



MultiRAE Lite

Wireless Portable Multi-Gas Monitor



The MultiRAE Lite is the optimal one-to-six¹-gas monitor for personal protection and leak detection applications. The MultiRAE Lite is available in pumped and diffusion versions and features the broadest selection of sensor options in its class. The MultiRAE Lite can be configured to exactly meet the detection needs and compliance requirements of various countries, industries, and applications.

The MultiRAE Lite's optional wireless capability improves safety by providing commanders and safety officers real-time access to instrument readings and alarm status from any location for better situational awareness and faster incident response.

- Available in pumped and diffusion versions
- Highly versatile and customizable
- Man Down Alarm with real-time remote wireless notification
- Easy maintenance with replaceable sensors, pump, and plug-and-play battery
- Fully automatic bump testing and calibration with AutoRAE 2

KEY FEATURES

Wireless. Versatile. 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 including Man Down Alarm²
- Over 25 interchangeable sensor options, including PID⁴ for VOCs, NDIR⁵ and catalytic for combustibles, and NDIR for CO₂
- Intelligent sensors store calibration data, so they can be swapped in the field⁶
- Large graphical display with easy-to-use, icon-driven user interface
- Continuous datalogging (6 months for 5 sensors, 24x7)

APPLICATIONS

- Personal protection and multi-gas leak detection in industries such as:
 - Chemical
 - Food and beverage
 - Oil and gas (downstream)
 - Pharmaceutical
 - Telecommunications
 - Wastewater treatment
- Fire overhaul



Confined space testing with the MultiRAE Lite



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SPECIFICATIONS

Instrument Specifications⁷

Size	- Pumped model: 7.6" H x 3.8" W x 2.6" D (193 x 96.5 x 66 mm) - Diffusion model: 6.9" x 3.8" x 2.2" (175 x 96.5 x 56 mm)
Weight	- Pumped model: 31 oz (880 g) - Diffusion model: 26.8 oz (760g)
Sensors	Over 25 intelligent interchangeable field-replaceable sensors including PID for VOCs, electrochemical sensors for toxic gases and oxygen, combustible LEL and NDIR sensors, and CO ₂ NDIR sensor
Battery Options, Runtime ³ and Recharge Time	- Rechargeable Li-ion ~12-hr. (pumped)/18-hr. (diffusion) runtime, < 6-hr. recharge time - Extended duration Li-ion ~18-hr. (pumped)/28-hr. (diffusion) runtime, < 9-hr. recharge time - Alkaline adapter with 4 x AA batteries ~6-hr. (pumped)/8-hr. (diffusion) runtime
Display	Monochrome graphical LCD display (128 x 160) with backlighting. Automatic screen "flip" feature
Display Readout	- Real-time reading of gas concentrations; PID measurement gas and correction factor; Man Down Alarm on/off; visual compliance indicator; battery status; datalogging on/off; wireless on/off and reception quality. - STEL, TWA, peak, and minimum values
Keypad Buttons	3 operation and programming keys (Mode, Y/+, and N/-)
Sampling	Built-in pump or diffusion
Calibration	Automatic with AutoRAE 2 Test and Calibration System ³ or manual
Alarms	Wireless remote alarm notification; audible (95 dB @ 30 cm), vibration, visible (flashing bright red LEDs), and on-screen indication of alarm conditions - Man Down Alarm with pre-alarm and real-time remote wireless notification ²
Datalogging	Continuous datalogging (6 months for 5 sensors at 1-minute intervals, 24/7) - User-configurable datalogging intervals (from 1 to 3,600 seconds)
Communication and Data Download	- Data download and instrument set-up and upgrades on PC via desktop charging and PC comm. cradle, travel charger, or AutoRAE 2 Automatic Test and Calibration System ³ - Wireless data and alarm status transmission via built-in RF modem (optional)
Wireless Network	ProRAE Guardian Real-Time Wireless Safety System or EchoView Host-based Closed-Loop System
Wireless Frequency and Approvals ¹⁰	ISM license free band, 868Mhz or 900Mhz FCC Part15, CE R&TTE, ANATEL
Wireless Range (Typical)	MultiRAE Lite to RAElink3 [Z1] Mesh modem ~330 feet (100 meters) MultiRAE Lite to EchoView Host, RAEMesh Reader or RAEPint ~660 feet (200 meters)
Operating Temperature	-4° to 122°F (-20° to 50°C)
Humidity	0% to 95% relative humidity (non-condensing)
Dust and Water Resistance	IP-65 (pumped); IP-67 (diffusion) ingress protection rating
Hazardous Location Approvals	CSA: Class I, Division 1, Groups A, B, C and D, T4 Class II, Division 1, Groups E, F, G T85°C ATEX: 0575 II 1G Ex ia IIC T4 Ga 2G Ex ia d IIC T4 Gb with IR Sensor installed IM1 Ex ia I Ma IECEX: Ex ia IIC T4 Ga Ex ia d IIC T4 Gb with IR Sensor installed IM1 Ex ia I Ma IECEX/ANZEx: Ex ia IIC T4 Ga Ex ia d IIC T4 Gb with IR Sensor installed Ex ia I Ma
CE Compliance (European Conformity)	EMC directive: 2004/108/EC. R&TTE directive: 1999/5/EC. ATEX directive: 94/9/EC
EMI/RFI ⁸	No effect when exposed to 0.43mW/cm ² RF interference from a 5-watt transmitter at 12" (30cm)
Performance Tests	LEL CSA C22.2 No. 152; ISA-12.13.01
Languages	Arabic, Chinese, Czech, Danish, Dutch, English, French, German, Indonesian, Italian, Japanese, Korean, Norwegian, Polish, Portuguese, Russian, Spanish, Swedish, and Turkish
Warranty	- Two years on non-consumable components and catalytic LEL, CO, H ₂ S, and O ₂ sensors - One year on all other sensors, pump, battery, and other consumable parts

