



# QRAE II

## Compact Multi-gas Detector for H<sub>2</sub>S, CO, O<sub>2</sub>, Combustibles

The QRAE II is a full-featured, compact, one- to four-sensor gas detector for detection of combustibles, oxygen, hydrogen sulfide, and carbon monoxide. Key features include easy-to-change, externally accessed battery packs (available in rechargeable and alkaline versions), a water-resistant case and a new state-of-the-art O<sub>2</sub> sensor technology with extended life. The rechargeable Lithium-ion battery pack provides up to 14 hours of continuous operation. The QRAE II includes storage capacity for 64,000 datalogging points, which can be downloaded to any PC compatible with Windows 98, NT, 2000 or XP.

### Key Features

**Patented SPE O<sub>2</sub><sup>™</sup>** Oxygen sensor unique features:

- Lead-free design that already complies with future RoHS Standard
- Extended life compared to lead-type electrochemical oxygen sensors resulting in low cost of ownership
- Leak-free design, minimizing downtime

**Best EMI/RFI immunity** technology for products in its class, eliminating radio interference

**Easy access** to sensors, filter and battery compartment without exposing electronic components to potential damage

**Large graphic display** for easy overview of gas type and concentration

**Alkaline adapter and rechargeable Lithium-ion battery pack** provide up to 14 hours of continuous operation

**Rugged housing** withstands harsh environments

- IP65 water- and dust-resistant case
- Strong, protective, concussion-proof design

### Additional Advantages

- One to four plug-in sensors (combustibles, oxygen SPE O<sub>2</sub><sup>™</sup>, hydrogen sulfide, carbon monoxide)
- Diffusion mode, with optional manual sample pump
- Intuitive simple-to-operate two-button user interface
- Display can be flipped 180° with the push of a button for easy viewing from belt or hand

- Multi-language support
- One-button calibration with auto-zero capability
- Loud 95 dB audible alarm
- Bright red flashing visible alarm
- Vibration alarm
- Interchangeable drop-in Lithium-ion and alkaline battery packs
- Charging cradle doubles as an external battery charger
- Compatible with AutoRAE calibration station
- Optional Confined Space Entry Kit



Actual Size



ver1\_04.07

[www.raesystems.com](http://www.raesystems.com)

IECEX  
(pending)

ATEX



## Specifications\*

### Detector Specifications

<b>Size</b>	5" L x 2.8" W x 1.5" H (12.5 x 7.2 x 3.8 cm)
<b>Weight</b>	12 oz (350 g)
<b>Sensors</b>	<ul style="list-style-type: none"> <li>Catalytic bead for combustibles</li> <li>Oxygen: SPE O<sub>2</sub><sup>™</sup> (non-consumable Solid Polymer Electrolyte technology)</li> <li>Toxic: electrochemical CO, H<sub>2</sub>S</li> </ul>
<b>Battery</b>	Interchangeable Lithium-ion and alkaline battery packs
<b>Operating Period</b>	Diffusion: Up to 14 hours continuous operation with Lithium-ion battery, up to 10 hours with alkaline battery (typical, without alarm)
<b>Display Graphic</b>	4 lines, with LED automatic back light in dim light or alarm condition
<b>Keypad</b>	Two-key operation
<b>Direct Readout</b>	<ul style="list-style-type: none"> <li>Instantaneous reading of up to four sensors</li> <li>Oxygen as percentage by volume</li> <li>Combustible gas as percentage of lower explosive limit (LEL), scaleable using correction factors</li> <li>Toxic gases as parts per million by volume</li> <li>High and low values for all gases</li> <li>Battery and shutdown voltage</li> <li>Date, time, elapsed time, temperature</li> </ul>
<b>Alarms</b>	<ul style="list-style-type: none"> <li>95dB buzzer (at 30 cm) and flashing red LED</li> <li>High: 3 beeps and flashes per second</li> <li>Low: 2 beeps and flashes per second</li> <li>STEL and TWA: 1 beep, vibration and flash per second</li> <li>Alarms latching with manual override or automatic reset</li> <li>Additional diagnostic alarm and display message for low battery</li> </ul>
<b>EMI/RFI</b>	Highly resistant to EMI/RFI. Compliant with EMC directive 89/336/EEC additional +60 volts/meter
<b>IP Rating</b>	IP65
<b>Datalogging</b>	Standard 12 days at one-minute intervals
<b>Calibration</b>	Two-point calibration for zero and span
<b>Sampling Pump</b>	Optional, external manual pump
<b>Hazardous Area Approval</b>	<ul style="list-style-type: none"> <li>US and Canada: c<sup>Ⓢ</sup>us C1, D1, Groups A, B, C, D, T4</li> <li>Europe: ATEX II 2G EEx ia d IIc T3 and T4</li> <li>IECEX: Ex ia d II C T3 and T4 (pending)</li> </ul>
<b>Temperature</b>	<ul style="list-style-type: none"> <li>-4° to 113° F (-20° to 50° C) for T4 Temperature code</li> <li>-4° to 131° F (-20° to 55° C) for T3 Temperature code (ATEX and IECEX only)</li> </ul>
<b>Humidity</b>	0% to 95% relative humidity (non-condensing)
<b>Attachments</b>	Stainless steel alligator clip
<b>Warranty</b>	Full 2-year warranty, including all sensors

\*Specifications are subject to change

### Default Sensor Settings

Gas Monitor	Range	Resolution
Oxygen	0 to 30.0%	0.1%
Combustible	0 to 100% LEL	1% LEL
Carbon Monoxide	0 to 1000 ppm	1 ppm
Hydrogen Sulfide	0 to 100 ppm	1 ppm

### QRAE II Monitor includes:

- Monitor as specified
- Sensors as specified
- Calibration adapter
- Quick reference guide
- User manual and ProRAE Studio Software Package for Windows® 2000, NT and XP on CD-ROM
- Alkaline adapter
- (Rechargeable version only) Charging/download cradle with computer interface cable
- (Rechargeable version only) Universal charger
- (Rechargeable version only) Lithium-ion battery pack

### Confined Space Entry Kit (CSK1) (CSK2)

- Hard transport case with pre-cut foam
- 6' (2 m) Tygon® tubing
- 10" (25cm) stiff aluminum sample probe with replaceable filter
- Constant-flow hand pump
- Tool Kit
- (CSK2 only) Four-gas mix in a 34L cylinder (50% LEL, 18% O<sub>2</sub>, 10 ppm H<sub>2</sub>S, 50 ppm CO)
- (CSK2 only) Calibration regulator and tubing



QRAE II exploded view



QRAE II shown with optional AutoRAE charging, bump test and calibration station



SPE O<sub>2</sub><sup>™</sup> sensor designed to meet RoHS directive

DISTRIBUTED BY:

ver1\_04.07

<b>RAE Systems Inc.</b>	USA/Canada	1-877-723-2878
3775 North First Street	Europe/Russia	+45 8652 5155
San Jose, CA 95134 USA	Middle East/Australia	971 50 429 1385
raesales@raesystems.com	China	8610 58858788
	Asia	+852 2669 0828

[www.raesystems.com](http://www.raesystems.com)

