

# Z Gard® C 485 Controller

## Economical and Reliable Microprocessor-Based Controller



Z Gard C 485 Controllers are economical, microprocessor-based gas monitoring systems designed to solve a variety of alarm and control applications. The Z Gard C 485 Controller interfaces with a wide choice of remote MSA Z Gard S Sensors. Models are available which can accept inputs from up to 8, 16, or 24 MSA Z Gard S Sensors.

### Sensor Communication

All of the Z Gard C 485 Controllers manage the remote sensor on a 4-wire digital RS-485 serial communication protocol. The Z Gard C 485 Controller automatically detects the sensor type connected on an RS-485 bus and determines its full-scale value. Set points and readout display are automatically adjusted to match sensor operating range.

### Display

A large LED readout displays the active channel number and corresponding sensor gas level. The display scans through all active channels at 2-second intervals.

### Outputs

Each controller provides a 4-20mA high-select output signal representing the highest gas concentration level of active sensors. A set of relay outputs for warning, alarm, and sensor fail are provided for each zone. This controller includes both audible and visual LED alarm status indication. Audible alarm activates every time a new alarm occurs, and may be silenced by pressing the Reset button.

### Status LEDs

A set of LED status indicators is present for each zone. Green Sensor OK LED will illuminate when all active input signals are valid. Red and amber LEDs are illuminated when gas levels have exceeded preset threshold limits.

### Zoning

Units are available with 1 or 2 zones. 2-zone option accepts sensor inputs in two groups. 2-zone alarm feature with function jumper selection can be used to program alarm relay action and number of remote sensors.

## Specifications

Zones	8-point controllers are only available as single zone 16-point controllers are available as single or 2 zones 24-point controllers are available with 2 zones
<b>Power Requirement</b> 8- and 16-point units: 24-point unit:	Standard, 110 VAC, 50/60 Hz $\pm$ 10% at 0.5 amps Optional, 220 VAC, 50/60 Hz $\pm$ 10% at 0.25 amps Standard, 110 VAC VAC, 50/60 Hz $\pm$ 10% at 1.0 amps Optional, 220 VAC, 50/60 Hz $\pm$ 10% at 0.5 amps
Sensor Signal Input	RS-485, 4-wire serial bus remote sensor connection
Operating Temperature	-10° to 40°C (14° to 104°F)
Storage Temperature	-20° to 50°C (-4° to 122°F)
<b>Relay Contacts Rating</b> 10 Amps 6 Amps 5 Amps	1/8 H.P., 125 VAC 1/8 H.P., 277 VAC 30 VDC All relays normally-energized or de-energized, jumper selected. Alarm relay latching or non-latching, jumper selected.
Relay Outputs per Zone	Common warning, SPDT, alarm SPDT & sensor fail SPDT
Digital Readout	Point number plus 3-1/2 digits
Status Display per Zone	Common LED for warning, alarm, and sensor status
<b>Alarm &amp; Warning Set-points</b> Field-adjustable Factory-set at:	Warning – 35% full scale Alarm at 50% full scale (unless otherwise specified)
Enclosure	Standard – metal NEMA 1 Optional – fiberglass NEMA 4X design
Weight	1-zone: 10 lb. (4.5 kg) 2-zone: 15 lb. (6.8 kg)
<b>Dimensions</b> 1-zone models: 2-zone models:	11.5" H (292 mm) x 10" W (254 mm) x 3.75" D (95 mm) 15" H (381 mm) x 12" W (305 mm) x 3.75" D (95 mm)
Certification	ENTELA (to CSA Standards)

## Ordering Information

A Z Gard C 485 Controller ATO 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.

For information on Z Gard S Sensors, see bulletin 07-2087-MC.

**Note:** This bulletin contains only a general description of the products shown. While uses and performance capabilities are described, under no circumstances shall the products be used by untrained or unqualified individuals and not until the product instructions including any warnings or cautions provided have been thoroughly read and understood. Only they contain the complete and detailed information concerning proper use and care of these products.

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