RAE SYSTEMS by Honeywell

QRAE 3

Wireless 4-Gas Monitor

The QRAE 3 is a full featured compact 4-gas monitor that provides detection and monitoring of Oxygen (O_2), Combustibles and toxic gases that include Carbon Monoxide (CO), Hydrogen Sulfide (H_2S), Sulfure Dioxide (SO_2) and Hydrogen Cyanide (HCN) and others. 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[1]**
- **Easy maintenance with field-replaceable sensors and pump**
- **Fully automated bump testing and calibration with AutoRAE 2**
- **Pumped or diffusion models available**
- **Large graphic display can rotate 180°**

KEY FEATURES

Wireless. Versatile. Proven.

- 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

APPLICATIONS

Confined space entry and general safety and compliance in:

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

QRAE 3 used for oil and gas applications.

CONNEXT COMPATIBLE Wireless AutoRAE 2 Compatible IECEx ATEX CSA US CE FCC ISO 9001 CERTIFIED

QRAE 3

Wireless 4-Gas Monitor

SPECIFICATIONS

Instrument Specifications

Size	Diffusion: 5.5" H x 3.2" W x 1.5" W (140 mm x 82 mm x 42 mm) Pumped: 5.7" H x 3.2" W x 1.7" D (145 mm x 82 mm x 42 mm)
Weight	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)
Sensors	Up to four replaceable sensors: • LEL: Catalytic bead for combustibles (built-in Correction Factor library) • Oxygen: Liquid electrolyte O_2 • Electrochemical sensor for Toxics
Battery	Rechargeable Li-ion
Running time	• 14 hours continuous non-wireless, diffusion • 11 hours continuous non- wireless, pumped • 10 hours continuous with wireless, diffusion • 8 hours continuous with wireless, pumped Note: All battery specifications at 68° F (20° C); lower temperatures and alarm conditions will affect runtime.
Display Graphic	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
Keypad	Two-button operation
Direct Readout	• Real-time reading of gas concentrations • Battery status • Pump status (if equipped with pump) • Wireless on/off and wireless reception quality • STEL, TWA, peak, and minimum values • Man Down and policy enforcement indicators
Alarms	• Multi-tone 95dB buzzer (at 11.8"/ 30 cm, typical), vibration alarm, and flashing red LEDs and on-screen indication of alarm conditions • Alarms: latching, non latching or manual override • Additional diagnostic alarm and display message for low battery • Pump stall alarm (pumped version only) • Man Down Alarm with pre-alarm and real-time remote wireless notification
Datalogging	• Continuous datalogging (3 months for 4 sensors at 1-minute intervals) • User-configurable datalogging intervals (from 1 to 3,600 seconds)
Communication & Data Download	• Data download and instrument set-up and upgrades on PC via Travel Charger • Wireless data and status transmission via built-in RF modem (optional)
Wireless Network	Mesh RAE Systems Dedicated Wireless Network
Wireless Range (Typical)	EchoView Host: LOS > 650 ft (200 m)[3] ProRAE Guardian & RAEMesh Reader: LOS > 650 ft (200 m)[3] ProRAE Guardian & RAELink3 Mesh: LOS > 330 ft (100 m)[3]
EMC/RFI	EMC directive: 2004/108/EC EMI and ESD test: 100MHz to 1GHz 30V/m, no alarm Contact: ±4kV Air: ±8kV, no alarm
IP Rating	Pumped: IP-65 Diffusion: IP-67
Calibration	Two-point calibration for zero and span (manual, or automatic with AutoRAE 2)
Sampling Pump	Built-in pump or diffusion Can sample through tubing up to 98ft (30m)
Safety Certifications	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)
Temperature	-4° to 122° F (-20° to 50° C) for T4 temperature code
Humidity	0% to 95% relative humidity (non-condensing)
Attachments	Stainless-steel alligator clip; Swivel belt clip (optional); Pouch (optional)
Languages	Arabic, Chinese, Czech, Dutch, English, French, German, Indonesian, Italian, Japanese, Korean, Norwegian, Polish, Portuguese, Russian, Spanish, Swedish and Turkish (language must be changed through ProRAE Studio II)
Warranty	2-year warranty on device[2] 3-year warranty on LEL, O_2, CO, H_2S sensors[2] 1-year warranty on other sensors
Wireless Frequency	ISM license free band. IEEE 802.15.4 Sub 1GHz
Wireless Approvals	FCC Part 15, CE R&TTE, Others[4]
Radio Module	Supports RM900

Default Sensor Specifications

Gas Monitor	Range	Resolution
Oxygen (O_2)	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_2S)	0 to 100 ppm	0.1 ppm
Sulfur Dioxide (SO_2)	0 to 20 ppm	0.1 ppm
Hydrogen Cyanide (HCN)	0 to 50 ppm	0.2 ppm
Ammonia (NH_3)	100 ppm	1 ppm
Phosphine (PH_3)	20 ppm	0.01 ppm
Chlorine (Cl_2)	0 to 50 ppm	0.05 ppm
Nitrogen Dioxide (NO_2)	0 to 50 ppm	0.1 ppm

ORDERING INFORMATION

- Wireless[1] and non-wireless options available for all configurations
- Diffusion and pumped versions available for all configurations
- Refer to the Portables Pricing guide for monitor configurations and accessories

OPTIONAL ACCESSORIES

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

[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] Contact RAE Systems for country specific wireless approvals and certificates.

Specifications are subject to change.

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