

# Model 5000

## Monitoring Systems

**The MSA Series 5000 Monitoring System uses a variety of remote sensors to monitor a wide range of combustable and toxic gases. It can also be used with an oxygen sensor to monitor for oxygen deficiency.**

**There are various models to choose from, depending on the number of channels of monitoring desired. The Model 5300 is the smallest, with up to six monitoring channels. The Model 5600 features up to 12 monitoring channels. The Model 5800 has up to 24 monitoring channels.**



Each of the models of the Series 5000 can be configured in the following packaging arrangements: panel mounted, general purpose wall-mounted and a NEMA 4X wall-mounted system.

Each model is made up of a number of control units. Each control unit contains two separate, independent channels. Each channel has a three-digit LED display with three separate alarm levels (caution, warning and alarm). Each alarm level has a status LED on the front panel. The alarm level for each channel can be displayed by a single push button.

The control units are compatible with all MSA Series 5000 sensors. Sensors may be mixed in any combination and used on any channel of the control module.

The unique relay programmer module allows the user to have multiple alarm levels to actuate up to six relays. This saves wiring and setup cost. Discrete relays are available for each alarm level as an option.

The units are normally powered from 115 volts 50/60 Hz ac. But there is a variety of optional power inputs available: 230 volts ac, 12, 24 and 48 volts dc.

An optional backup power supply can also be added.

## Features

- True one-man calibration cuts maintenance time

- Simple setup of alarm levels with no tools or meters required
- Easy wiring hookup to wiring modules
- User is able to program a variety of relay activations in response to an alarm event
- UL listed. Factory Mutual approved
- 30-second warmup time built in on startup to prevent false startups and false alarms
- Range switch allows actual gas concentration to appear on LED display
- Time delay relays to prevent quick cycling of fans and motors
- Each sensor power lead is fused to prevent possible wiring error from damaging the instrument
- Common trouble and horn relays for each group of six channels
- A three-digit LED displays gas concentration and will also automatically display alphanumerically the following:
  - Trouble
  - Out of range
  - Under range
  - Calibration
- 4 to 20 mA analog output signal for each channel.
- European DIN construction.

