MultiRAE

Wireless portable 1-6 gas monitor with advanced PID (VOC) detection capability and a selection of 25 sensors.

Product description

The MultiRAE delivers the broadest PID sensor range in its class and the versatility to support 25 intelligent interchangeable sensor options (such as PID, NDIR for combustibles and CO_2, ammonia, chlorine, formaldehyde, and phosphine) to fully meet the monitoring needs in a variety of applications, including industrial hygiene, personal protection, leak detection, and HazMat response.

The MultiRAE's optional wireless capability improves safety by providing commanders and safety of cers real-time access to instrument readings and alarm status from any location for better situational awareness and faster incident response.

Features

✔ Man down and other alarms with real-time remote wireless notification

✔ Highly versatile and customizable for different applications

✔ Available in pumped and diffusion versions

✔ 20+ interchangeable intelligent sensors, including ppb, PID, gamma, and NDIR

✔ Extensive on-board gas libraries (190 VOCs and 55 combustible gases)

✔ Continuous datalogging for 6 months, for 5 sensors, 24/7

✔ Field-replaceable sensors, pump, and plug and play battery

✔ Fully automated bump testing and calibration with AutoRAE2

✔ Device Management with Honeywell Sotera™ Express

Applications

✔ Aviation (Wing Tank Entry)

✔ Chemical

✔ Environmental

✔ Oil and gas

✔ Pharmaceutical

✔ Shipping/marine

Technical specifications

Instrument Specifications	
Size	7.6" H x 3.8" W x 2.6" D (193 x 96.5 x 66 mm)
Weight	31 oz (880 g)
Sensors	25 intelligent interchangeable field-replaceable sensors including PID for VOCs, electrochemical sensors for toxic gases and oxygen, combustible LEL and NDIR sensors, and CO_2 NDIR sensor.
Battery options, runtime[5] and recharge time	- Rechargeable Li-ion (~12-hr. runtime, < 6-hr. recharge time) - Extended duration Li-ion (~18-hr. runtime, < 9-hr. recharge time) - Alkaline adapter with 4 x AA batteries (~6-hr. runtime)
Display	Monochrome graphical LCD display (128 x 160) with backlighting. Automatic screen "flip" feature.
Display readout	- Real-time reading of gas concentrations; PID measurement gas and correction factor - Man Down alarm on/off; visual compliance indicator; battery status; datalogging on/off - Wireless on/off and reception quality. - STEL, TWA, peak, and minimum values
Keypad buttons	3 operation and programming key (Mode, Y/+, N/-)
Sampling	Built-in pump. Average flow rate: 250 cc/min. Auto shutoff in low-flow conditions
Calibration	Automatic with AutoRae 2 Test and Calibration System or manual
Alarms	Wireless remote alarm notification; audible (95 dB @ 30 cm), vibration, visible (flashing bright red LEDs), and on-screen indication of alarm conditions - Man Down Alarm with pre-alarm and real-time remote wireless notification[1]
Datalogging	Continuous datalogging (6 months for 5 sensors at 1-minute intervals, 24/7) - User-configurable datalogging intervals (from 1 to 3,600 seconds)
Communication and Data Download	- Data download and instrument set-up and upgrades on PC via desktop charging and PC comm. cradle, travel charger, or AutoRAE 2 Automatic Test and Calibration System - Wireless data and alarm status transmission via built-in RF modem (optional)
Wireless Network	ProRAE Guardian Real-Time Wireless Safety System or EchoView Host-based Closed-Loop System
Wireless Range (Typical)	MultiRAE to RAELink3 [Z1] Mesh modem ~330 feet (100 meters) MultiRAE to EchoView Host, RAEMesh Reader or RAEPoint ~660 feet (200 meters) MultiRAE to Wi-Fi Access Point ~330 feet (100 meters)
Operating temperature	-4° to 122°F (-20° to 50°C)
Humidity	0 to 95% relative humidity (non-condensing)
Dust and water Resistance	IP-65 ingress protection rating (dust-tight and waterproof against hosing jets coming from all directions)
Safety Certifications	CSA: Class I, Division 1, Groups A, B, C and D, T4 Class II, Division 1; Groups E, F, G; T85°C ATEX: 0575 II 1G Ex ia IIC T4 Ga 2G Ex ia d IIC T4 Gb with IR Sensor installed I M1 Ex ia I Ma IECEx: Ex ia IIC T4 Ga Ex ia d IIC T4 Gb with IR Sensor installed I M1 Ex ia I Ma IECEx/ANZEx: Ex ia IIC T4 Ga Ex ia d IIC T4 Gb with IR Sensor installed Ex ia I Ma
EMI/RFI	EMC directive: 2004/108/EC
Performance Tests	MIL-STD-810G and 461F compliant. LEL CSA C22.2 No. 152; ISA-12.13.01

(1) Additional equipment and/or software licenses may be required to enable remote wireless monitoring and alarm transmission.
(2) RAE Systems recommends calibrating sensors on installation.
(3) A two-gas combination sensor is required for a six-gas configuration.
(4) Specifications are subject to change.
(5) Specification for non-wireless monitors.

