

QRAE II

Multi-gas Detector Diffusion or Pump for O₂, Combustibles, H₂S, CO or SO₂



Pump or diffusion models available

Cradle doubles as an external battery charger and data transfer connection

Rugged housing

Large graphic display for easy overview of gas type and concentration

Rechargeable Lithium-ion battery pack provides up to 14 hours of continuous operation



SPE O₂™ sensor designed to meet RoHS directive

The QRAE II is a full-featured, compact, one- to four-sensor gas detector for oxygen, combustibles, hydrogen sulfide, carbon monoxide or sulfur dioxide. Key features include easy-to-change battery pack, a water-resistant case and a new state-of-the-art O₂ sensor.

Key Features

- Patented SPE O₂™ Oxygen sensor unique features:
 - Lead-free design that complies with RoHS directive
 - 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 pump, sensors, filter and battery compartment without exposing electronic components to potential damage
- IP-65 water- and dust-resistant case
- Strong, protective, concussion-proof design

Additional Advantages

- Plug-in sensors: oxygen, combustibles, hydrogen sulfide, carbon monoxide or sulfur dioxide
- Intuitive simple-to-operate two-button user interface with built-in pump



QRAE II being used with built-in pump for a confined space entry

- 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 95dB audible alarm
- Bright, red flashing visible alarm
- Vibration alarm
- Interchangeable drop-in Lithium-ion and alkaline battery packs



IECEx

ATEX



Specifications

Detector Specifications*

Size	Diffusion: 5" L x 2.8" W x 1.5" H (12.5cm x 7.2cm x 3.8cm) Pump: 5" L x 2.8" W x 2" H (12.5cm x 7.2cm x 5.0cm)
Weight	Diffusion: 9 oz (250 g) Pump: 12 oz (350 g)
Sensors	<ul style="list-style-type: none"> Catalytic bead for combustibles Oxygen: SPE O₂[™] (non-consumable Solid Polymer Electrolyte technology) Toxic: electrochemical, H₂S, CO or SO₂
Battery	Interchangeable Lithium-ion and alkaline battery packs
Operating Period	Diffusion: Up to 14 hours continuous operation with Lithium-ion battery, up to 10 hours with alkaline battery (typical, without alarm) Pump: Up to 10 hours with Lithium-ion battery, up to 8 hours with alkaline battery
Display Graphic	4 lines, with LED automatic back light in dim light or alarm condition
Keypad	Two-key operation
Direct Readout	<ul style="list-style-type: none"> Instant reading of up to four sensors Oxygen as percentage by volume Combustible gas as percentage of lower explosive limit (LEL), scaleable using correction factors Toxic gases as parts per million High and low values for all gases Battery and shutdown voltage Date, time, elapsed time, temperature
Alarms	<ul style="list-style-type: none"> 95dB buzzer (at 30 cm) and flashing red LED High: 3 beeps, vibration and flashes per second Low: 2 beeps, vibration and flashes per second STEL and TWA: 1 beep, vibration and flash per second Alarms: latching with manual override or automatic reset Additional diagnostic alarm and display message for low battery
EMI/RFI	Highly resistant to EMI/RFI. Compliant with EMC directive 2004/108/EC additional +60 volts/meter
IP Rating	IP-65
Datalogging	Standard 12 days at one-minute intervals
Calibration	Two-point calibration for zero and span
Sampling Pump	Optional, internal pump 300 cc/mn
Hazardous Area Approval	<ul style="list-style-type: none"> US and Canada: c[®]us CI, D1, Groups A, B, C, D, T4 Europe: ATEX II 2G EEx ia d IIc T4 IECEx: Ex ia d II C T4
Temperature	-4° to 113° F (-20° to 50° C) for T4 temperature code
Humidity	0% to 95% relative humidity (non-condensing)
Attachments	Stainless-steel alligator clip
Warranty	Full 2-year warranty, including all sensors

*Specifications are subject to change

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DS-1027-01

Default Sensor Specifications*

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 0 to 1000 ppm	0.1 ppm 1 ppm
Sulfur Dioxide	0.1 to 100 ppm	0.1 ppm

*Consult RAE Systems for custom configurations

QRAE II Ordering Options

QRAE II Monitor Includes:

- Monitor as specified
- Sensors as specified
- Calibration adapter and internal filters (diffusion only)
- Quick reference guide
- User manual and ProRAE Studio Software Package for Windows® 2000, NT and XP on CD-ROM
- Alkaline adapter
- Water trap filter (pump only)
- Rechargeable versions additionally offer:
 - Charging/download cradle with computer interface cable
 - Universal adapter
 - Lithium-ion battery pack

Confined Space Entry Kit for Pump and Diffusion Models (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
- Three water trap filters
- CSK2 versions additionally offer:
 - Four-gas mix in a 34L cylinder (50% LEL, 18% O₂, 10 ppm H₂S, 50 ppm CO)
 - Calibration regulator and tubing

