

# Portable Multi-Gas Monitor

## RAE QRAE PLUS Four-Gas Monitor

With 11 sensors to choose from, the QRAE PLUS Multi-Gas Monitor allows you to measure up to 4 gases. An excellent meter in a variety of confined space entry and other air monitoring applications.

### FEATURES

- Plug-in smart sensors for LEL, O<sub>2</sub>, H<sub>2</sub>S, CO, SO<sub>2</sub>, NO, NO<sub>2</sub>, CL<sub>2</sub>, HCN, NH<sub>3</sub>, and PH<sub>3</sub>
- Sensors are easily replaced in the field
- Built-in sample draw pump with optional sample probe
- Displays 4 gases simultaneously and the concentrations
- Water and dust resistant with protective rubber boot
- 16,000 point datalogging capacity (standard)
- Audible and visual alarms
- Smart battery charger keeps unit ready to go
- One button calibration with auto zero capability
- Operates for 20 hours on a rechargeable lithium-ion battery pack, and includes alkaline battery adapter for emergency operation.



### WHAT'S INCLUDED

#### QRAE PLUS Monitor only includes

- QRAE PLUS with internal pump
- LEL, O<sub>2</sub>, H<sub>2</sub>S, and CO
- Rechargeable lithium-ion battery back
- 120V AC/DC wall adapter
- Calibration adapter
- 3" inlet probe
- 10 water trap filters
- Carbon filters
- Operation and maintenance manual
- Rubber boot with belt clip
- Shipping case

#### QRAE PLUS Confined Space Kit includes:

- All items listed above plus 34 liter mixed calibration gas (50% LEL, 20.9% O<sub>2</sub>, 10 ppm hydrogen sulfide, 50 ppm carbon monoxide)
- Calibration regulator
- 15 feet (5m) Tygon® tubing
- Tool kit
- Hard transport case

### APPLICATIONS

#### Confined space entry

- Utility work such as sewers, manholes, and tunnels
- Waste water treatment plants
- Mining and excavation industry
- Landfill operations
- Grain silos

#### Refineries and petrochemical plants

- Power plants
- Drilling operations
- Steel mills
- Tank farms
- Ocean going vessels

**CALL GEOTECH TODAY (800) 833-7958**

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### SPECIFICATIONS

#### MONITOR

<b>Size:</b>	4.5" L x 3" W x 1.8" H (11.5cm x 7.6cm x 4.6cm)
<b>Weight:</b>	15 oz. (425g)
<b>Sensors:</b>	
Combustible	Protected dual mode catalytic bead for 100% LEL and thermal conductivity for 0-100% by volume
Oxygen	Electrochemical fuel-cell
<b>Operating Hours:</b>	12 hours of continuous operation with lithium-ion battery
<b>Battery:</b>	Interchangeable lithium-ion and alkaline battery packs. Rechargeable units include lithium-ion battery pack with internal smart changing 120V AC/DC wall adapter, and spare alkaline pack.
<b>Display:</b>	2 line, 16 digit LCD with LED back light, automatic activation in dim light or alarm condition
<b>Key Pad:</b>	1 operation key and 2 programming keys
<b>Attachment:</b>	Durable, high visibility rubber boot and wrist strap
<b>Temperature:</b>	-4° to 113°F (-20° to 45°C)
<b>Humidity:</b>	0% to 95% relative humidity (non-condensing)
<b>Direct Readout:</b>	Instantaneous readings for up to four sensors: <ul style="list-style-type: none"> <li>• Oxygen as percentage by volume</li> <li>• Combustible: LEL range as percentage of (LEL), thermal conductivity mode as percent volume</li> <li>• Toxic gases as parts per million by volume</li> <li>• High and low values for all gases</li> <li>• STEL and TWA values of toxic gases</li> <li>• Battery and shut down voltage</li> <li>• Date, time, elapsed time, temperature</li> </ul>
<b>Alarms:</b>	95 dB buzzer and flashing red LED to indicate exceeded preset limits
High	3 beeps and flashes per second
Low	2 beeps and flashes per second
STEL & TWA	1 beep and flash per second <ul style="list-style-type: none"> <li>• Alarms latching with manual override or automatic reset</li> <li>• Additional diagnostic alarm and display message for low battery and pump stall</li> </ul>
<b>Intrinsic Safety:</b>	UL classified as to intrinsic safety for use in Class 1, Div. I, Group A, B, C, and D hazardous locations
<b>Calibration:</b>	Two point field calibration for zero and span, optional three-point calibration for oxygen
<b>Datalogging:</b>	20,000 datalogging points downloadable to PC with serial number of unit, user ID, date, time, site number, calibration, and readings
<b>Sampling Pump:</b>	Internal pump user selectable flow-rate: <ul style="list-style-type: none"> <li>Low 200cc/min</li> <li>High 300cc/min</li> </ul>

#### SENSOR

Gas Monitor	Range	Resolution	Response Time (T90)
Oxygen (O <sub>2</sub> )	0-30%	0.1%	15 seconds
Combustible Gas (LEL)	0-100% LEL	1% LEL	15 seconds
Carbon Monoxide (CO)	0-500 ppm	1 ppm	20 seconds
Hydrogen Sulfide (H <sub>2</sub> S)	0-100 ppm	1 ppm	30 seconds

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