

# PERSONAL GAS DETECTORS

## OMNI-4000 Portable Detector with Interchangeable Sensors



### FEATURES

The most versatile portable gas detector utilizes interchangeable SMART sensor technology for expanded detection capability.

- Holds Up to 3 SMART BLOCKS plus Combustible Sensor
- Interchangeable Plug-In Sensor Blocks
- Microprocessor-based
- Capable of 25 Programmed Combustible Gases
- Datalogging
- TWA & STEL Alarms for Toxic Gases
- Audio/Visual Alarms
- Optional Integral Sampling Pump
- 0-100% LEL, 0-30% O<sub>2</sub>, ppm Toxic Gases
- Intrinsically Safe

### SPECIFICATIONS

**Display:** LCD, 2 lines, 16 characters

**Sensors:** One catalytic combustible gas sensor. One to three electrochemical interchangeable SMART BLOCKS.

**Power:** Nicad battery pack

**Size:** 194 x 119 x 58 mm

**Weight:** 1 Kg

### CALIBRATIONS AVAILABLE

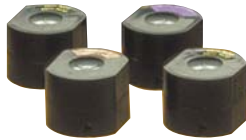
**Toxic:** Alarms at TLV, user adjustable

**Combustible:** 0-100% LEL (Also 0-100% by Vol. CH<sub>4</sub>); alarms at 10% LEL, user adjustable

**Oxygen Deficiency:** 19.5% by Vol.

**Oxygen Abundance:** 23.5% by Vol.

### SMART BLOCKS



O<sub>2</sub>, CO, H<sub>2</sub>S, H<sub>2</sub>, NO, HCl, HCN, SO<sub>2</sub>, Cl<sub>2</sub>, NO<sub>2</sub>, NH<sub>3</sub>, O<sub>3</sub>, ClO<sub>2</sub>, ETO, HF, CO<sub>2</sub>, HCHO, AsH<sub>3</sub>, PH<sub>3</sub>, SiH<sub>4</sub> and broad-range ppm hydrocarbons.

## TARGET Five-Gas Monitor



### FEATURES

This versatile gas detector features internal sampling pump and remote display capability.

- Up to 5 Sensors, including Broad-Range Toxic
- Simultaneous Display of All Sensor Readings
- Internal Sample Pump
- Remote Display Capability
- 10 Preprogrammed Combustibles
- Datalogging
- Push-button Cal and Auto Zero
- Designed to Minimize RFI
- Intrinsically Safe

### SPECIFICATIONS

**Display:** LCD with backlight, 4 lines, 20 characters

**Sensors:** *Combustible:* Catalytic

*Oxygen & Toxic:* Electrochemical

*Broad-Range Hydrocarbons:* Metallic Oxide Semiconductor (MOS)

**Power:** Nickel metal hydride battery pack or optional alkaline

**Size:** 194 x 119 x 58 mm

**Weight:** 1 Kg

Gases Detected	Range	Gases Detected	Range
Combustible	0-100% LEL	Oxygen	0-30.0% by Vol.
Carbon monoxide	0-500 ppm	Hydrogen sulfide	0-200 ppm
Broad-range		Chlorine	0-9.9 ppm
hydrocarbons	0-200 ppm	Sulfur dioxide	0-30.0 ppm
Nitrogen dioxide	0-30.0 ppm	Hydrogen chloride	0-20.0 ppm
Ammonia	0-100 ppm	Ozone	0-3.00 ppm

**Note:** Other gas sensors available

## QUADRANT Four-Gas Monitor

### FEATURES

Proven performance, durable construction, designed for confined space safety.

- Simultaneously Detects Up to 4 Gases
- For CO, H<sub>2</sub>S, O<sub>2</sub>, and Combustible Gases
- TWA & STEL Alarms
- 25 Preprogrammed Flammable Gas/Vapor Responses in Memory
- Pushbutton Instrument Calibration
- Datalogging, Including Exposure and Event Information
- Bright Visual & Loud Audio Alarms
- Intrinsic Safety Approval

### SPECIFICATIONS

**Display:** LCD with backlight

**Sensors:** One catalytic flammable sensor. One to three electrochemical toxic and/or oxygen sensors.

**Power:** Supplied with Nicad battery pack, alkaline optional

**Size:** 80 x 150 x 40 mm

**Weight:** 450 grams

### SENSOR RANGES

**Flammable:** 0-100% LEL

**CO:** 0-500 ppm

**Oxygen:** 0-25% by Volume

**H<sub>2</sub>S:** 0-100 ppm



**Gas and Vapor Detection Instruments for Industrial Health and Safety**

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# SINGLE FUNCTION GAS DETECTORS

## SPECTRUM Series Personal Gas Detectors

### FEATURES

Inexpensive, pocket-size, single-function gas monitor, available for a wide range of toxic gases plus oxygen and hydrogen.

