

# QRAE 3

## Wireless 4-Gas Monitor

QRAE 3 is a wireless compact monitor for one to four gases.

The QRAE 3 provides detection and monitoring of Oxygen (O<sub>2</sub>), Combustibles, and toxic gases that include Hydrogen Sulfide (H<sub>2</sub>S), Carbon Monoxide (CO), Sulfur Dioxide (SO<sub>2</sub>) and Hydrogen Cyanide (HCN). QRAE 3 can deliver wireless real-time instrument readings and alarm status 24/7. This provides better incident visibility and can improve response time.

- Man Down Alarm with real-time remote wireless notification<sup>1</sup>
- Easy maintenance with fieldreplaceable sensors and pump
- Fully automated bump testing and calibration with AutoRAE 2
- Pumped or diffusion models available
- Large graphic display can rotate 180°

### Applications

Confined space entry and general safety and compliance in:

- Industrial safety
- Oil and gas
- Fireground "Toxic Twins" detection
- Environmental
- Fire and Emergency response



### Optional Accessories

- AutoRAE 2 Automatic Test and Calibration System
- External battery charger

## FEATURES & BENEFITS

- Available in Diffusion or Pumped version
- IP-65/67 water- and dust-resistant case
- Strong, protective, concussion-proof design
- Real-time gas concentration readings and alarm status enabled by state-of-the-art wireless technology
- Unmistakable five-way local and remote wireless notification of alarm conditions
- Large graphical display icon-driven user interface through intuitive, simple-to-operate two-button user interface.
- Multi-language support: 18 languages encoded
- Easy access to pump, sensors, filter and battery compartment
- Device Management with Honeywell Sotera™

# QRAE 3 Specifications

INSTRUMENT SPECIFICATIONS	
<b>SIZE</b>	Diffusion: 5.5 "H x 3.2 "W x 1.5" W (140 mm x 82mm x 42mm) Pumped: 5.7 "H x 3.2 "W x 1.7" D (145 mm x 82 mm x 42mm)
<b>WEIGHT</b>	Diffusion: 12.9 oz (365 g with Li-ion battery and clip) Pumped: 14.5 oz (410 g with Li-ion battery, clip, and external filter)
<b>SENSORS</b>	Up to four field-replaceable sensors: <ul style="list-style-type: none"> <li>• LEL: Catalytic bead for combustibles (built-in Correction Factor library)</li> <li>• Oxygen: Liquid electrolyte O<sub>2</sub></li> <li>• Toxic: electrochemical for H<sub>2</sub>S, CO, SO<sub>2</sub>, HCN</li> </ul>
<b>BATTERY</b>	Rechargeable Li-ion
<b>RUNNING TIME</b>	<ul style="list-style-type: none"> <li>• 14 hours continuous non-wireless, diffusion</li> <li>• 11 hours continuous non-wireless, pumped</li> <li>• 10 hours continuous with wireless, diffusion</li> <li>• 8 hours continuous with wireless, pumped</li> </ul> Note: All battery specifications at 68° F (20° C); lower temperatures and alarm conditions will affect runtime.
<b>DISPLAY GRAPHIC</b>	Monochrome graphic display (128 x 80) Display size: 1.57" W x 1.06" H (40 x 27 mm) with backlighting Automatic or on-demand screen rotation
<b>KEYPAD</b>	Two-button operation
<b>DIRECT READOUT</b>	<ul style="list-style-type: none"> <li>• Real-time reading of gas concentrations</li> <li>• Battery status</li> <li>• Pump status (if equipped with pump)</li> <li>• Wireless on/off and wireless reception quality</li> <li>• STEL, TWA, peak, and minimum values</li> <li>• Man Down and policy enforcement indicators</li> </ul>
<b>DATALOGGING</b>	<ul style="list-style-type: none"> <li>• Multi-tone 95dB buzzer (at 11.8" / 30 cm, typical), vibration alarm, and flashing red LEDs and on-screen indication of alarm conditions</li> <li>• Alarms: latching, non latching or manual override</li> <li>• Additional diagnostic alarm and display message for low battery</li> <li>• Pump stall alarm (pumped version only)</li> <li>• Man Down Alarm with pre-alarm and real-time remote wireless notification</li> </ul>
<b>DATALOGGING</b>	<ul style="list-style-type: none"> <li>• Continuous datalogging (3 months for 4 sensors at 1-minute intervals, 24/7)</li> <li>• User-configurable datalogging intervals (from 1 to 3,600 seconds)</li> </ul>
<b>COMMUNICATION AND DATA DOWNLOAD</b>	<ul style="list-style-type: none"> <li>• Data download and instrument set-up and upgrades on PC via Travel Charger</li> <li>• Wireless data and status transmission via built-in RF modem (optional)</li> </ul>
<b>WIRELESS NETWORK</b>	Mesh RAE Systems Dedicated Wireless Network
<b>WIRELESS FREQUENCY AND APPROVALS<sup>4</sup></b>	ISM license free band, 868Mhz or 900Mhz FCC Part15, CE R&TTE, ANATEL
<b>WIRELESS RANGE (TYPICAL)</b>	EchoView Host: LOS > 650 ft (200 m) <sup>3</sup> ProRAE Guardian and RAEMesh Reader: LOS > 650 ft (200 m) <sup>3</sup> ProRAE Guardian and RAELink3 Mesh: LOS > 330 ft (100 m) <sup>3</sup>
<b>EM IMMUNITY</b>	EMI and ESD test: 100MHz to 1GHz 30V/m, no alarm Contact: ±4kV Air: ±8kV, no alarm
<b>IP RATING</b>	Pumped: IP-65 Diffusion: IP-67
<b>CALIBRATION</b>	Two-point calibration for zero and span (manual, or automatic with AutoRAE 2)

