

ppbRAE

Portable Continuous ppb VOC Detector Monitor

The ppbRAE is the most sensitive handheld VOC monitor in the world with true parts per billion (ppb) detection of extremely low level, low vapor pressure and highly toxic Volatile Organic Compounds (VOCs) such as nerve agent, pesticide residues and low level permeation breakthrough detection.

Advanced Features

- New patented planar, dual channel PID detector
 - self-cleaning
- New super bright UV lamp
 - Increased sensitivity down to 1 ppb
 - Reduced humidity interference
 - Improved linearity
 - Easily accessible lamp and sensor
- Strong, built-in sample draw pump with pump stall feature
 - Prevents liquid flow into monitor
- Snap-in, field replaceable NMH rechargeable battery
 - 10 hours of continuous operation
 - Smart battery charging
 - Alkaline battery holder supplied
 - Automotive charger available
- Large keys operable with 3 layers of gloves
- Large easy to read back light display
 - Alarm activated
 - Darkness manually activated

- Preset alarm thresholds for STEL, TWA, low and high level peak values
- Audio buzzer and flashing LED display will be activated when the limits are exceeded
- 15,000 points data logging storage capacity for data download to PC
- Rubber protective boot
- 102 built-in correction factors from a RAE list of 250+ chemicals
- Protected from portable radios

Applications

- Weapons of Mass Destruction – chemical warfare agents
- Emergency response to hazardous spills
- Indoor air quality in new, sick and mixed usage buildings
 - Outgassing of new building materials (carpets and fabrics)
 - Hospital emergency room patient off gassing
 - Ethylene oxide, Formaldehyde
- Breathe sampling
- Personnel monitoring of very toxic compounds – MDI, TDI
- Environmental survey instrument
 - Leak detection
 - Residue studies
 - Drug detection
- Hypo-allergenic studies in chemical clean rooms
- Laboratory fume hood breakthrough
- Personal protective equipment (PPE) – breakthrough, decision making



Specifications

Range	Resolution	Response Time (T90): Isobutylene (calibration gas)
0 – 999 ppb	1 ppb	< 5 sec
0.01 – 9.99 ppm	0.01 ppm	< 5 sec
0.1 – 199.9 ppm	0.1 ppm	< 5 sec

Measurement accuracy with 10.6 eV lamp: (Isobutylene) ± 20 ppb or 10% of reading

Size	8.2" (21.8cm)L x 3" (7.62 cm)W x 2" (5cm)H
Weight	19.5 oz (553 gm) with battery pack
Detector	New patented, planar, dual channel, Photo-ionization sensor with super bright 10.6 eV
Battery	Rechargeable, external, field replaceable Nickel Metal Hydride battery pack Alkaline battery holder (for 4 AA batteries)
Operating Hours	10 hours continuous
Battery Charging	Up to 10 hours charge through built-in smart charger
Display	Large LCD, manual, darkness and alarm activated
PID Detector	Easy access to lamp and sensor
Correction Factors	102 built-in VOC gases
Calibration	Two points field calibration of zero and standard reference gas
Background Display	User selectable to monitor or cancel background level Calibration memory of 8 calibration curves, alarm limits, span values & calibration date
Robust Inlet Probe	Flexible 5" tubing
Large keypads	1 operation and 2 program keys
Direct Readout	Instantaneous, average, STEL and peak value, battery voltage and elapsed time
Intrinsic Safety	UL & cUL Class 1, Division I, Group A,B,C,D (US & Canada), Eex ia IIC T4 & CE (Europe)
Alarm Setting	Separate preset alarm limit for high, low, STEL and TWA alarm
Operating Mode	Survey or Hygiene, user selectable Audible Alarm: 90 db buzzer
Visual Alarm	Flashing red LED
External Alarm	Optional plug in pen size vibration alarm
Alarm Mode	Latching or automatic reset
Data Logging	15,000 points with time/date. Header information includes monitor serial number
Communication	Download data and up load instrument setup from PC through RS-232 link to serial port
Remote Control	Power On/Off & data logging through RS-232
Analog Output	Calibrated output, user selectable range
Sampling Pump	Internal integrated flow rate 400 cc/minute
Low Flow Alarm	Auto shut off pump at low flow condition
Temperature	14°F to 113°F (-10°C to 40°C)
Humidity	0% to 95% relative humidity (non-condensing)

Ordering Information

Model PGM-7240 Monitor

- ppbRAE unit with 10.6eV PID detector
- Nickel metal hydride batteries
- Alkaline battery holder
- Rubber boot
- Inlet probe and water trap filter
- Operation and maintenance manual
- Soft carry case
- Pro-RAE Suite software (data logging version)

Model PGM-7240 Kit

Items included with Monitor Plus:

- Calibration Gas
- Calibration Regulator with flow controller
- Porous metal filter and O-ring kit
- Gas outlet port and tubing
- Tool kit
- Hard transport case

Accessories

- Lamp cleaning kit
- Automotive charger/adaptor
- Remote access probe
- External vibration alarm
- Wrist strap

Data Logging Monitors also include:

- Software, ProRAE Suite Package for Windows 98, NT, 2000 & NT
- Computer Interface cable

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