, a 4-20mA analog output or an addressable RS-485 digital signal. The Z Gard S Sensor with RS-485 digital output is specifically designed to operate with any Z Gard C 485 Controller, operating as a system. The Z Gard S Sensor with 4-20mA can be installed as a stand-alone sensor typically integrated with the Z Gard C Controller or common commercial equipment including PLC, DCS or building automation systems.

- Two sensor output options: 4-20mA analog output or a RS-485 digital signal.
- Standard housing is a 4" x 4" tamper-resistant commercial electrical box constructed of PVC with 3/4" PVC conduit opening. The sensor and electronics are housed in a steel cover plate that mounts to the box with 4 screws.
- Sensor status is shown by the green OK LED, indicating that the device is operating properly.
- Jumpers to drive the output to percentages of full-scale. This feature is useful for testing remote devices, which may be connected to the sensor output.

Specifications

Solid State Sensor

Detection Range	Specified through ATO (Assemble To Order) Matrix for CO, refrigerants and ammonia
Sensor	Metal oxide sensing element
Accuracy	±5%, full scale (FS) at 50% relative humidity
Humidity	0 - 95% RH
Temperature	
Operating:	0° to 40°C (32° to 104°F)
Storage:	-10° to 50°C (14° to 122°F)

Electrochemical Sensor

Detection Range	
Carbon monoxide	Standard- 0-100 ppm Optional- 0-200 ppm
Nitrogen dioxide	Standard- 0-10 ppm
Sensors	Plug-in, electrochemical sensing elements
Accuracy	±5%, full scale (FS)
Humidity	0 - 95% RH
Temperature	
Operating:	0° to 40°C (32° to 104°F)
Storage:	-10° to 50°C (14° to 122°F)

All Z Gard Sensors

Calibration	Factory-calibrated. Sensors can also be field-calibrated.
Standard Enclosure	Plastic double-gang connection box Metal front plate secures the sensor and the circuit board
Dimensions	5.5" H x 5.5" W x 2.2" D
Certification	ENTECLA (to CSA Standards)

Z Gard S 4-20mA Sensors

Operating Power	
24 VAC or DC	100mA used with MSA Z Gard Controllers or commercial DCS and PLC devices
24 VAC	100mA used with commercial DCS and PLC devices
Signal Output	4-20mA analog, 3-wire, point-to-point connection

Z Gard S RS-485 Sensors

Operating Power	24 VDC, 100mA used with MSA Z-Gard C Controllers
Signal Output	RS-485, 4-wire network connection
Function Selection	Network Address jumpers, 1 to 127

Ordering Information

A Z Gard S Sensor ATO (Assemble To Order) form is available in the MSA Preferred Products Catalog. Call 1-800-MSA-INST (1-800-672-4678) to obtain a copy of the Preferred Products Catalog CD-Rom.

Note: This Data Sheet contains only a general description of the product shown. While uses and performance capabilities are described, under no circumstances should the product be used except by qualified, trained personnel, and not until the instructions, labels or other literature accompanying the product have been carefully read and understood and the precautions therein set forth followed. Only they contain the complete and detailed information concerning this product.

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