

MULTIRAE Lite

Wireless Portable Six-Gas Monitor



Wireless. Versatile. Proven.

The MultiRAE Lite is the optimal one-to-six 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.

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

KEY FEATURES

- **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)**

MULTIRAE LITE

SENSOR SPECIFICATION⁴

PID Sensor	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

SPECIFICATIONS

Specifications subject to change without notice

Size	<ul style="list-style-type: none"> 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 56mm)
Weight	<ul style="list-style-type: none"> Pumped model: 31 oz (880 g) Diffusion model: 26.8 oz (760g)
Sensors	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 Runtime⁵ and Recharge Time	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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/+, N/-)
Sampling:	Built-in pump or diffusion
Calibration:	Automatic with AutoRAE 2 Test and Calibration System ³ or manual
Alarms:	<ul style="list-style-type: none"> 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 notification²
Datalogging:	<ul style="list-style-type: none"> Continuous datalogging (6 months for 5 sensors at 1-minute intervals, 24/7) User-configurable datalogging intervals (from 1 to 3,600 seconds)

MULTIRAE LITE

SPECIFICATIONS CONTINUED Specifications subject to change without notice

Communication and Data Download	<ul style="list-style-type: none"> 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 Wireless data and alarm status transmission via built-in RF modem (optional) 	Hazardous Location Approvals	<p>CSA: Class I, Division 1, Groups A, B, C and D, T4, ATEX: 0575 II 2G Ex ia d IIC T4 Gb, 1G Ex ia IIC T4 Ga if IR Sensor is not installed, I M1 Ex ia I Ma</p> <p>IECEX: Ex ia d IIC T4 Gb, Ex ia IIC T4 Ga if IR Sensor is not installed, I M1 Ex ia I Ma</p> <p>IECEX/ANZEx: Ex ia d IIC T4 Gb, Ex ia IIC T4 Ga if IR Sensor is not installed, Ex ia Ma</p>
Wireless Network	ProRAE Guardian Real-Time Wireless Safety System or EchoView Host-based Closed-Loop System	EMI/RFI5	No effect when exposed to 0.43mW/cm ² RF interference from a 5-watt transmitter at 12" (30 cm)
Wireless Frequency	ISM license-free bands	Languages	Arabic, Chinese, Czech, Danish, Dutch, English, French, German, Indonesian, Italian, Japanese, Korean, Norwegian, Polish, Portuguese, Russian, Spanish, Swedish
Wireless Range (Typical)	MultiRAE to RAELink3 [Z1] Mesh modem ~330 feet (100 meters) MultiRAE to EchoView Host, RAEMesh Reader or RAEPoInt ~660 feet (200 meters)	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 consumables
Operating Temperature	-4° to 122°F (-20° to 50°C)	Part Number	72-8020-MD (Diffusion) 72-8020-MP (Pumped)
Humidity	0% to 95% relative humidity (non-condensing)		
Dust and Water Resistance	IP-65 (pumped); IP-67 (diffusion) ingress protection rating		

1 Additional equipment and/or software licenses may be required to enable remote wireless monitoring and alarm transmission.

2 RAE Systems recommends calibrating sensors on installation.

3 A two-gas combination sensor is required for a 6-gas configuration.

4 Specifications are subject to change.

5 Specification for non-wireless monitors.

6 Gastech recommends sensor calibration once installed.



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