



ToxiRAE Pro

Personal Wireless Monitor
for Toxic Gases and Oxygen



The ToxiRAE Pro is the world's first wireless personal monitor for toxic gases and oxygen^{1,2}. The ToxiRAE Pro takes worker protection to the next level by providing safety professionals wireless access to real-time instrument readings and alarm status from any location for better visibility and faster response. The ToxiRAE Pro can detect a broad range of gases—from carbon monoxide, hydrogen sulfide, and oxygen to ammonia, chlorine, and phosgene². The ToxiRAE Pro's intelligent interchangeable sensors store calibration data, so if you need to monitor one gas one day and another gas the next, swapping the sensors in your ToxiRAE Pro is all it takes³.

KEY FEATURES

Wireless. Personal. Proven.

- Wireless access to real-time instrument readings and alarm status from any location
- Unmistakable five-way local and remote wireless notification of alarm conditions
- Intelligent sensors store calibration data, so they can be swapped in the field³
- Largest display in its class
- Reliable, rugged, and intrinsically safe
- Continuous datalogging
- Easy to use

APPLICATIONS

- Agriculture
- Chemical
- Fire service/HazMat
- Food and beverage
- Oil and gas
- Pharmaceutical
- Pulp and paper
- Steel manufacturing
- Water and wastewater industries

- World's first wireless personal gas monitor
- Wireless elevates worker protection to the next level
- Over twenty intelligent interchangeable sensor options to cover a wide variety of gases²
- Easy to maintain with replaceable sensor, filter, and Lithium-ion battery
- Fully-automated bump testing and calibration with AutoRAE2²



The world's first personal wireless monitor protects workers from toxic gases without getting in the way.



AutoRAE²
Compatible



ToxiRAE Pro



Personal Wireless Monitor for Toxic Gases and Oxygen

SPECIFICATIONS

Instrument Specifications⁴

Size	4.6" H x 2.4" W x 1.2" D (118 x 60 x 30 mm)
Weight	7.76 oz. (220 g)
Sensor	Over 20 intelligent interchangeable field-replaceable electrochemical sensors ²
Battery	Rechargeable Lithium-ion battery - Operating time: > 30 hours (normal operation) - Recharge time: < 4 hours through charging cradle
Display	Graphical LCD display with white LED backlighting (activated when monitor is in alarm or with a button press)
Display Readout	- Real-time reading of gas concentrations in parts per million (ppm); battery status; data logging on/off; wireless on/off and reception quality. - STEL, TWA, and peak values
Keypad	2 buttons for operation and programming
Sampling	Diffusion
Calibration	Automatic with AutoRAE 2 Test and Calibration Station ² or manual
Alarm Modes	Wireless remote alarm notification ^{1,2} ; audible (95 dB @ 30 cm), vibration, visible alarm (flashing bright red LEDs), and on-screen indication of alarm conditions - Additional diagnostic alarm and display message for low battery
Datalogging	- Continuous datalogging with a three-month capacity (at one-minute intervals) - User-configurable datalogging interval (from 1 to 3,600 seconds)
Communication and Data Download	- Data download and instrument set-up on PC via charging and PC comm. cradle - Data download via AutoRAE 2 Automated Test and Calibration Station ² - Wireless data and status transmission ¹ via built-in RF modem (optional)
Wireless Network	RAE Systems Dedicated Wireless Network
Wireless Frequency ^{1,2}	ISM license-free bands
Wireless Range ^{1,2} (Typical)	300 feet (100 meters)
Operating Temperature	-4° to 131°F (-20° to 55°C)
Humidity	0% to 95% relative humidity (non-condensing)
Dust and Water Resistance	IP-65 rating for dust and water ingress protection (validated by an independent test laboratory)
Hazardous Location Approvals	US and Canada: Class I, Division 1, Groups A, B, C and D. T-code T4 Class I, Zone 0 A/Exia IIC T4 Europe: ATEX: II 1G, Ex ia IIC Ga T4 IECEx: Ex ia IIC Ga T4 China: Ex ia IIC T4
CE Compliance (European Conformity)	EMC directive: 2004/108/EC. R&TTE directive: 1999/5/EC. ATEX directive: 94/9/EC
Warranty	- Two years on non-consumable components and CO, H ₂ S, and O ₂ sensors - One year on all other sensors, battery, and other consumable parts

¹ Wireless functionality is scheduled for availability in 2011 in North America and Europe. Contact RAE Systems for availability in other regions.

² Contact RAE Systems for availability.

³ RAE Systems recommends calibrating sensors on installation.

⁴ Specifications are subject to change.

⁵ Wireless units have a functioning RF modem and are ready for wireless deployments; Wireless-capable units can be upgraded to wireless in the field for a fee; Non-wireless units cannot be upgraded to wireless. Additional equipment and/or software licenses may be required to enable remote wireless monitoring and alarm transmission.

Sensor Specifications⁴

Sensor	Range	Resolution
Ammonia (NH ₃)	0 to 100 ppm	1 ppm
Carbon Monoxide (CO)	0 to 500 ppm	1 ppm
Carbon Monoxide (CO), Ext. Range	0 to 2,000 ppm	10 ppm
Carbon Monoxide (CO), H ₂ -comp. ²	0 to 2,000 ppm	10 ppm
Chlorine (Cl ₂)	0 to 50 ppm	0.1 ppm
Chlorine Dioxide (ClO ₂)	0 to 1 ppm	0.03 ppm
Ethylene Oxide (EtO-A)	0 to 100 ppm	1 ppm
Ethylene Oxide (EtO-B)	0 to 10 ppm	0.1 ppm
Ethylene Oxide (EtO-C), Ext. Range	0 to 500 ppm	10 ppm
Hydrogen (H ₂) ²	0 to 1,000 ppm	2 ppm
Hydrogen Chloride (HCl) ²	0 to 15 ppm	0.2 ppm
Hydrogen Cyanide (HCN)	0 to 50 ppm	0.5 ppm
Hydrogen Fluoride (HF) ²	0 to 10 ppm	0.1 ppm
Hydrogen Sulfide (H ₂ S)	0 to 100 ppm	0.1 ppm
Hydrogen Sulfide (H ₂ S), Ext. Range	0 to 1,000 ppm	1 ppm
Methyl Mercaptan (CH ₃ -SH)	0 to 10 ppm	0.1 ppm
Nitric Oxide (NO)	0 to 250 ppm	0.5 ppm
Nitrogen Dioxide (NO ₂)	0 to 20 ppm	0.1 ppm
Oxygen (O ₂)	0 to 30% Vol.	0.1% Vol.
Phosgene (COCl ₂) ²	0 to 1 ppm	0.02 ppm
Phosphine (PH ₃)	0 to 20 ppm	0.1 ppm
Phosphine (PH ₃), Ext. Range ²	0 to 1,000 ppm	1 ppm
Sulfur Dioxide (SO ₂)	0 to 20 ppm	0.1 ppm

TOXIRAE PRO COMES WITH:

- ToxiRAE Pro monitor with sensor as specified, alligator clip, protective rubber boot, and rechargeable battery installed
- Charging and PC communication cradle
- PC communication cable
- AC adapter (100 to 240 V, 50/60 Hz AC to 12 V DC)
- Calibration adapters
- Quick Start Guide
- CD with documentation
- ProRAE Studio II software for PC-based instrument configuration and data management
- Calibration card, quality certificate, packing list, and warranty/registration card

OPTIONAL ACCESSORIES

- AutoRAE 2 Automated Test and Calibration Station²
- Multi-unit charging station for up to five monitors²

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