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# AIR QUALITY CONTROLLER

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## Combustible Gas & Oxygen Depletion

$H_2S$      $CO$      $CL_2$      $SO_2$



Model 1016 & 1008

### FEATURES:

- Simultaneous Monitoring of Multiple Gases
- One Person Calibration
- Up to 16 Channels
- Fail Safe Operation & Sensor Diagnostics
- Non Intrusive Calibration
- Alarm Bypass and Alarm Test
- Lightning Arrestor
- Noise Rejection
- 32 Kbytes of Non Volatile Memory For Historical Data
- RS232/485 Communication
- Memory Scrolls to Display

### Description & Principle of Operation

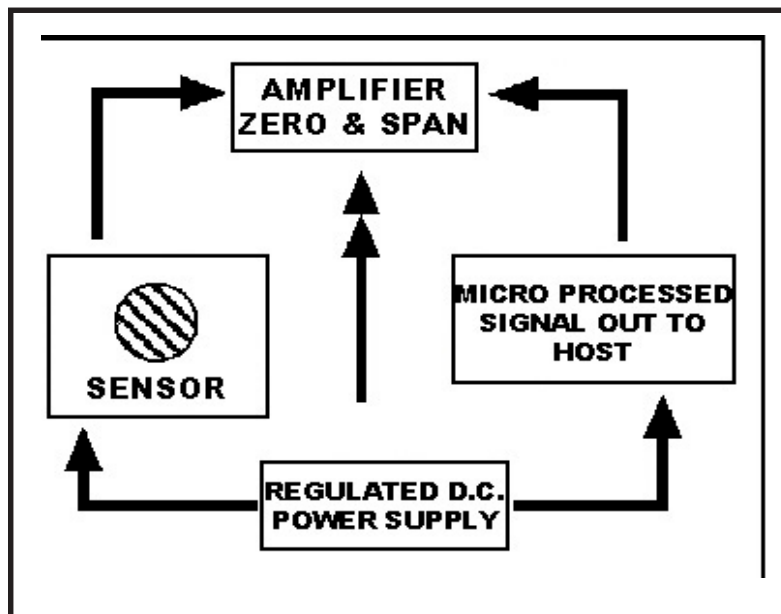
The Model 1016 & 1008 utilizes the latest Microprocessor technology to enhance multi-point gas detection in the Industry. The Model 1016 system is designed to monitor up to 16 points while the Model 1008 up to 8 points remote mounted gas detection sensors or any combination of analog inputs. The controller accepts each input and changes the analog signal to digital. The converted digital data is then analyzed and written to the controller's LCD display. On board there are 32 Kbytes of battery backed memory, Real Time Clock Calendar, and RS232/485 interface. The system will connect the current and historical data and transmit serially to a host computer, receiver, or printer. The system offers five alarm levels per channel and each input is configurable for an assortment of gases and analog inputs.



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# PRINCIPLE OF OPERATION



The regulated d.c. power supply provides a constant standing voltage. The gas diffuses through a porous filter and contacts the surface of the sensor element. A change in resistance occurs that is proportional to the concentration of gas applied. This signal is then amplified and sent to the microprocessor. The microprocessor digitizes the data and processes the information to the L.E.D. display and provides any one of a number of outputs to a host controller or monitor.

**Relay:** 5 SPDT Relays, 250VAC @ 10 amps Low, High, High High, Fail, and Alternate. Field programmable through full range.

**Humidity:** 0 - 100% Non condensing

**Power Consumption:** 400mA - Control Unit

**Memory & Interface:** 32K Battery Backed up RAM memory Expandable to 1MB, RS232/485 Serial

## ORDERING INFORMATION:

**Model 1016/1008** 1 to 16 channels configurable controller with memory and event printing.

\* Specify Number of active channels \*

# SPECIFICATIONS

<b>Sensor Type:</b>	Catalytic Bead	Hydrocarbons
	Solid State	H <sub>2</sub> S
	Electrochemical Cell	H <sub>2</sub> S, CO, SO <sub>2</sub> , CL <sub>2</sub> & O <sub>2</sub>

**Zero & Span Drift:** Less than 2% per month

**Repeatability:** +/- 4% of full scale

<b>Life:</b>	Catalytic Bead	3 years
	Solid State	3 years
	Electrochemical Cell	2 years

**Temperature Range:** -40°F to +180°F

**Response Time @ 50% of Full Scale Applied:**

Catalytic Bead	95% in 30 seconds
Electrochemical Cell	90% in 30 seconds
Solid State	75% in 60 seconds

**Class:** NEMA 4x, NEMA 1, NEMA 12, Class I, Division I & II

**Mounting Options:** Wall or Panel mount

**Dimensions:** 19"H x 12"W x 6"D for 1008  
19"H x 12"W x 9"D for 1016

**Weight:** 12.5 pounds for 1008  
18 pounds for 1016

**Analog Output:** Linear 4 - 20mA - zero to full scale  
1.5mA - Calibrate Mode  
1.0mA - Sensor Fail

**Power:** 12 or 24VDC, 110 or 220VAC 50/60Hz

<b>Range:</b>	Hydrocarbons	0 - 100% LEL
	H <sub>2</sub> S & SO <sub>2</sub>	0 - 100 PPM
	CO	0 - 200 PPM
	CL <sub>2</sub>	0 - 25 PPM
	Oxygen	0 - 30%

**L.E.D.'s:** Alarm 1 (Low) - Yellow Alarm 2 (High) - Red  
Alarm 3 (High High) - Red Alarm 4 (Alternate) - Red, Fail - Red Fail is indicated with Low line voltage, High line voltage, Sensor malfunction

**Warranty:** 2 years electronics & workmanship  
1 year sensor element  
(Other Warranties Available)