# Model 5000

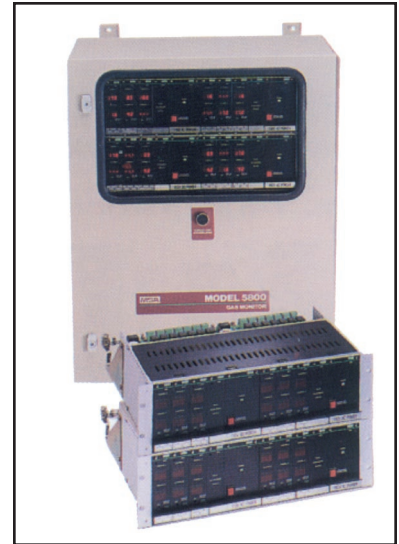
## Monitoring Systems



**Model 5300**  
wall-mounted or  
panel-mounted monitors



**Model 5600**  
wall-mounted or  
panel-mounted monitors



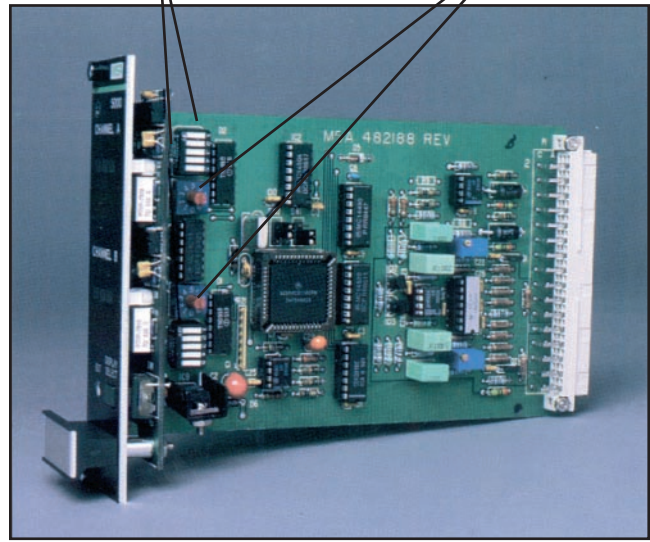
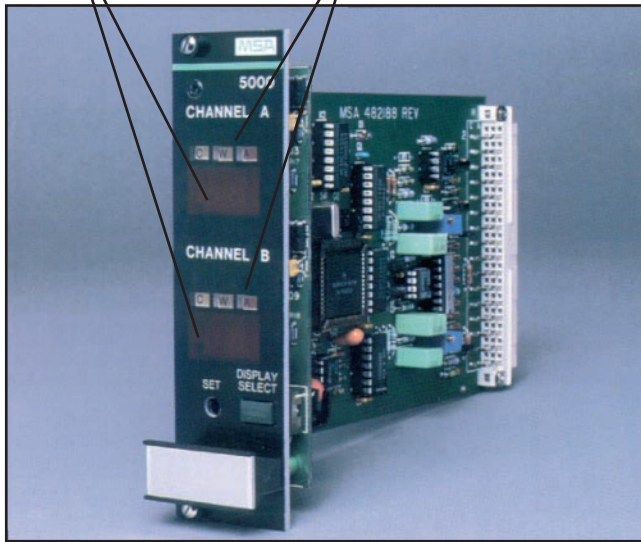
**Model 5800**  
wall-mounted or  
panel-mounted monitors