## For more information

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INSTRUMENT SPECIFICATIONS	
<b>SAMPLING PUMP</b>	Built-in pump or diffusion Can sample through tubing up to 98ft (30m)
<b>HAZARDOUS AREA APPROVAL</b>	US and Canada: classified for use in Class I, Division 1, Groups A, B, C and D Europe: IECEx/ATEX (II 1G Ex ia IIC T4)
<b>TEMPERATURE</b>	-4° to 122° F (-20° to 50° C) for T4 temperature code
<b>HUMIDITY</b>	0% to 95% relative humidity (non-condensing)
<b>ATTACHMENTS</b>	Stainless-steel alligator clip Swivel belt clip (optional) Pouch (optional)
<b>LANGUAGES</b>	Arabic, Chinese, Czech, Dutch, English, French, German, Indonesian, Italian, Japanese, Korean, Norwegian, Polish, Portuguese, Russian, Spanish, and Swedish (language must be changed through ProRAE Studio II)
<b>WARRANTY</b>	2-year warranty on device <sup>2</sup> 3-year warranty on LEL, O <sub>2</sub> , CO, H <sub>2</sub> S sensors <sup>2</sup> 1-year warranty on SO <sub>2</sub> , HCN sensors <sup>2</sup>

Specifications are subject to change.

DEFAULT SENSOR SPECIFICATIONS		
GAS MONITOR	Range	Resolution
OXYGEN (O <sub>2</sub> )	0 to 30.0%	0.1%
COMBUSTIBLE	0 to 100% LEL	1% LEL
CARBON MONOXIDE (CO)	0 to 500 ppm	1 ppm
HYDROGEN SULFIDE (H <sub>2</sub> S)	0 to 100 ppm	0.1 ppm
SULFUR DIOXIDE (SO <sub>2</sub> )	0 to 20 ppm	0.1 ppm
HYDROGEN CYANIDE (HCN)	0 to 50 ppm	0.2 ppm
AMMONIA (NH <sub>3</sub> )	100 ppm	1 ppm
PHOSPHINE (PH <sub>3</sub> )	20 ppm	0.01 ppm
CHLORINE (CL <sub>2</sub> )	0 to 50 ppm	0.05 ppm
NITROGEN DIOXIDE (NO <sub>2</sub> )	0 to 50 ppm	0.1 ppm

## ORDERING INFORMATION

- Wireless<sup>1</sup> and non-wireless options available for all configurations
- Diffusion and pumped versions available for all configuration
- Refer to the Portables Pricing guide for monitor configuration and accessories

- 1 Additional equipment and/or software licenses may be required to enable remote wireless monitoring and alarm transmission
- 2 Against factory defects
- 3 Receiving >80%
- 4 Please contact RAE Systems for specific wireless certifications

Device Management with  
Honeywell Sotera™



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