SentryRAE Steel

Multi-channel, Compact, and Easily Transportable Multi Gas Monitor

The SentryRAE Steel is the first "lunch-box"-sized, portable, pumped monitor to combine a PID (Photoionization Detector) and standard four gas confined space monitor (O_2, LEL, and two toxic gas sensors) in one product that can run over 24 hours on either rechargeable Lithium-ion or alkaline batteries.

The SentryRAE Steel detector is designed for use in circumstances where it is advantageous for the customer to leave the detector in a central location and provide monitoring information for a group of workers. The extra-bright, cluster LED alarm-light, large display, and very loud audible alarm convey readings and alarm state information over a substantially wider area than typical personal portable detectors.

Key Features

- **O_2, LEL, PID and any two plug-in "smart" toxic sensors: CO, H_2S, SO_2, NO, NO_2, Cl_2, HCN, NH_3, PH_3**

- **0 to 2,000 ppm measurement of VOCs** (volatile organic compounds) with 0.1 ppm resolution

- **Measure more chemicals than with any other PID**
  With over 60 Correction Factors built into the SentryRAE Steel memory and the largest printed list of Correction Factors in the world (300+), RAE Systems offers the ability to accurately measure more ionizable chemicals than any other PID!

- **User friendly**
  Easy to use for simple applications and flexible enough for sophisticated options

- **Drop-in battery**
  When work schedules require putting in more than the 36 hours supplied by the advanced Lithium-ion (Li-ion) battery, the drop-in alkaline pack supplied with every SentryRAE Steel lets you finish the job.

- **Strong, built-in sampling pump**
  Draws up to 100 feet (30 meters) horizontally or vertically. External filter and automatic low flow alarm protect the SentryRAE Steel from damage.

- **Large keys**
  Operable even with 3 layers of gloves

- **Big, easy-to-read display with backlight**

- **Store up to 80 hours of data**
  Data collected at one minute interval from all 5 sensors for download to PC with the datalogging option.

- **Loud audible alarm and extra-bright light**
  Alarm varies for different alarm conditions

- **Rugged, weather-resistant housing**

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

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ISO 9001 CERTIFIED

SentryRAE Steel

Specifications*

Detector Specifications

Size	9.25"L x 5.0"W x 9.25"H (without handle) (23.5 x 13.0 x 23.5 cm)
Weight	13.85 lbs. (6.3 kg) with battery pack
Sensors	Up to 5 sensors including: • Protected catalytic bead for combustible gases • Interchangeable electrochemical sensors for oxygen and toxic gases • Photoionization detector for VOCs, 10.6 eV lamp standard
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 hrs. continuous operation (typical) • Unit will run and charge simultaneously
Display	2 line, 16 digit LCD
Keypads	1 operation and 2 programming keys
Direct Readout	Instantaneous (up to 5) values: • Oxygen as percentage by volume • Combustible gas as percentage of lower explosive limit (LEL) • Toxic gases and VOCs as parts per million by volume (VOC scaleable using correction factors) • High and low values for all gases • STEL and TWA values of toxic gases and VOCs • Battery and shut down voltage • Date, time, elapsed time, temperature
Alarm	100 dB buzzer (at 10 cm) and flashing red LED to indicate exceeded preset limits
	• High: 3 beeps and flashes per second • Low: 2 beeps and flashes per second • STEL and TWA: 1 beep and flash per second • Alarms automatic reset or latching with manual override • Additional diagnostic alarm and display message for low battery and pump stall
Datalogging	Optional 20,000 points (80 hours, 5 channels at one minute intervals) download to PC with serial number of unit, user ID, site number, calibration date
Communication	Upload to PC and download monitor setup from PC through RS-232 link to serial port on PC
Calibration	Two-point field calibration for fresh air and standard reference gas
Sampling Pump	Internal integrated diaphragm pump with programmable flow rate settings: High: ~400 cc/min, Low: ~300 cc/min
Low Flow Alarm	Auto shut-off pump at low flow condition
Hazardous Area Approval	UL Classified for use in Class I, Division I, Groups A, B, C and D, Class II Groups E, F, G Hazardous Locations, Temp Code T3C
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
Warranty	Lifetime on non-consuming components (per RAE Standard Warranty), 2 years for O2, LEL, CO and H2S sensors, 1 year for all other sensors, 1 year for the pump, 1 year for the battery, 1 year for the 10.6eV PID lamp

*Specifications are subject to change

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Sensor Specifications

Sensor	Range	Resolution
Oxygen	0 to 30%	0.1%
Combustible	1 to 100% LEL	1% LEL
VOCs	0 to 200.0 ppm 200 to 2,000 ppm	0.1 ppm 1 ppm
Carbon Monoxide	0 to 500 ppm	1 ppm
Hydrogen Sulfide	0 to 100 ppm	1 ppm
Sulfur Dioxide	0 to 20.0 ppm	0.1 ppm
Nitric Oxide	0 to 250 ppm	1 ppm
Nitrogen Dioxide	0 to 20.0 ppm	0.1 ppm
Chlorine	0 to 10.0 ppm	0.1 ppm
Hydrogen Cyanide	0 to 100 ppm	1 ppm
Ammonia	0 to 50 ppm	1 ppm
Phosphine	0 to 5.0 ppm	0.1 ppm

SentryRAE Steel Accessories

Monitor only includes:
• Sensors as specified
• Calibration adapter
• Quick reference guide
• Operation and maintenance manual
• Shoulder strap
• Rechargeable Lithium-ion battery pack
• 120/240 V AC/DC adapter (if specified)
• Spare alkaline battery pack
• External filter adapter
• 3 external filters
• Hard transport case with pre-cut foam
• 15 feet (5 meters) Teflon® tubing
• Tool kit

Monitor with calibration kit also includes:
• Calibration gas (kit may include 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

DISTRIBUTED BY:

www.raesystems.com

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