Three-digit LED display

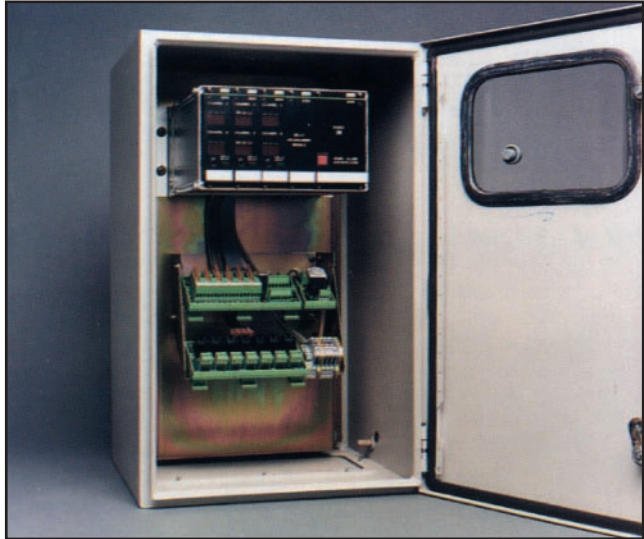
Caution, warning, alarm descriptors

Function selector

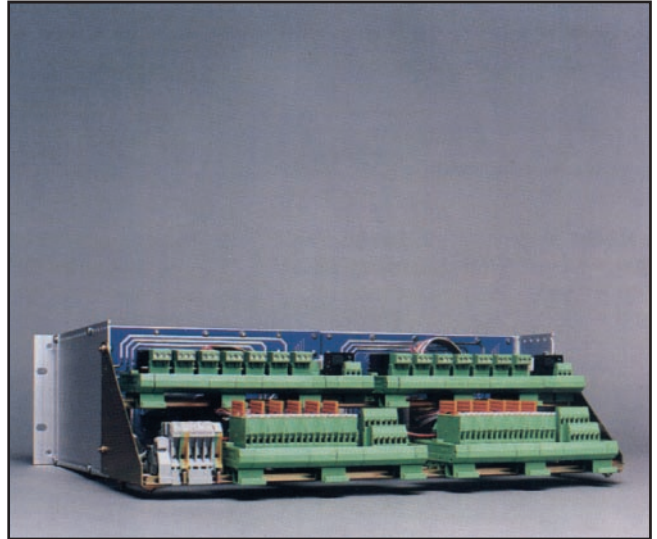
Readout range selector



**Series 5000 2-channel control module**



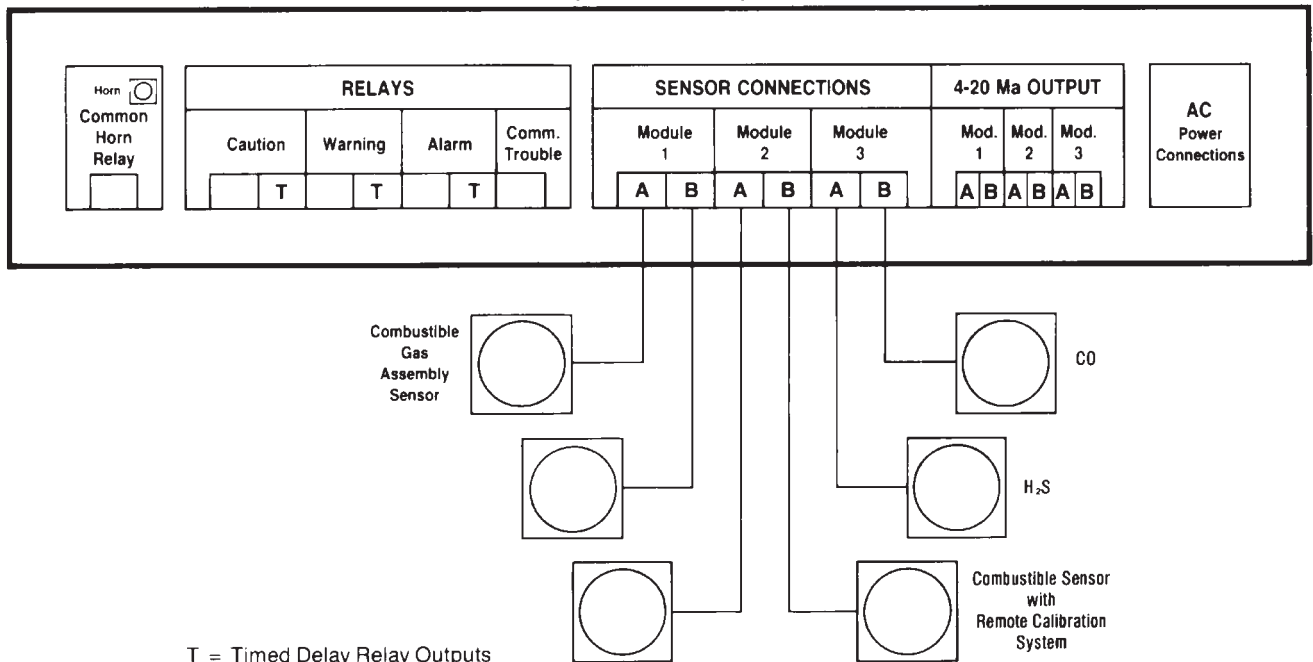
Model 5300 6-channel, wall-mounted system



Model 5600 12-channel, panel-mounted system, rear view

## Typical Connections

(Model 5300)





# Model 5000

## Monitoring Systems

### Specifications

#### Operating

Temperature range: Series 5000 control modules 32° to 125°F (0° to 52°C)

**Power:** 115 VAC 50/60 Hz ac; 100 Va max for model 5300, 200 Va max for Model 5600, 400 Va max for Model 5800

Options: 9-18 Vdc, 18-36 Vdc, 36-72 Vdc, 3 amps dc max for Model 5300, 6 amps dc max for Model 5600, 12 amps dc max for Model 5800

