ToxiRAE Pro

Personal Wireless Monitor for Toxic Gases and Oxygen

Product description

The ToxiRAE Pro is the world's first wireless personal monitor for toxic gases and oxygen. The ToxiRAE Pro can detect a broad range of gases—from carbon monoxide, hydrogen sulfide, and oxygen to ammonia, chlorine, and formaldehyde. The ToxiRAE Pro provides safety professionals wireless remote access to real-time instrument readings and alarm status for better visibility and faster incident response. The ToxiRAE Pro's intelligent interchangeable sensors store calibration data, which allows users to monitor for one gas one day and another gas the next, by simply swapping the sensors in the ToxiRAE Pro.

Features

- Wireless elevates safety to the next level
- Over 20 intelligent interchangeable sensor options to cover a wide variety
- Man Down Alarm with real-time remote wireless notification
- Easy to maintain with replaceable sensor, fan, filter, and Li-ion battery
- Fully automatic bump testing and calibration with AutoRAE 2

Applications

- Agriculture
- Chemical
- Fire service / Hazmat
- Food and beverage
- Oil and gas
- Pharmaceutical
- Pulp and paper
- Steel manufacturing
- Water and wastewater industries

Technical specifications

ToxiRAE Pro	
Size	4.6" H x 2.4" W x 1.2" D (118 x 60 x 30 mm)
Weight	7.76 oz. (220 g)
Battery	Rechargeable Li-ion battery - Operating time: > 30 hours (normal operation, non-wireless) - Recharge time: < 4 hours through charging cradle
Display	Graphical LCD display with white LED backlighting (activated when monitor is in alarm or with a button press)
Display readout	- Real-time reading of VOC concentrations in parts per million or mg/m3; battery status; data logging on/off; wireless on/off and reception quality - STEL, TWA, and peak values
Keypad	2 buttons for operation and programming
Sampling	Diffusion
Calibration	Automatic with AutoRAE2 Test and Calibration Station[2] or manual
Alarm modes	- Wireless remote alarm notification; audible (95 dB @ 30 cm), vibration, visible alarm (flashing bright red LEDs), and on-screen indication of alarm conditions - Man Down Alarm with pre-alarm and real-time remote wireless notification
Datalogging	Continuous datalogging with a three-month capacity (at one-minute intervals) - User-configurable datalogging interval (from 1 to 3,600 seconds)
Communication and data download	- Data download and instrument set-up on PC via charging and PC comm. cradle - Data download via AutoRAE 2 Automated Test and Calibration Station - Wireless data and status transmission[1] via built-in RF modem (optional)
Wireless network	ProRAE Guardian Real-Time Wireless Safety System or Closed Loop Network with EchoView Host
Wireless range (typical)	ToxiRAE Pro to Mesh Router, EchoView Host, or Mesh Reader[2] ~ 660 feet (200 meters) ToxiRAE Pro to RAELink3 Mesh or RAELink3 Z1 Mesh modems ~ 330 feet (100 meters)
Operating temperature	-4° to 131°F (-20° to 55°C)
Humidity	0% to 95% relative humidity (non-condensing)
Dust and water resistance	IP-65 rating for dust and water ingress protection (validated by an independent test laboratory)
Hazardous location approvals	CSA: Class I, Division 1, Groups A, B, C and D. T-code T4 Class I, Zone 0 A/Exia IIC T4 ATEX: CE, II 1G, Ex ia IIC Ga T4 IECEx: Ex ia IIC Ga T4 China Ex: Ex ia IIC T4
EMC/RFI	EMC directive: 2004/108/EC
Warranty	- Two years on non-consumable components and CO, H_2S, and O_2 sensors - One year on all other sensors, battery, and other consumable parts
Wireless frequency	ISM license-free band. IEEE 802.15.4 Sub 1GHz
Wireless approvals	FCC Part 15, CE R&TTE, Others[4]
Radio module	Supports RM900

(1) Wireless units have a functioning RF modem and are ready for wireless deployments; non-wireless units cannot be upgraded to wireless. Additional equipment and/or software licenses may be required to enable remote wireless monitoring and alarm transmission. Additional equipment and/or software licenses may be required to enable remote wireless monitoring and alarm transmission.

(2) Contact Honeywell RAE Systems for availability.

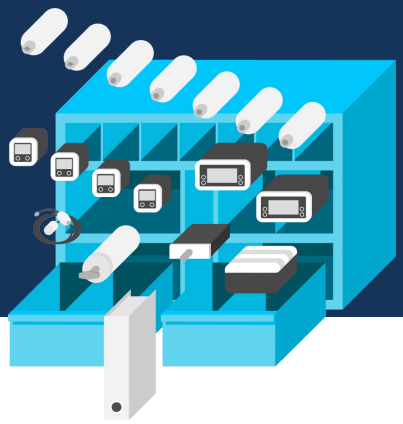
(3) Honeywell RAE Systems recommends calibrating sensors on installation.

(4) Contact Honeywell RAE Systems for country-specific wireless approvals and certificates. Specifications are subject to change.

Sensor specifications

Gas name	Range	Resolution
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
Chlorine (Cl_2)	0 to 50 ppm	0.1 ppm
ChlorineDioxode (ClO_2)	0 to 1 ppm	0.03 ppm
Ethylene Oxide (ETO-A)	0 to 100 ppm	0.1 ppm
Ethylene Oxide (ETO-B)	0 to 10 ppm	1 ppm
Ethylene Oxide (ETO-C), Ext. range	0 to 500 ppm	10 ppm
Formaldehyde (HCHO)	0 to 10 ppm	0.05 ppm
Hydrogen (H_2)	0 to 1,000 ppm	10ppm
Hydrogen Cyanide (HCN)	0 to 50 ppm	0.5 ppm
Hydrogen Sulfide (H_2S)	0 to 100 ppm	0.1 ppm
Hydrogen Sulfide (H_2S), Ext. range	0 to 1,000 ppm	1 ppm
Methyl Mercaptan (CH_3-SH)	0 to 10 ppm	0.1 ppm
Nitrogen Oxide (NO)	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



BRUUSGAARD

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