



ppbRAE 3000

Portable Handheld VOC Monitor



The compact ppbRAE 3000 is a comprehensive VOC gas monitor and datalogger for hazardous environments. The ppbRAE 3000 is the most advanced handheld VOC monitor available for parts-per-billion detection. This third-generation patented PID device monitors VOCs using a photoionization detector with a 9.8 eV, 10.6 eV UV-discharge lamp.

The built-in wireless modem allows real-time data connectivity with the ProRAE Guardian command center located up to two miles/3 km away (with optional RAElink3 portable modem) from the ppbRAE 3000 detector.

- Accurate VOC measurement in all operating conditions
- Easy access to lamp and sensor in seconds without tools
- Patented sensor and lamp auto-cleaning reduces maintenance
- Monitors real-time readings and location of people
- Low Cost of Ownership: 3-year 10.6 eV lamp Warranty

KEY FEATURES

Proven PID Technology

- 3-second response time
- Extended range from 1 ppb to 10,000 ppm with best in class linearity
- Humidity compensation with integral humidity and temperature sensors

Integrated

- Real-time wireless data transmission through built-in Bluetooth & RAElink3 link
- Integrated Correction Factors list of 220 compounds—more than any other PID
- Includes flashlight for dark conditions
- Large graphic display presents gas type, Correction Factor and concentration

Durable

- Easy access to battery, lamp and sensor in seconds without tools
- Rugged housing withstands use in harsh environments
- IP-67 waterproof design for easy cleaning and decontamination

APPLICATIONS

- Oil & Gas
- HazMat
- Industrial Safety
- Civil Defense
- Environmental & Indoor Air Quality



Workers can easily measure VOCs and wirelessly transmit readings up to two miles/3 km away.



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Specifications

Detector Specifications

| | |
|--------------------------|--|
| Size | 10" L x 3.0" W x 2.5" H (25.5 cm x 7.6 cm x 6.4 cm) |
| Weight | 26 oz (738 g) |
| Sensors | Photoionization sensor with standard 10.6 eV or optional 9.8 eV lamp |
| Battery | <ul style="list-style-type: none">Rechargeable, external field-replaceable Lithium-Ion battery packAlkaline battery adapter |
| Operating Hours | 16 hours of operation (12 hours with alkaline battery) |
| Display Graphic | 4 lines, 28 x 43 mm, with LED backlight for enhanced display readability |
| Keypad | 1 operation and 2 programming keys, 1 flashlight on/off |
| Direct Readout | Instantaneous reading <ul style="list-style-type: none">VOCs as ppm by volume or mg/m³ (3 in upper case for cubic)STEL, TWA and PEAKBattery and shutdown voltageDate, time, temperature |
| Alarms | 95 dB (at 12"/30 cm) buzzer and flashing red LED to indicate exceeded preset limits <ul style="list-style-type: none">High: 3 beeps and flashes per secondLow: 2 beeps and flashes per secondSTEL and TWA: 1 beep and flash per secondAlarms latching with manual override or automatic resetAdditional alarm for low battery and pump stall |
| EMI/RFI | Highly resistant to EMI/RFI Compliant with EMC Directive 89/336/EEC |
| IP Rating | <ul style="list-style-type: none">IP-67 unit off and without flexible probeIP-65 unit running |
| Datalogging | Standard 6 months at one-minute intervals |
| Calibration | Two-point or three-point calibration for zero and span Calibration memory for 8 calibration gases |
| Sampling Pump | <ul style="list-style-type: none">Internal, integrated flow rate at 500 cc/mnSample from 100' (30m) horizontally and vertically |
| Low Flow Alarm | <ul style="list-style-type: none">Auto pump shutoff at low-flow condition |
| Communication | <ul style="list-style-type: none">Download data and upload instrument set-up from PC through charging cradle or optional Bluetooth™Wireless data transmission through built-in RF modem |
| Wireless Network | ProRAE Guardian Real-Time Wireless Safety System |
| Wireless Range (Typical) | ppbRAE 3000 to RAELink3 or RAELink3 Z1 modems ~ 33 feet (10 meters) |
| Safety Certifications | <ul style="list-style-type: none">US and Canada: UL, cUL, Classified as Intrinsically Safe for use in Class I, Division 1 Groups A, B, C, DEurope: ATEX Ex II 2GEx ia IIC/IIB T4IECEX: Ex ia IIC/IIB T4 |
| Temperature | -4° to 113° F (-20° to 50° C) |
| Humidity | 0% to 95% relative humidity (non-condensing) |
| Attachments | Durable black rubber boot with straps |
| Warranty | 3-year warranty for 10.6 eV lamp, 1 year for pump, battery, and instrument |
| Wireless Frequency | ISM license free band. Bluetooth |
| Wireless Approvals | FCC Part 15, CER&TTE, Others ¹ |
| Radio Module | Supports BTM431 |

¹ Contact RAE Systems for country specific wireless approvals and certificates. Specifications are subject to change.

Sensor Specifications

| Gas Monitor | Range | Resolution | Response Time T90 |
|-------------|------------------|------------|-------------------|
| VOCs | 0 to 9999 ppb | 1 ppb | < 3 s |
| | 10 to 99 ppm | 0.01 ppm | < 3 s |
| | 100 to 99 ppm | 0.1 ppm | < 3 s |
| | 1000 to 9999 ppm | 1 ppm | < 3 s |

Monitor only includes:

- ppbRAE 3000 Monitor, with RAE Systems UV lamp, as specified
- Datalogging with ProRAE Studio II
- Charging/download adapter
- VOC Zeroing Tubes (1 box)
- Tube adapter
- Tedlar® bag for calibration
- Flex-I-Probe™
- External filter
- Rubber boot with straps
- Alkaline battery adapter
- Lamp-cleaning and tool kit
- Operation CDROM
- Operation & Maintenance manual
- Soft leather case

Monitor with accessories kit adds:

- Hard transport case with pre-cut foam padding
- Charging/download cradle
- 5 Porous metal filters and O-rings
- Organic vapor zeroing kit
- Gas outlet port adapter and tubing

Optional calibration kit adds:

- 10 ppm isobutylene calibration gas, 34L
- Calibration regulator and flow controller

Optional Guaranteed Cost of Ownership Program:

- 4-year repair and replacement guarantee
- Annual maintenance service

CORPORATE HEADQUARTERS

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