Technical specifications

Instrument Specifications cont.

Languages	Arabic, Chinese, Czech, Danish, Dutch, English, French, German, Indonesian, Italian, Japanese, Korean, Norwegian, Polish, Portuguese, Russian, Spanish, Swedish, and Turkish
Warranty	- Four years on Liq O_2 sensors - Three years on CO and H_2S sensors - Two years on non-consumable components and catalytic LEL sensors - One year on all other sensors, pump, battery, and other consumable parts
Wireless Frequency	ISM license free band. IEEE 802.15.4 Sub 1GHz, Wi-Fi 802.11 b/g
Wireless approvals	FCC Part 15, CE R&TTE, Others[6]
Radio Module	Supports RM900A

(6) Contact RAE Systems for country specific wireless approvals and certificates.

Sensor Specifications

		Range	Resolution
PID Sensor	VOC 10.6 eV (HR)	0 to 5,000 ppm	0.1 ppm
Combustible Sensors	Catalytic LEL	0 to 100% LEL	1% LEL
	NDIR (0-100% LEL Methane)	0 to 100% LEL	1% LEL
	NDIR (0-100% Vol. Methane)	0 to 100% Vol.	0.1% Vol.
Carbon Dioxide CO_2 NDIR Sensor	CARBON DIOXIDE (CO_2) NDIR	0 to 50,000 ppm	100 ppm
Electrochemical Sensors	Ammonia (NH_3)	0 to 100 ppm	1 ppm
	Carbon Monoxide (CO)	0 to 500 ppm	1 ppm
	Carbon Monoxide (CO), Ext Range	0 to 2,000 ppm	10 ppm
	Carbon Monoxide (CO), H_2-comp.	0 to 2,000 ppm	10 ppm
	Carbon Monoxide (CO)	0 to 500 ppm	1 ppm
	Hydrogen Sulfide (H_2S) - Combo	0 to 200 ppm	0.1 ppm
	Chlorine (Cl_2)	0 to 50 ppm	0.1 ppm
	Chlorine Dioxide (ClO_2)	0 to 1 ppm	0.03 ppm
	Ethylene Oxide (Et0-A)	0 to 100 ppm	0.5 ppm
	Ethylene Oxide (Et0-B)	0 to 10 ppm	0.1 ppm
	Formaldehyde (HCH0)	0 to 10 ppm	0.01 ppm
	Hydrogen Cyanide (HCN)	0 to 50 ppm	0.5 ppm
	Hydrogen Sulfide (H_2S)	0 to 100 ppm	0.1 ppm
	Methyl Mercaptan (CH_3-SH)	0 to 10 ppm	0.1 ppm
	Nitric Oxide (N0)	0 to 250 ppm	0.5 ppm
	Nitrogen Dioxide (NO_2)	0 to 20 ppm	0.1 ppm
	Oxygen (O_2)	0 to 30% Vol.	0.1%Vol.
	Phosphine (PH_3)	0 to 20 ppm	0.1 ppm
	Sulfur Dioxide (SO_2)	0 to 20 ppm	0.1 ppm

The Bruusgaard System

TBS is a unique turnkey portable gas detection solution, giving you increased safety and substantial cost savings through standardised instruments, routines, training and procurement.

Logistic Support

At any given time we know the status of all vessels and sites covered by The Bruusgaard System. We consolidate all shipments and make sure you have everything you need on board until next scheduled delivery. This results in fewer shipments and substantial savings!

- Year round follow up of instruments, spares and consumables
- Handling of all shipments & logistics
- Annual reports per vessel including budgeting

Safety

QA – strict routines and logging

- Crew are able to use instruments and follow routines correctly
- Instruments are in proper working condition at all times
- Instruments are calibrated at correct intervals
- Sensors and other items are replaced at correct intervals
- Usage of instruments is logged, including abnormal observations
- Traceability – instrument history and usage
- Routines and procedures can merge into the overall QA-system

Effective and proven training is an integrated part of The Bruusgaard System.

Instruments

All the equipment used for gas detection and calibration is placed in a custom-made wall cabinet. Including Log & Instruction Manual, which are crucial to maintaining the safety integrity.

- Standardised vessel specific gas detector solutions
- Total solutions including all equipment and routines necessary for efficient and safe use, storage and maintenance

Cost Savings

Some of our customers have been able to go from 8 to 10 suppliers down to 1 – translating into cost savings of up to 40-50%. For one vessel, this could be thousands of dollars annually, and for a whole fleet, the cost savings can be dramatic. This is achieved through:

- One contact for worldwide supply of spares & gases
- All service and calibration can be done on site.
- Reductions of instrument types from 10-12 to 2-3

Reduced maintenance costs through:

- On board calibration
- Fewer instruments on board
- No need for spares on board
- One PO per year
- Increased safety
- Less use of administrative time