- Digital Display
- Maximum and Minimum Value Tracking
- Dual-Level Alarms
- Audio/Visual Alarms
- RFI Resistant
- Low Battery Alarm



### SPECIFICATIONS

**Display:** 8 character, LCD with backlight  
**Power:** 9V replaceable alkaline battery  
**Weight:** 250 grams  
**Sensors:** Electrochemical  
**Size:** 110 x 60 x 30 mm

### SPECTRUM & SPECTRUM ON-LINE AVAILABLE FOR THE FOLLOWING GASES:

O <sub>2</sub>	H <sub>2</sub> S	Cl <sub>2</sub>	F <sub>2</sub>	O <sub>3</sub>	SO <sub>2</sub>	HCN
NH <sub>3</sub>	NO <sub>2</sub>	CO	HCl	NO	H <sub>2</sub>	HF
COCl <sub>2</sub>	AsH <sub>3</sub>	SiH <sub>4</sub>	PH <sub>3</sub>	and more.		

**NOTE:** Certain gases, O<sub>3</sub> and HF, require the use of a Sample Pump, and it is recommended for other gases, including Cl<sub>2</sub>, HCl, COCl<sub>2</sub>, AsH<sub>3</sub> and PH<sub>3</sub>.

## SPECTRUM ON-LINE Continuous Monitors

Simple and inexpensive microprocessor-based continuous air monitor. Ideal for commercial and laboratory applications.

### FEATURES

- Dual-level Alarms
- Alarm Relays
- Backlit Digital Display
- Audio/Visual Alarms



### SPECIFICATIONS

**Display:** 8 character, LCD with backlight  
**Sensors:** Electrochemical  
**Power:** 110 or 220 Vac power supply module provided with 6 ft. cord  
**Size:** 114 x 89 x 57 mm  
**Weight:** 454 grams

## TX-2000 Toxic Gas OX-2000 Oxygen Intrinsically Safe Detectors

### FEATURES

Single-function, pocket-size, ergonomically designed instrument certified intrinsically safe.

- Continuous LCD
- Audio/Visual Alarms
- Available for: Cl<sub>2</sub>, H<sub>2</sub>S, CO, NO, NO<sub>2</sub>, NH<sub>3</sub>, HCN, HCl, H<sub>2</sub>, O<sub>3</sub> and O<sub>2</sub>
- Certified Intrinsically Safe



### SPECIFICATIONS

**Display:** LCD with backlight  
**Power:** 3 alkaline batteries  
**Weight:** 95 grams  
**Sensor:** Plug-in electrochemical  
**Size:** 60 x 87 x 25 mm  
**Gases Detected:** Cl<sub>2</sub>, H<sub>2</sub>S, CO, NO, NO<sub>2</sub>, NH<sub>3</sub>, HCN, HCl, H<sub>2</sub>, O<sub>3</sub>, or O<sub>2</sub>  
**NOTE:** Sample Pump required for O<sub>3</sub> and recommended for Cl<sub>2</sub> and HCl.

## EX-2000 Personal Combustible Gas Detector

### FEATURES

Pocket-size, certified intrinsically safe instrument for monitoring flammable gases.

- Continuous LCD
- Audio/Visual Alarms
- Certified Intrinsically Safe



### SPECIFICATIONS

**Display:** LCD with backlight  
**Power:** Rechargeable Nicad batteries  
**Range:** 0 to 100% LEL CH<sub>4</sub> (Standard)  
**Gas Detected:** Responds to combustible hydrocarbons  
**Sensor:** Catalytic, plug-in type  
**Size:** 128 x 54 x 27 mm  
**Weight:** 230 grams

## Accessories for Instruments

### CALIBRATION HARDWARE MOTORIZED SAMPLE PUMP



The unit is supplied with charger, probe and 6m (20') tubing. Available for QUADRANT, SPECTRUM, TX-2000, OX-2000 & EX-2000. Intrinsically safe design.

**Size:** 10 x 6 x 2 cm  
**Weight:** 212 grams



# STATIONARY MONITORS

## ISA Series

### Single Point Monitor

#### FEATURES

The ISA-M monitors ambient air for toxic or combustible gases.

