

SentryRAE

Multi-channel, Compact and Easily Transportable Multi Gas Monitor

The SentryRAE is a rugged, weatherproof, one-to-five sensor portable monitor that can run over 24-hours on either rechargeable lithium-ion or alkaline batteries. It is also the first "lunch-box" type multi-sensor instrument able to include a photoionization detector (PID) for parts-per-million measurement of volatile organic compounds (VOCs) as well as LEL, O2 and up to two electrochemical toxic sensors for measurement of specific toxic substances such as CO and H2s.

SentryRAE detectors are designed for use in circumstances where it is advantageous for the customer to leave the detector in a central location, where it can provide monitoring information for a group of workers. The extra-bright cluster LED alarm-light, large display, and very loud audible alarm are Features consistent with the product mission of conveying readings and alarm state information over a substantially wider area that is the case with our smaller portable detectors.

The SentryRAE is ideal for HazMat and other emergency response monitoring programs. It is designed for special application CS Monitoring programs (such as US Air Force, various government agencies, HAZMAT, WMD, etc.) as well as for use in more standard, civilian sector confined space entry programs.

Standard Features

- UP to five sensors (PID, LEL, O2 and two toxic)
- Loud buzzer and large , extra-bright warning light
- Large LCD display and keypad
- Rugged, weather-proof housing (IP55)
- Built-in pump
- Interchangeable Li-ion or alkaline battery pack
- Continuous operation via AC Source

Additional Advantages

- Unique sensors (PID, CO2)
- Only "lunchbox" monitor with PID and CO2

- Very strong sample drawing pump
- Long battery operation time per charge ((22-24 hours)
- Optional wall-mounting bracket or field mounting tripod adapter

Applications

- HAZMAT and Emergency Response
- Refineries and petrochemical plants
- Confined Space Entry
- Power plants
- Pulp and paper industry
- Plant and mill turnarounds
- Marine and offshore wells



Specifications

Sensor Specifications

Gas Monitor	Range	Resolution	Response Time (T 90)
Oxygen	0 ~ 30%	0.1%	15 seconds
Combustible	0 ~ 100% LEL	1% LEL	15 seconds
VOCs	0 ~ 200 ppm	0.1 ppm	10 seconds
	200-2000 ppm	1 ppm	10 seconds
Carbon Monoxide	0-500 ppm	1 ppm	25 seconds
Hydrogen Sulfide	0-100 ppm	1 ppm	30 seconds
Sulfur Dioxide	0-20 ppm	0.1 ppm	15 seconds
Nitric Oxide	0-250 ppm	1 ppm	20 seconds
Nitrogen Dioxide	0-20 ppm	0.1 ppm	25 seconds
Chlorine	0-10 ppm	0.1 ppm	60 seconds
Hydrogen Cyanide	0-100 ppm	1 ppm	60 seconds
Ammonia	0-50 ppm	1 ppm	150 seconds
Phosphine	0-5 ppm	0.1 ppm	60 seconds

Detector Specifications

Size	9.25"L x 5.0"W 9.25"H (without handle) (23.5cm x 13.0cm x 23.5cm)
Weight	8 lbs (3.6 kg) with battery pack
Detector	Up to five sensors (O2, combustible, two toxic and VOC), electrochemical sensors for toxic gases and oxygen, photo-ionization sensors for VOC, catalytic sensors for combustible gases.
Battery	Rechargeable, 7.4V/4.5Ah, Lithium-ion battery pack with built in charger (less than 10 hours charge time) or a 6 C-cell alkaline battery pack
Operating Hours	Up to 36 hours continuous operation (typical)
Display	2 line, 16 digit LCD
Keypads	1 operation and 2 programming keys
Direct Readout	Instantaneous values (up to 5), sensor name, high and low values, TWA and STEL values for toxic and VOCs, battery voltage and elapsed time
Alarm	Flashing red LED cluster to indicate exceeded preset limits, low battery or sensor failure
Alarm Setting	Separate alarm limit settings for TWA, STEL, Low and High alarm
Audible Alarm	100dB buzzer at 10cm (typical)
Visual Alarm	Flashing red LED cluster
External Alarm	Optional plug in pen size vibration alarm or earphone
Alarm Mode	Latching/automatic reset
Datalogging	20,000 points (64 hours, 5 channels at one minute intervals) download to PC with serial number of unit, user ID, site number, calibration date
Datalog Interval	Programmable 1-3600 sec
Communication	Upload data to PC and Download monitor setup from PC through RS-232 link to serial port on PC
Intrinsic Safety	UL Classified for use in Class 1, Division II, Groups A,B,C, and D, Class 2 Groups E, F, G Hazardous Locations, Temp Code T3C
EM Immunity	No effect when exposed to 0.43 mW/cm2 RF interference (5 watt transmitter at 12 inch)
Calibration	Two-point field calibration for fresh air and standard reference gas
Sampling pump	Internal integrated diaphragm pump with programmable "high" (400cc) and "Low" (300cc) flow rate settings
Low Flow Alarm	Auto shut off pump at low flow condition
Temperature	-4° to 113 °F (-20 to 45°C)
Humidity	0% to 95% relative humidity (non-condensing)
Attachment	Shoulder strap, optional tripod/wall mounting bracket

SentryRAE Accessories

Monitor Only Includes:

- Monitor as specified
- Sensors as specified
- Carbon filters (for units with CO)
- Calibration adapter
- Quick reference guide
- Operation and Maintenance Manual
- Shoulder strap
- Rechargeable Lithium-ion battery pack
- 120/240 VAC AC/DC Adapter
- Spare alkaline battery pack
- Water-trap adapter
- 10 Spare External Water trap filters
- 5 Internal filters
- Hard transport case with pre-cut foam
- 15' (5M) Teflon tubing
- Tool kit
- Lamp cleaning kit (if instrument equipped with PID)

Instrument with calibration kit also includes:

- Calibration gas (kit may contain multiple cylinders depending on the sensors installed)
- Calibration regulator and tubing (kit may contain a second regulator depending on the types of calibration gases included)
- Hard transport case with pre-cut foam

Datalogging Monitors also include:

- Software, ProRAE Suite Package for Windows 98, NT, 2000 and XP
- Computer interface cable

Warranty: Lifetime on non-consuming components (per RAE Standard Warranty), 2 years for O2, LEL, CO, and H2S sensors, 1 year all other sensors, 1 year pump, 1 year battery, 1 year for 10.6eV PID lamp



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