Wireless Multi-Gas Detector

RAE Systems 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 (O₂), Combustibles, and toxic gases that include Hydrogen Sulfide (H₂S), Carbon Monoxide (CO), Sulfur Dioxide (SO₂) 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.

FEATURES

- 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
- Easy maintenance with field-replaceable sensors and pump
- Man Down Alarm with real-time remote wireless notification¹
- Fully automated bump testing and calibration with AutoRAE 2
- 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

CALL GEOTECH TODAY (800) 833-7958

Geotech Environmental Equipment, Inc.
2650 East 40th Avenue • Denver, Colorado 80205
(303) 320-4764 • (800) 833-7958 • FAX (303) 322-7242
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### RAE Systems 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 field-replaceable sensors:
    - LEL: Catalytic bead for combustibles (built-in Correction Factor library)
    - Oxygen: Liquid electrolyte O₂
    - 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

- **Display Graphic**
  - Monochrome graphic display (128 x 80)
  - Display size: 1.57” W x 1.06” H (40 x 27 mm) with backlighting

- **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, 24/7)
  - 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 Frequency**
  - ISM license-free bands, 868MHz or 900MHz

- **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 > 30 ft. (10 m)^3

- **EM Immunity**
  - 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 98 ft. (30 m)

**Hazardous Area Approval**

- US and Canada: classified for use in Class I, Division 1, Groups A, B, C and D
- Europe: IECEx/ATEX (II 1 G Ex ia IIC T4)

**Temperature**

- -4° to 112°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, O₂, CO, H₂S sensors^2
- 1-year warranty on other sensors

**Default Sensor Specifications**

<table>
<thead>
<tr>
<th>Gas Monitor</th>
<th>Range</th>
<th>Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxygen</td>
<td>0 to 30.0%</td>
<td>0.1%</td>
</tr>
<tr>
<td>Combustible</td>
<td>0 to 100% LEL</td>
<td>1% LEL</td>
</tr>
<tr>
<td>Carbon Monoxide</td>
<td>0 to 500 ppm</td>
<td>1 ppm</td>
</tr>
<tr>
<td>Hydrogen Sulfide</td>
<td>0 to 100 ppm</td>
<td>0.1 ppm</td>
</tr>
<tr>
<td>Sulfur Dioxide</td>
<td>0 to 20 ppm</td>
<td>0.1 ppm</td>
</tr>
<tr>
<td>Hydrogen Cyanide (HCN)</td>
<td>0 to 50 ppm</td>
<td>0.5 ppm</td>
</tr>
<tr>
<td>Ammonia (NH₃)</td>
<td>100 ppm</td>
<td>1 ppm</td>
</tr>
<tr>
<td>Phosphine (PH₃)</td>
<td>20 ppm</td>
<td>0.01 ppm</td>
</tr>
<tr>
<td>Chlorine (Cl₂)</td>
<td>0 to 50 ppm</td>
<td>0.05 ppm</td>
</tr>
<tr>
<td>Nitrogen Dioxide (NO₂)</td>
<td>0 to 50 ppm</td>
<td>0.1 ppm</td>
</tr>
</tbody>
</table>

Specifications are subject to change.

### ORDERING INFORMATION

- Wireless^1 and non-wireless options available for all configurations
- Diffusion and pumped versions available for all configurations
- Contact Geotech 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%

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