- Meter Display
- Audio and Visual Alarms
- Dual Alarm Points & Relay Contacts
- Remote Sensors, up to 1000 feet



Model ISA-M

#### SPECIFICATIONS

**Size/Wt:** 20 x 15 x 10 cm, 3.6 Kg  
**Enclosure:** NEMA-12  
**Auxiliary Relays:** 2 amps steady; 5 amps surge.  
**Power:** 110/220 Vac or 12 Vdc, 25 watts  
**Sensor Rating:** Class I, Division 1, Groups A, B, C & D  
**Sensor Type:** MOS, up to 3 years sensor life.  
**Temperature Range:** -20 to 50°C

#### Examples of ISA-M & ISA-44 Calibrations:

CO, 35 & 100 ppm	Freon® 113, 500 & 1000 ppm
Ammonia, 50 & 100 ppm	H <sub>2</sub> S, 10 & 20 ppm
Methane, 10 & 20% LEL	Gasoline, 10 & 20% LEL
Hydrogen, 10 & 20% LEL	Propane, 10 & 20% LEL

HCN • ETO • Jet Fuels • Ketones • Alcohols • Ethers  
 Halogenated Hydrocarbons • Solvents • Esters  
 Butane • Hexane • and others

## ISA-44 Series Multi-Channel Systems

Similar to the Model ISA-M, ISA-44 Series instruments feature MOS sensors for CO, H<sub>2</sub>S and ppm or LEL levels of organic solvents. Oxygen monitoring capability can also be included. ISA-44 systems are available for up to 10 channels.

### ISA-40 Oxygen Monitor

1 to 4 Channels

#### SPECIFICATIONS

**Size/Wt:** 30.5 x 21.5 x 17.5 cm, 4 Kg  
**Enclosure:** NEMA-4X fiberglass  
**Meter Display:** 16-26% by Volume  
**Alarm Point Calibration:** 19.5% by Volume  
**Relays, Auxiliary:** One latching SPDT (NO,NC) relay per channel; 2 amps steady, 5 amps surge  
**Power:** 110/220 Vac and/or 12 Vdc  
**Sensor Type:** Galvanic micro-fuel cell  
**Temperature Range:** 32-125°F (0-50°C)  
**Sensor Life:** Average 12-15 months



Model ISA-40

## ENGUARD Series

### Controller with Integral or Remote Toxic Sensor

The economical ENGUARD 97D Stand-Alone controller features either an integral toxic gas sensor or an optional remote sensor and cable. Electrochemical sensors are available for O<sub>2</sub> and a wide range of toxic gases.

#### FEATURES

- Integral or Remote Sensor and Cable
- Audio and Visual Alarms
- 4-20 mA Output Signal
- 3 Factory Programmable Alarms
- 5 Vdc TTL Outputs
- 85-265 Vac, or 24 Vdc Power
- IP 65, Polycarbonate Enclosure
- Digital Display
- Pushbutton Calibration
- 1 Alarm Relay, User Selectable



ENGUARD 97D Stand-Alone

## Controllers

### For Remote Sensor/Transmitters

The ENGUARD Series is an economical, versatile and reliable state-of-the-art system designed to detect and monitor many different toxic and combustible gases. Single and multi-channel systems are available.

#### FEATURES

- Audio and Visual Alarms
- 4-20 mA
- Digital Display
- One-person Calibration
- Wall, Panel or Rack Mount Controllers Available
- For 24 Vdc, 2 and 3 wire Sensor/Transmitters



Model MX-32 1-2 channels



Model MX-42A 1-4 channels

**Also available:** Model MX-48 1-8 channels  
 Model MX-52 1-16 channels

## Sensor/Transmitters

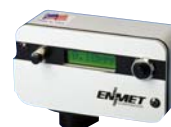
#### FEATURES

- 24 Vdc Loop Powered
- 4-20 mA Output
- Electrochemical Sensors
- Excellent Selectivity
- One-person Calibration

Available for these gases:

AsH <sub>3</sub>	B <sub>2</sub> H <sub>6</sub>	Cl <sub>2</sub>	ClO <sub>2</sub>
CO	CO <sub>2</sub>	COCl <sub>2</sub>	ETO
HCl	HCN	HF	H <sub>2</sub>
H <sub>2</sub> S	NH <sub>3</sub>	NO	NO <sub>2</sub>
N <sub>2</sub> H <sub>4</sub>	O <sub>2</sub>	O <sub>3</sub>	PH <sub>3</sub>
SiH <sub>4</sub>	SO <sub>2</sub>	VCM	HCHO
F <sub>2</sub>	SiH <sub>2</sub> Cl <sub>2</sub>	HBr	BCl <sub>3</sub>
SF <sub>4</sub>	WF <sub>6</sub>	H <sub>2</sub> Se	Si <sub>2</sub> H <sub>6</sub>
Br <sub>2</sub>	I <sub>2</sub>	NF <sub>3</sub>	SF <sub>6</sub>

