QRAE PLUS

Advanced "Walkman-sized" 1,2,3,or 4-gas Confined Space Gas Monitor

Q-RAE ^{Plus} is a full-featured, compact, one-to-four sensor confined space gas monitor.

New features include easy-to-change, externally accessed battery packs, (available in both alkaline and rechargeable versions), and an even more water resistant case design.

The rechargeable, lithium-ion battery pack provides up to 20-hours of continuous operation.

DATALOGGING

Q-RAE ^{Plus} *includes* 16,000 points "Wrap around" datalogging and Windows™ software. Comes with software & computer interface cable included

Advanced Features

- One-to-four reliable, plug-in smart sensors
    - Combustible
    - Oxygen
    - Hydrogen sulphide
    - Carbon monoxide •
- Wide rage of additional substance specific toxic sensors: SO_2, NO, NO_2, CI_2, HCN, NH_3, PH_3
- Rechargeable lithium-ion battery pack provides up to 20-hours (more than 2 work shifts) of continuous operation
- Rugged housing withstands use in harsh environments
    - Water and dust resistant case
    - Strong protective rubber boot
    - Highly resistant to radio frequency and other electromagnetic interference

**lifetime warranty (excluding abuse) on LCD display; sensor blocks; Printed Circuit Board;
1 year on Battery & pump
2 years on H2S; LEL; CO; O2 Sensors.
[All others 1 year]**

- Strong, built-in sample-draw pump with optional collapsible sample-probe
- Also available in diffusion configuration
- One-button calibration with auto-zero capability
- Large, simple-to-use buttons operable with three layers of gloves
- Loud audible alarm
- Bright visual alarm
- Vibration alarm
- Interchangeable lithium-ion and alkaline battery packs
- Comfort Beep

Applications

- Confined Space Entry
— Wastewater treatment plants
— Shipyard and maritime confined spaces
— Land-fill operations
— Trenches, silos, railcars
— Sewers and manholes
- Refineries and petrochemical plants, including offshore drilling and plant shutdowns
- Power plants
- Pulp and paper industry
- Steel mills

Sensor Specifications

Sensor	Range	Resolution	Response Time (T 90)
Oxygen	0 ~ 30%	0.1%	15 seconds
Combustible	0 ~ 100% LEL	1% LEL	15 seconds
	0 ~ 100% VOL	1% VOL	15 seconds
Carbon Monoxide	0 ~ 500 ppm	1 ppm	20 seconds
Hydrogen Sulphide	0 ~ 100 ppm	1 ppm	30 seconds
Sulphur Dioxide	0 ~ 20 ppm	0.1 ppm	15 seconds
Nitric Oxide	0 ~ 250 ppm	1 ppm	20 seconds
Nitrogen Dioxide	0 ~ 20 ppm	0.1 ppm	25 seconds
Chlorine	0 ~ 10 ppm	0.1 ppm	60 seconds
Hydrogen Cyanide	0 ~ 100 ppm	1 ppm	60 seconds
Ammonia	0 ~ 50 ppm	1 ppm	150 seconds
Phosphine	0 ~ 5 ppm	0.1 ppm	60 seconds

Monitor Specifications

Size	4.5" x 3" x 1.8" (11.5 cm x 7.6 cm x 4.6 cm)
Weight	15 oz. (425 g)
Sensors	Combustible: Protected dual-mode catalytic bead for 0 ~100% LEL Oxygen: Electrochemical fuel-cell Toxic: Interchangeable electrochemical for CO, H_2S, SO_2, NO, NO_2, CL_2, HCN, NH_3, and PH_3
Battery	Interchangeable Li-Ion and alkaline battery packs. Fitted with rechargeable lithium-ion battery pack with internal smart charging, 120V AC/DC wall adapter, and spare alkaline battery adaptor
Operating hours	Up to 20-hours of continuous (typical) operation with lithium-ion battery pack
Display	2-line, 16-digit LCD with LED back-light, automatic activation in dim-light or alarm condition.
Keypad	1 operation key and 2 programming keys
Attachments	Durable, rubber boot with belt clip and wrist strap
Temperature	- 4 to 113°F (- 20 to 45°C)
Humidity	0% to 95% relative humidity (non-condensing)
Direct readout (instantaneous up to 4 values)	Instantaneous readings for up to four sensors: • Oxygen as percentage by volume • Combustible: LEL range as percent of LEL • Combustible: Thermal conductivity mode as percent volume • Toxic gases as parts-per-million by volume • High and low values for all gases • STEL and TWA values of toxic gases • Battery and shut down voltage • Date, time, elapsed time, temperature
Alarms	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 and TWA: 1 beep and flash per second • Alarms latching with manual override or automatic reset • Additional diagnostic alarm and display message for low battery and pump stall
Intrinsic Safety	UL® Classified as Intrinsically Safe for use in Class 1, Division1, Groups A, B, C, & D, and Class 2 Groups E, F, G Hazardous Locations, and European Community (ATEX) Eex ia d IIC T4/T3
Calibration	Two-point field calibration for zero and span, optional three point calibration for oxygen
Datalogging	16,000 datalogging points downloadable to PC with serial number of unit, user ID, date, time, site number, calibration and readings
Sampling pump	Optional, internal pump with user selectable flow-rate: Low— 200cc/min, High — 300cc/min

QRAE PLUS

Your **Q-RAE** Plus comes with:-

• Monitor as chosen by you – diffusion or internal pump

• Sensors as specified by you

• Datalogging with 16,000 points

• ProRAE Suite Package for Windows™

• Computer interface cable

• Rechargeable lithium-ion battery pack with charger

• Alkaline battery adaptor

• Calibration adaptor

• Quick reference guide

• Operators manual

• Training video

• Protective rubber boot with belt-clip

• Pumped units additionally include:

  — 10 water trap filters

  — Inlet probe 3"

  — Water trap adapter

Accessories

• Hard transport case

• 15' (5 m) Tygon® tubing

• Constant flow hand pump (for diffusion models)

• Tool Kit

• Calibration gas. Four-gas mix in a 34L cylinder; (50% LEL, 20.9% O2, 10ppm Hydrogen Sulphide, 50 ppm Carbon Monoxide) or other concentrations

• Calibration regulator and tubing

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[All others 1 year]

Intrinsically
Safe
ATEX
EEx ia d IIC T4/T3

ISO 9001 ✔ CERTIFIED