

# Z Gard® C Controllers

## Economical and Reliable Microprocessor-Based Controller



Z Gard C Controllers are economical, microprocessor-based gas monitoring products designed to solve a variety of alarm and control applications. The Z Gard C Controller can accept 4 to 20 mA or RS-485 inputs from MSA Z Gard S Sensors. Controllers are available that can accept inputs from 1 to 8 remote sensors. Single- and 4-point controllers feature an easy-to-read display, 4-20mA analog output, relay outputs, and audible alarm. 8-point version also features a keypad user interface located on the controllers' front panel used to control many of the unit's output functions.

### Sensor Communication

All Z Gard C Controllers accept either 4-20mA or RS-485 serial input from remote sensors. Z Gard C Controllers automatically detect the connected sensor type and determines its full-scale value. Set points and readout display are automatically adjusted to match the sensor operating range.

### Display

A large LED readout displays the active channel number and corresponding sensor gas level. For multi-point units, display scans through active channels at 2-second intervals.

### Outputs

**Relays** - Standard relay outputs for warning and alarm levels facilitate interfacing to externally connected devices.

**Status LEDs** - located on Z Gard C Controller front panel provide quick indication of system status.

**Fail Safe Operation** - If analog input signal from any remote sensor falls below 3.8mA, Sensor Fail LED will turn ON, and fault relay will de-energize. Should the Z Gard Controller experience a corrupt data signal from any associated inputs, System OK LED will turn OFF. Fault relay will also de-energize.

**Audible Alarm** - integral to each Z Gard C Controller; features alarm reset and local audible alarm silence pushbutton.

**4-20 mA high select option** - available on all controllers. Provides analog output signal derived from highest gas concentration level reported by remote sensor inputs. 4-20mA high-select signal represents readings from 0 to 100% full-scale.

## Specifications

<b>Power Requirements</b>	<b>Power</b>	<b>Current</b>
1-point:	110 VAC, 50/60 Hz $\pm$ 10%	0.15A
1-point:	220 VAC, 50/60 Hz $\pm$ 10%	0.10A
4-point:	110 VAC, 50/60 Hz $\pm$ 10%	0.50A
4-point:	220 VAC, 50/60 Hz $\pm$ 10%	0.25A
8-point:	110 VAC, 50/60 Hz $\pm$ 10%	1.00A
8-point:	220 VAC, 50/60 Hz $\pm$ 10%	0.50A
<b>Signal Input</b>	4-20 mA, 3-wire connection or RS-485, 4-wire connection	
<b>Number of Relays</b>		
1-point:	3 relays total, Form C	
4-point:	6 relays total, Form C	
8-point:	10 relays total, Form C	
<b>Relay Action</b>	Energized / non-energized; latching / non-latching	
<b>Digital Readout</b>	4-digit LED with sequential scanning features	
<b>Digital Readout Scale</b>	1- and 4-point; 0 to 999 ppm 8-point; 0 to 999 ppm	
<b>Operating Temperature Range</b>	-10 to +40°C (14 to 104°F)	
<b>Storage Temperature Range</b>	-20 to +50°C (4 to 104°F)	
<b>Enclosure</b>	Standard – metal NEMA 1 Optional – fiberglass NEMA 4X design	
<b>Weight</b>	1-point: 9.1 lb. (4.12 kg) 4- & 8-point: 13.2 lb. (6 kg)	
<b>Dimensions</b>		
1-point:	11"H (292 mm) x 10"W (254 mm) x 3.75"D (95 mm)	
4-point:	15"H (381 mm) x 12"W (305 mm) x 3.75"D (95 mm)	
8-point:	13.5"H (340 mm) x 11.5"W (290 mm) x 5.5"D (139 mm)	
<b>Certification</b>	ENTECLA (to CSA Standards)	

## Ordering Information

A Z Gard C 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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