Sensor Specifications⁷

PID Sensor ⁴	Range	Resolution
VOC 10.6 eV	0 to 1,000 ppm	1 ppm
Combustible Sensors	Range	Resolution
Catalytic LEL	0 to 100% LEL	1% LEL
NDIR (0-100% LEL Methane)	0 to 100% LEL	1% LEL
NDIR (0-100% Vol. Methane) ⁵	0 to 100% Vol.	0.1% Vol.
Carbon Dioxide Sensor	Range	Resolution
Carbon Dioxide (CO ₂) NDIR	0 to 50,000 ppm	100 ppm
Electrochemical Sensors	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.	0 to 2,000 ppm	10 ppm
Carbon Monoxide (CO) + Hydrogen Sulfide (H ₂ S) Combo	0 to 500 ppm 0 to 200 ppm	1 ppm 0.1 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	0.5 ppm
Ethylene Oxide (EtO-B)	0 to 10 ppm	0.1 ppm
Ethylene Oxide (EtO-C), Ext. Range ⁹	0 to 500 ppm	10 ppm
Formaldehyde (HCHO)	0 to 10 ppm	0.05 ppm
Hydrogen (H ₂) ⁹	0 to 1,000 ppm	2 ppm
Hydrogen Cyanide (HCN)	0 to 50 ppm	0.5 ppm
Hydrogen Sulfide (H ₂ S)	0 to 100 ppm	0.1 ppm
Hydrogen Sulfide (H ₂ S), Ext. Range ⁹	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.
Phosphine (PH ₃)	0 to 20 ppm	0.1 ppm
Sulfur Dioxide (SO ₂)	0 to 20 ppm	0.1 ppm

- 1 A two-gas combination sensor is required for a 6-gas configuration.
- 2 Additional equipment and/or software licenses may be required to enable remote wireless monitoring and alarm transmission.
- 3 AutoRAE 2 supports the MultiRAE Lite pumped version only.
- 4 PID sensor requires a pumped configuration.
- 5 NDIR combustible sensors require a pumped configuration in CSA countries.
- 6 RAE Systems recommends calibrating sensors on installation.
- 7 Specifications are subject to change.
- 8 Specification for non-wireless monitors.
- 9 Supported in MultiRAE Lite Diffusion only.
- 10 Please contact RAE Systems for specific wireless approvals.

ORDERING INFORMATION (MODELS: PGM-6208 AND PGM-6208D)

- Wireless² and non-wireless configurations are available
- Refer to the Portables Pricing Guide for part numbers for monitors, accessories, sampling and calibration kits, gas, sensors, and replacement parts

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