

MULTIRAE IR

CO2 One-to-Five Gas Monitor with VOC Detection

The MultiRAE IR is an extremely flexible one-to-five sensor instrument for use in indoor air quality, industrial hygiene, and many other monitoring applications. The MultiRAE IR is the only instrument available on the market today that can offer protection using 0-20,000 ppm standard gas detection sensors for the detection of oxygen, combustible gas, and specific toxic gases, newly developed NDIR sensor to measure CO₂, as well as an integrated, uniquely patented Photo-Ionization Detector (PID) for the ultimate in broad-range toxic gas detection. The MultiRAE IR's versatility allows it to replace a wide range of monitors, saving training and maintenance costs. The MultiRAE IR is quickly and easily changed from a sophisticated technician instrument to a simple text or display only monitor. The same monitor can be used as a personal monitor, a hand-held sniffer, or as a continuous, operational area monitor.

Advanced Features

- Newly developed compact non-dispersive infrared (NDIR) CO₂ sensor with 10 ppm CO₂ resolution
 - 0-2,000 ppm measurement of total VOCs with 0.1 ppm resolution
 - Built-in sample draw pump with automatic liquid trap protection.
- Any plug-in "smart" toxic sensor: CO, H₂S, SO₂, NO, NO₂, Cl₂, HCN, NH₃, PH₃
 - Large digital display Visual alarm with flashing LED
 - Loud audible alarm with varying tones for different alarm conditions and an optional remote vibration alarm for noisy areas
 - Programmable alarms can be changed on the MultiRAE IR or from easy-to-use Windows 98, 2000, NT & XP software
 - 20,000 point (65 hours, 5 channels at 1 minute intervals) datalogging storage capacity for download to PC via ProRAE Suite
 - Easy on-button calibration
 - 12 hours of continuous monitoring with rechargeable Li+ battery pack
 - Rugged weather-proof composite case

Applications

- Indoor Air Quality
- Beverage and brewery
- Food Industry
- Hospitals
- Respirable breathing air testing



Specification

Gas Monitor	Range	Resolution	Response Time (T 90)
Carbon Dioxide	0-20,000 ppm	10 ppm	60 seconds
Oxygen	0-30 %	0.1 %	15 seconds
Combustible gas	0-100% LEL	1%	15 seconds
VOCs	0-200 ppm	0.1 ppm	10 seconds
	200-2,000 ppm	1 ppm	10 seconds
Carbon Monoxide	0-500 ppm	1 ppm	20 seconds
Hydrogen Sulfide	0-100 ppm	1 ppm	30 seconds
Sulfur 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

Detector Specifications

Size	4.6"L x 3"W x 1.9"H (12 cm x 7.6cm x 4.8cm)
Weight	16oz with battery (454 g)
Detectors	Up to 5 sensors including non-dispersive infrared sensor for CO2. Protected catalytic bead for combustible gas. Interchangeable electrochemical sensors for oxygen and toxic gases. Photo-ionization detector for VOCs (10.6 eV, 9.8 eV and 11.7 eV lamps)
Battery	Interchangeable external Li-Ion and alkaline battery packs. Rechargeable units include lithium-ion battery pack with internal smart charging, 120V AC/DC wall adapter, and spare alkaline batter pack
Operating Hours	12 hours continuous Unit will run and charge simultaneously
Display	2-line, 16 digit LCD with LED back light automatically in dim light or alarm condition
Keypad	1 operation key and 2 programming keys
Attachments	Wrist strap and high visibility rubber boot
Direct Readout	Instantaneous (up to 5) values: <ul style="list-style-type: none"> Oxygen as percentage by volume Combustible gas as percentage of lower explosion limit (LEL), Toxic gas, VOC and CO2 as parts per million by volume Peak values for all gases STEL and TWA values of toxic gas, VOC and CO2 Battery and shut down voltage Date, time, elapsed time, temperature LEL/VOC scale (using correction factors)
Calibration	Two point field calibration for zero and span gas
Alarm	<ul style="list-style-type: none"> 90 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
Sampling Pump	Optional, internal pump with user selectable flow-rate: Low - 200cc/min, High- 300 cc/min
Datalogging	20,000 points (64 hours, 5 channels at one minute intervals) download to PC with serial number of unit, user ID, site number, calibration date
Humidity	0% to 95% relative humidity (non-condensing)
Temperature	-4 to 113 F (-20 to 45 C)

MultiRAE IR Accessories

Monitor only includes

- Monitor as specified
- Sensors as specified
- Shipping case
- Carbon filters (for units with CO)
- Calibration adapter
- Operation and maintenance manual
- Rubber boot with belt-clip
- Alkaline battery adapter
- Rechargeable units additionally include:
 - Lithium-ion (Li-Ion) battery
 - 120 V AC/DC Wall Adapter (if specified)
- Pumped units additionally include:
 - 10 Water trap filters
 - Inlet probe 3"
 - Water trap adapter

Monitor with Accessories Kit also includes:

- Hard transport case with pre-cut foam
- 15' (5M) sample tubing
- Lamp Cleaning Kit (for detectors which include PID)

Optional Calibration Kit also includes:

- Four-gas mix in a 34 L cylinder; (50% LEL, 20.9% O2, 5000 ppm Carbon Dioxide, 50 ppm Carbon Monoxide)
- Calibration regulator (male) and tubing
- Isobutylene gas in a 34 L cylinder
- Calibration regulator (female) and tubing

Datalogging Monitors also include:

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

Warranty: Lifetime on non-consuming components (per RAE Standard Warranty), 2 years for CO2, O2, LEL, CO and H2S sensors, 1 year all other sensors, 1 year pump, 1 year battery, 1 year for 10.6 eV PID lamp



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