MultiRAE

Wireless Portable Six-Gas Monitor With Advanced VOC Detection Capability

The MultiRAE is the most advanced portable chemical detector on the market. The MultiRAE delivers the broadest PID sensor range in its class and the versatility to support over 25 intelligent interchangeable sensor options (such as PID, NDIR for combustibles and CO_2, ammonia, chlorine, formaldehyde, and phosphene) to fully meet the monitoring needs in a variety of applications, including industrial hygiene, personal protection, leak detection, and HazMat response.

The MultiRAE's wireless capability elevates worker protection by providing safety officers real-time access to instrument readings and alarm status from any location[1] for better visibility and faster incident response.

- **Highly versatile and customizable for different applications**
- **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[2]**

KEY FEATURES

Wireless. Versatile. Proven.

- Wireless access to real-time instrument readings and alarm status from any location[1]
- Unmistakable five-way local and remote wireless notification of alarm conditions
- Over 25 interchangeable sensor options, including 0.1 to 5,000 ppm PID
- Intelligent sensors store calibration data, so they can be swapped in the field[3]
- Extensive on-board gas libraries (190 VOCs and 55 combustible gases)
- Largest display in its class
- Continuous datalogging (6 months for 5 sensors, 24x7)

APPLICATIONS

- Industrial hygiene, personal protection, and multi-gas leak detection in industries such as:
  - Aviation (wing tank entry)
  - Chemical
  - Environmental
  - Oil and gas
  - Pharmaceutical
  - Shipping / marine
- HazMat response
- Clandestine drug labs

MultiRAE used for worker exposure monitoring at an oil refinery

Wireless   AutoRAE 2 Compatible   ISO 9001 CERTIFIED   CSL us   ATEX   IECEx   CE   Ex   FCC

MultiRAE

Wireless Portable Six-Gas[4] Monitor with Advanced VOC Detection Capability

SPECIFICATIONS

Instrument Specifications[5]

Size	7.6" H x 3.8" W x 2.6" D (193 x 96.5 x 66 mm)
Weight	31 oz. (880 g)
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[6] and Recharge Time	- Rechargeable Li-ion (~12-hr. runtime, < 6-hr. recharge time) - Extended duration Li-ion[2] (~18-hr. runtime, < 9-hr. recharge time) - Alkaline adapter with 4 x AA batteries (~6-hr. 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; 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. Average flow rate: 250 cc/min. Auto shutoff in low-flow conditions
Calibration	Automatic with AutoRAE 2 Test and Calibration System[2] 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
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 charging and PC comm. cradle, travel charger, or AutoRAE 2 Automatic Test and Calibration System[2] - Wireless data and alarm status transmission via built-in RF modem (optional)
Wireless Network	ProRAE Guardian Real-Time Wireless Safety System
Wireless Frequency	ISM license-free bands
Wireless Range (Typical)	MultiRAE to RAELink3 Mesh or RAELink3 Z1 Mesh modems ~ 33 feet (10 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 rating
Hazardous Location Approvals	CSA: c(SP)us Class I, Division 1, Groups A, B, C and D, T4 ATEX: CE 0575 (Ex) II 2G Ex ia d IIC T4 Gb IECEx: Ex ia d IIC T4 Gb
CE Compliance (European Conformity)	EMC directive: 2004/108/EC. R&TTE directive: 1999/5/EC. ATEX directive: 94/9/EC
EMI/RFI[6]	No effect when exposed to 0.43mW/cm^{2} RF interference from a 5-watt transmitter at 12"
Performance Tests	MIL-STD-810G compliant. 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, and Swedish
Warranty	- Two years on non-consumable components and catalytic LEL, CO, H_2S, and O_2 sensors - One year on all other sensors, pump, battery, and other consumable parts

1 Additional equipment and/or software licenses may be required to enable remote wireless monitoring and alarm transmission.
2 Contact RAE Systems for availability.
3 RAE Systems recommends calibrating sensors on installation.
4 A two-gas combination sensor is required for a 6-gas configuration.
5 Specifications are subject to change.
6 Specification for non-wireless monitors.

Sensor Specifications[5]

PID Sensors	Range	Resolution
VOC 10.6 eV (HR) VOC 9.8 eV[2]	0 to 5,000 ppm 0 to 1,000 ppm (benzene)	0.1 ppm 0.1 ppm

Combustible Sensors	Range	Resolution
Catalytic LEL NDIR (0-100% LEL Methane) NDIR (0-100% Vol. Methane)	0 to 100% LEL 0 to 100% LEL 0 to 100% Vol.	1% LEL 1% LEL 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) Carbon Monoxide (CO), Ext. Range Carbon Monoxide (CO), H_2-comp.	0 to 500 ppm 0 to 2,000 ppm 0 to 2,000 ppm	1 ppm 10 ppm 10 ppm
Carbon Monoxide (CO) + Hydrogen Sulfide (H_2S) 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) Ethylene Oxide (EtO-B) Ethylene Oxide (EtO-C), Ext. Range	0 to 100 ppm 0 to 10 ppm 0 to 500 ppm	0.5 ppm 0.1 ppm 10 ppm
Formaldehyde (HCHO)	0 to 10 ppm	0.05 ppm
Hydrogen Cyanide (HCN)	0 to 50 ppm	0.5 ppm
Hydrogen Sulfide (H_2S) Hydrogen Sulfide (H_2S), Ext. Range	0 to 100 ppm 0 to 1,000 ppm	0.1 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

ORDERING INFORMATION (MODEL: PGM-622X)

- Wireless[1] 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