



# MultiRAE Lite

Wireless Portable Multi-Gas Monitor



The MultiRAE Lite is the optimal one-to-six<sup>1</sup>-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 AutoRAE2

## 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 Alarm<sup>2</sup>
- Over 25 interchangeable sensor options, including PID<sup>4</sup> for VOCs, NDIR<sup>5</sup> and catalytic for combustibles, and NDIR for CO<sub>2</sub>
- Intelligent sensors store calibration data, so they can be swapped in the field<sup>6</sup>
- 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



AutoRAE<sup>2</sup>  
Compatible



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## SPECIFICATIONS

### Instrument Specifications<sup>7</sup>

|   |  |
|---|--|
| Size  | - Pumped model: 7.6" H x 3.8" W x 2.6" D (193 x 96.5 x 66 mm)<br>- Diffusion model: 6.9" x 3.8" x 2.2" (175 x 96.5 x 56 mm)  |
| Weight  | - Pumped model: 31 oz (880 g)<br>- 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 <sub>2</sub> NDIR sensor  |
| Battery Options, Runtime <sup>3</sup> and Recharge Time | - Rechargeable Li-ion ~12-hr. (pumped)/18-hr. (diffusion) runtime, < 6-hr. recharge time<br>- Extended duration Li-ion ~18-hr. (pumped)/28-hr. (diffusion) runtime, < 9-hr. recharge time<br>- 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;<br>Man Down Alarm on/off; visual compliance indicator; battery status; datalogging on/off;<br>wireless on/off and reception quality.<br>- 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 <sup>3</sup> 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<br>- Man Down Alarm with pre-alarm and real-time remote wireless notification <sup>2</sup>  |
| Datalogging   | Continuous datalogging (6 months for 5 sensors at 1-minute intervals, 24/7)<br>- 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 <sup>3</sup><br>- 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                                      | ISM license-free bands   |
| Wireless Range (Typical)                                | MultiRAE Lite to RAELink3 [Z1] Mesh modem ~330 feet (100 meters)<br>MultiRAE Lite to EchoView Host, RAEMesh Reader or RAEPPoint ~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                            | <b>CSA:</b> Class I, Division 1, Groups A, B, C and D, T4<br>ATEX: 0575 II 2G Ex ia d IIC T4 Gb<br>1G Ex ia IIC T4 Ga if IR Sensor is not installed<br>IM1 Ex ia I Ma<br><br><b>IECEx:</b> Ex ia d IIC T4 Gb<br>Ex ia IIC T4 Ga if IR Sensor is not installed<br>IM1 Ex ia I Ma<br><br><b>IECEx/ANZEx:</b><br>Ex ia d IIC T4 Gb<br>Ex ia IIC T4 Ga if IR Sensor is not installed<br>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 <sup>8</sup>                                    | No effect when exposed to 0.43mW/cm <sup>2</sup> 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 <sub>2</sub> S, and O <sub>2</sub> sensors<br>- One year on all other sensors, pump, battery, and other consumable parts   |

### Sensor Specifications<sup>7</sup>

| PID Sensor <sup>4</sup>  | 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) <sup>5</sup>                          | 0 to 100% Vol.               | 0.1% Vol.        |
| Carbon Dioxide Sensor  | Range                        | Resolution       |
| Carbon Dioxide (CO <sub>2</sub> ) NDIR                           | 0 to 50,000 ppm              | 100 ppm          |
| Electrochemical Sensors  | Range                        | Resolution       |
| Ammonia (NH <sub>3</sub> )                                       | 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 <sub>2</sub> -comp.                      | 0 to 2,000 ppm               | 10 ppm           |
| Carbon Monoxide (CO) + Hydrogen Sulfide (H <sub>2</sub> S) Combo | 0 to 500 ppm<br>0 to 200 ppm | 1 ppm<br>0.1 ppm |
| Chlorine (Cl <sub>2</sub> )                                      | 0 to 50 ppm                  | 0.1 ppm          |
| Chlorine Dioxide (ClO <sub>2</sub> )                             | 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 <sup>9</sup>                  | 0 to 500 ppm                 | 10 ppm           |
| Formaldehyde (HCHO)  | 0 to 10 ppm                  | 0.05 ppm         |
| Hydrogen (H <sub>2</sub> ) <sup>9</sup>                          | 0 to 1,000 ppm               | 2 ppm            |
| Hydrogen Cyanide (HCN)   | 0 to 50 ppm                  | 0.5 ppm          |
| Hydrogen Sulfide (H <sub>2</sub> S)                              | 0 to 100 ppm                 | 0.1 ppm          |
| Hydrogen Sulfide (H <sub>2</sub> S), Ext. Range <sup>9</sup>     | 0 to 1,000 ppm               | 1 ppm            |
| Methyl Mercaptan (CH <sub>3</sub> -SH)                           | 0 to 10 ppm                  | 0.1 ppm          |
| Nitric Oxide (NO)  | 0 to 250 ppm                 | 0.5 ppm          |
| Nitrogen Dioxide (NO <sub>2</sub> )                              | 0 to 20 ppm                  | 0.1 ppm          |
| Oxygen (O <sub>2</sub> )   | 0 to 30% Vol.                | 0.1% Vol.        |
| Phosphine (PH <sub>3</sub> )                                     | 0 to 20 ppm                  | 0.1 ppm          |
| Sulfur Dioxide (SO <sub>2</sub> )                                | 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.

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

- Wireless<sup>2</sup> 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

**Authorized Distributor:**  
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