230 Vac, 100 Va max for Model 5300, 200 Va max for Model 5600, 400 Va max for Model 5800

**Humidity:** 0 to 95% RH noncondensing

**Gas indicator:** Three-digit LED display per channel (3/8" high digits)

**Electrical class:** Control modules, general purpose

#### Relays

##### Caution, warning, alarm, horn and trouble:

Single pole, double throw (Form C); 5 amps resistive, 3 amps inductive, 120 Vac or 28 Vdc

#### Performance

**Repeatability:** ±1% full scale

**Analog output:** 4 to 20 mA current loop, ±1% of full scale, current sourcing, nonisolated into 250 ohm maximum

**Signal input:** 4 to 9 KHz frequency modulated, 200 mV peak-to-peak sensitivity or 4 to 20 mA

**LED status indicator:** Red (Alarm), Orange (Warning), Yellow (Caution)

#### Physical

##### Panel mount dimensions:

Model 5300 - 5.18" H x 10.56" W x 17" D (132 x 268 x 431.8 mm)

Model 5600 - 5.18" H x 19" W x 17" D (132 x 483 x 431.8 mm)

Model 5800 - 10.44" H x 19" W x 21" D (265 x 483 x 533 mm)

##### General-purpose enclosure dimensions:

Model 5300 - 19" H x 15" W x 11" D (483 x 381 x 279 mm)

Model 5600 - 32" H x 24" W x 11" D (813 x 610 x 279 mm)

Model 5800 - 32" H x 24" W x 11" D (813 x 610 x 279 mm)

##### NEMA 4X enclosure dimensions:

Model 5300 - 22" H x 16.5" W x 12.25" D (559 x 419 x 311 mm)

Model 5600 - 33" H x 26" W x 14.25" D (839 x 660.4 x 362 mm)

Model 5800 - 33" H x 26" W x 14.25" D (839 x 660.4 x 362 mm)

##### Panel mount weight:

Model 5300 - Approx 15 lb. (6.8 kg)

Model 5600 - Approx 30 lb. (13.5 kg)

Model 5800 - Approx 65 lb. (27.5 kg)

##### General-purpose case weight:

Model 5300 - Approx 50 lb. (22.5 kg)

Model 5600 - Approx 110 lb. (49.5 kg)

Model 5800 - Approx 145 lb. (61.5 kg)

##### NEMA 4X case weight:

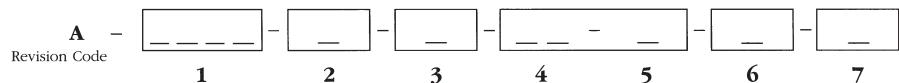
Model 5300 - Approx 36 lb. (12.2 kg)

Model 5600 - Approx 110 lb. (49.5 kg)

Model 5800 - Approx 145 lb. (61.5 kg)

## Ordering Information

### SERIES 5000 MONITORS



#### 1: Model Type

5300=Model 5300

5600=Model 5600

5800=Model 5800

#### 2: Packaging Arrangement

G=General Purpose Wall Mount Enclosure

N=NEMA 4X Wall Mount Enclosure

P=Panel/Rack Mount Type

Z=Back Plate Only-no enclosure

#### 3: Power Supply Voltage

1=110 Volts AC

2=220 Volts AC

3=12 Volts DC

4=24 Volts DC

5=48 Volts DC

#### 4: Number of Dual Channel Control

Modules

01 to 12

48808 Discrete relay package

633606 Back-up power supply

482505 Module extender board

#### 5: Control Module Input

M=4-20 mA Input-P/N 814441

F=Frequency Input-P/N 490892

C=CSA Approved Frequency Input

O=None

#### 6: Accessories

0=None Selected

B=Bezels Kits

#### 7: Custom Features

0=None

T=Custom Tagging, Aluminum Tag, Stainless

Steel Tag



Represented by:



**Note:** This Data Sheet contains only a general description of the MSA's Series 5000 Gas Monitoring Systems. 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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