#### TOXIC GASES



SDS-97D Series with Digital Display



EN-Series without Digital Display

#### HYDROCARBON/ PPM SOLVENTS



EX-5100-MOS with MOS sensor (ppm Solvents)

EX-5100 with catalytic sensor (0-100% LEL)

#### COMBUSTIBLE GASES



IR-6000 with infrared sensor (0-100% LEL)

*NOTE: Sample Pump required for some gases. Consult factory for details.*



# RESPIRATORY AIR-LINE MONITORS & FILTRATION SYSTEMS

## Air Filtration System for Supplied-Air Respirators

### AFS-50

#### FEATURES

- Designed for assuring Grade D breathing air, when equipped with optional CO/O<sub>2</sub> Monitor
- Includes 4 outlets for connection to supplied-air respirators
- Two-stage prefilter/coalescer removes oil, water, and solid particles
- Adsorber removes unpleasant odor and taste



AFS-50 System

#### SPECIFICATIONS

<b>Inlet Pressure:</b>	Maximum 150 psi
<b>Total Air Capacity:</b>	Maximum 50 CFM
<b>Outlet Connections:</b>	Supplied with 4 quick disconnects (Hansen series 1000 compatible) for connecting respirators.
<b>Inlet Port:</b>	1/2" NPT, female
<b>Size:</b>	12"W x 15"H x 5"D (AFS-50 only)
<b>Weight:</b>	10 lbs. (AFS-50 only)

#### Can be supplied in the following configurations:

- In Optional Transit Case:**  
High impact ABS construction, 19" x 15" x 6", 8 lbs.
- On Optional Wall-Mount Plate:**  
Painted steel construction, 21"W x 17"H, 13 lbs.
- With Optional CO/O<sub>2</sub> Monitor**



AFS-50 System on Optional Plate with ISA-RAL-M

#### AFS 50 SYSTEM & OPTIONS

Description	Part No.
<b>AFS-50, Air Filtration System</b> Supplied with mounting brackets	<b>03462-001</b>
<b>Optional Plate, Wall-Mounting</b> for ISA-RAL-M, ISA-200 Series CO or CO/O <sub>2</sub> Monitor and AFS-50	<b>03262-002</b>
<b>Optional Case</b> Holds AFS-50 and CO-RAL, 9 Vdc, CO Monitor, during transit and use	<b>03462-003</b>

## CO and O<sub>2</sub> Air Line Monitors

### Carbon Monoxide Monitor for Compressed Breathing Air

#### SPECIFICATIONS

- Alarm Point:** 10 ppm or 20 ppm CO
- Meter:** Full scale at 50 ppm CO
- Operating Power:** 110 Vac and/or 12 Vdc. 60 Hz, 25 watts.
- Operating Temperature Limits:** 0 to 125°F.
- Sensor:** Metal Oxide Semi-conductor (MOS) solid state gas sensor. Typical life: up to 3 years.
- Inlet Pressure:** Maximum 250 psi.
- Enclosure:** NEMA-12
- Size:** 8"H x 6"W x 4"D
- Weight:** 10 lbs.
- Wiring:** Line cord supplied for 110 Vac operation.
- Sensor Cable Length:** Supplied with 10 foot sensor cable
- Audio Alarm:** 2900 Hz, 90 dB at 2 feet
- Hydrocarbon Filter Assembly:** Designed to eliminate trace hydrocarbons which are present in some compressed air systems.



Model ISA-RAL-M

### ISA-200 SERIES CO & CO/O<sub>2</sub> Monitors

#### SPECIFICATIONS

- CO & O<sub>2</sub> MONITOR:**
- Alarm Points:** 10 ppm CO (adjustable), 19.5% O<sub>2</sub> (adjustable), 23.5% O<sub>2</sub> (non-adjustable) and Fault.
- Display:** 2 line, 16 character, dot matrix LCD
- Operating Power:** 100 to 240 Vac and/or 12 Vdc, 15 watts, supplied with 110 Vac line cord.
- Auxiliary Relays:** RAL, 2 relays, CO and Fault. RAL-O, 3 relays, CO, O<sub>2</sub> and Fault. All relays are programmable latching or non-latching, dry DPDT, 2 amps (resistive load only) at 110 Vac.
- Sensor:** Electrochemical for both CO and oxygen.
- Inlet Pressure:** Maximum 250 psi; regulator supplied.
- Size & Weight:** 10.46"H x 8.44"W x 5.75"D; 9 lbs.
- Audio Alarm:** 90 dB at 2 feet.



ISA-200 Series Monitor

