**Honeywell**

**RAE** ®
S Y S T E M S

# 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 25 intelligent interchangeable sensor options (such as PID, NDIR for combustibles and $CO_2$, ammonia, chlorine, formaldehyde, and phosphine) to fully meet the monitoring needs in a variety of applications, including industrial hygiene, personal protection, leak detection, and HazMat response.

The MultiRAE's optional wireless capability improves safety by providing commanders and safety of cers real-time access to instrument readings and alarm status from any location[1] for better situational awareness and faster incident response.

*MultiRAE used for worker exposure monitoring at an oil refinery*

### APPLICATIONS

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

- *Highly versatile and customizable*
- *Best PID in its class (0 to 5,000 ppm range, 0.1 ppm resolution)*
- *Man Down Alarm with real-time remote wireless notifcation*
- *Compliant with MIL-SPEC-810G performance standard*
- *Fully automatic bump testing and calibration with AutoRAE 2*

## FEATURES & BENEFITS

- 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, including Man Down Alarm[1]

- Intelligent sensors store calibration data, so they can be swapped in the field[2]

- Extensive on-board gas libraries (190 VOCs and 55 combustible gases)
- Largest display in its class

- Continuous datalogging (6 months for 5 sensors, 24x7)
- Device Management with Honeywell Sotera™

# MultiRAE Specifications

## INSTRUMENT SPECIFICATIONS[4]

| | |
|---|---|
| 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 | 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[5] AND RECHARGE TIME | - Rechargeable Li-ion (~12-hr. runtime, < 6-hr. recharge time)<br>- Extended duration Li-ion (~18-hr. runtime, < 9-hr. recharge time)<br>- 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; Man Down Alarm on/off; visual compliance indicator; battery status; datalogging on/off; 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. 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<br>- 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)<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<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 RANGE (TYPICAL) | MultiRAE to RAELink3 [Z1] Mesh modem ~330 feet (100 meters)<br>MultiRAE to EchoView Host, RAEMesh Reader or RAEPoint ~660 feet (200 meters)<br>MultiRAE to Wi-Fi Access Point ~330 feet (100 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 ingress protection rating (dust-tight and waterproof against hosing jets coming from all directions) |
| SAFETY CERTIFICATIONS | CSA: Class I, Division 1, Groups A, B, C and D, T4<br>Class II, Division 1, Groups E, F, G; T85ºC<br>ATEX: 0575 II 1G Ex ia IIC T4 Ga<br>2G Ex ia d IIC T4 Gb with IR Sensor installed<br>I M1 Ex ia I Ma<br>IECEx: Ex ia IIC T4 Ga<br>Ex ia d IIC T4 Gb with IR Sensor installed<br>I M1 Ex ia I Ma<br>IECEx/ANZEx: Ex ia IIC T4 Ga<br>Ex ia d IIC T4 Gb with IR Sensor installed<br>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 | - Two years on non-consumable components and catalytic LEL, CO, $H_2S$, and $O_2$ sensors<br>- One year on all other sensors, pump, battery, and other consumable parts<br>- Three years Liq $O_2$ sensor |
| WIRELESS FREQUENCY | ISM license free band. IEEE 802.15.4 Sub 1GHz, Wi-Fi 802.11 b/g |
| WIRELESS APPROVALS | FCC Part 15, CE R&TTE, Others[6] |
| RADIO MODULE | Supports RM900A |

## SENSOR SPECIFICATIONS[4]

| | RANGE | RESOLUTION |
|---|---|---|
| **PID SENSORS** | | |
| VOC 10.6 EV (EXT. RANGE) | 0 to 5,000 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) | 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 |
| AMMONIA ($NH_3$) EXT | 0 to 500 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 RAE Systems for country specific wireless approvals and certificates.

## 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

## For more information

www.honeywellanalytics.com
www.raesystems.com

### Europe, Middle East, Africa

Life Safety Distribution GmbH
Tel: 00800 333 222 44 (Freephone number)
Tel: +41 44 943 4380 (Alternative number)
Middle East Tel: +971 4 450 5800 (Fixed Gas Detection)
gasdetection@honeywell.com

### Americas

Honeywell Analytics Distribution Inc.
Tel: +1 847 955 8200
Toll free: +1 800 538 0363
detectgas@honeywell.com
Honeywell RAE Systems
Phone: +1 408 952 8200
Toll Free: +1 888 723 4800

**DUOTEC A/S**

**DUOTEC A/S**
Herstedøstervej 19 · 2600 Glostrup
Tlf. 4345 9188 · Fax 4343 2330
e-mail: info@duotec.dk
www.duotec.dk

### Technical Services

EMEA: HAexpert@honeywell.com
US: ha.us.service@honeywell.com
AP: ha.ap.service@honeywell.com

Device Management with
**Honeywell Sotera™**

honeywellanalytics.com/products/
Honeywell-Sotera

**Honeywell**