MultiRAE

Wireless Portable Six-Gas Monitor with Advanced VOC Detection Capability

The MultiRAE is one of the most advanced portable chemical detectors on the market, and delivers the broadest PID sensor range in its class.

It has the versatility to support more than 25 intelligent interchangeable sensor options to fully meet monitoring needs in a variety of applications. These include Industrial Hygiene, Personal Protection, Leak Detection, Confined Space Entry pre-screening where Benzene might be present, and HazMat response.

The MultiRAE's optional wireless capability improves safety by providing commanders and safety managers real-time access to instrument readings and alarm status from any location[1] for better situational awareness and faster incident response. Its Bluetooth® Low Energy (BLE) module and Honeywell Mobile App suite provide enhanced datalogging and connectivity capabilities.

APPLICATIONS
- Industrial hygiene, Personal protection, Leak detection, Confined space entry pre-screening, and Plant shutdown in industries such as:
  - Aviation wing tank entry
  - Chemical
  - Environmental
  - Oil & gas
  - Pharmaceutical
  - Shipping marine
- Hazmat response
- Clandestine drug labs

MultiRAE used for worker exposure monitoring at an oil refinery

EASE & FLEXIBILITY
- Highly versatile and customizable
- Enhanced PID (0 to 5,000 ppm range, 0.1 ppm resolution)
- Benzene-specific measurement up to 200 ppm with 0.1 ppm resolution
- Man Down Alarm with real-time remote wireless notification
- Compliant with MIL-SPEC-810G performance standard
- Fully automatic bump testing and calibration with AutoRAE 2

FEATURES AND BENEFITS

Wireless access to real-time instrument readings and alarm status from any location[1]

Multiple connectivity capabilities through multiple wireless module options

Five-way local and remote wireless notification of alarm conditions including Man Down Alarm[1]

Intelligent sensors store calibration data, so they can be swapped in the field[2]. Versatile multi-gas and Benzene-specific[7] modes.

Extensive on-board gas libraries. Largest display in its class

Continuous datalogging (6 months for 5 sensors, 24x7). Device Management with Honeywell SafetySuite

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MultiRAE Specifications

INSTRUMENT SPECIFICATIONS[4]	
SIZE	7.6 in x 3.8 in x 2.6 in D / [193 mm x 96.5 mm x 66 mm]
WEIGHT	31 oz [880 g]
SENSORS	Intelligent interchangeable field-replaceable sensors
BATTERY OPTIONS, RUNTIME[5] AND RECHARGE TIME	• Rechargeable Li-ion (~12-hour runtime, < 6-hour recharge time) • Extended duration Li-ion (~18-hour runtime, < 9-hour recharge time) • Alkaline adapter with 4 x AA batteries (~6-hour runtime)
DISPLAY	Monochrome graphical LCD display (128 x 160) with backlighting. Automatic screen "flip" feature
DISPLAY READOUT	• Real-time reading of gas concentrations and correction factor; Man Down Alarm on/off; visual compliance indicator; instrument components' status • 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 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[1]
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	• Download data and upload instrument set-up from PC through charging cradle or using BLE module and dedicated App • Wireless data and alarm status transmission via built-in RF modem (optional)
WIRELESS NETWORK	RAE Systems Dedicated Wireless Network
WIRELESS RANGE (TYPICAL)	Up to 650 ft [200 m] for sub1 GHz Mesh Radio Up to 330 ft [100 m] for Wi-Fi and RAELink3 Mesh Modem Up to 15 ft [5m] for BLE
OPERATING TEMPERATURE	-4°F to 122°F (-20°C to 50°C)
HUMIDITY	0% to 95% relative humidity (non-condensing)
DUST AND WATER RESISTANCE	IP65 ingress protection rating
SAFETY CERTIFICATIONS	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 I M1 Ex ia I Ma IEC Ex: Ex ia IIC T4 Ga Ex ia d IIC T4 Gb with IR sensor installed I M1 Ex ia I Ma IEC Ex/ANZ Ex: Ex ia IIC T4 Ga Ex ia d IIC T4 Gb with IR sensor installed Ex ia I Ma
EMC/RFI	EMC directive: 2004/108/EC
PERFORMANCE TESTS	MIL-STD-810G and 461F 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, Swedish, and Turkish
WARRANTY	• Four years on Liq O_2 sensors • Three years on CO and H_2S sensors • Two years on non-consumable components and catalytic LEL sensors • One year on all other sensors, pump, battery, and other consumable parts
WIRELESS FREQUENCY	ISM license-free band. IEEE 802.15.4 Sub 1 GHz, IEEE 802.11 bands b/n/g 2.4 GHz
WIRELESS APPROVALS	FCC Part 15, CE R&TTE, Others[6]

SENSOR SPECIFICATIONS[4]	RANGE	RESOLUTION
PID SENSORS		
VOC 10.6 EV (EXT. RANGE)	0 to 5,000 ppm	0.1 ppm
VOC 9.8 EV	0 to 2,000 ppm	0.1 ppm
BENZENE-SPECIFIC SNAPSHOT[7]	0 to 200 ppm	0.1 ppm
COMBUSTIBLE SENSORS		
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		
CARBON DIOXIDE (CO_2) NDIR	0 to 50,000 ppm	100 ppm
ELECTROCHEMICAL SENSORS		
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) +	0 to 500 ppm	1 ppm
HYDROGEN SULFIDE (H_2S) COMBO	0 to 200 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
FORMALDEHYDE (HCHO)	0 to 10 ppm	0.05 ppm
HYDROGEN CYANIDE (HCN)	0 to 50 ppm	0.5 ppm
HYDROGEN SULFIDE (H_2S)	0 to 100 ppm	0.1 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.
OXYGEN (LIQ O_2)	0 to 30% Vol.	0.1% Vol.
PHOSPHINE (PH_3)	0 to 20 ppm	0.1 ppm
PHOSPHINE (PH_3 H)	0 to 20 ppm	0.1 ppm
SULFUR DIOXIDE (SO_2)	0 to 20 ppm	0.1 ppm

[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] Contact Honeywell RAE Systems for country specific wireless approvals and certificates.
[7] Requires Benzene RAE-Sep Tube Cartridge.

ORDERING INFORMATION
(MODEL: PGM-6228)

• 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

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