EntryRAE

Confined Space Entry Monitor

Affordable OSHA compliance plus reliable VOC protection

The typical confined space monitor measures oxygen, combustibles, carbon monoxide and hydrogen sulfide. Will it keep you safe in today's industrial environment? No.

When doing confined space work today, you need the added broad-band protection of a PID.

EntryRAE

The **EntryRAE** is a 4-gas monitor, plus photoionization (PID) detector. Reliable, easy to operate, and simple to calibrate, the **EntryRAE** delivers added protection without added complexity.

Simple, Modular, Durable PID

RAE Systems is the leader in PIDs. Our plug & play, patented self-cleaning PID is the most reliable and durable PID available today.

Why PID?

Typical 4-gas monitors do not detect volatile organic compounds (VOCs). VOCs are combustible, and often toxic at levels far below 10% LEL. They are commonly found in:

- Fuels, oils, degreasers
- Industrial cleaners
- Heat transfer fluids
- Solvents, paints
- Plastics, resins, adhesives
- Pesticides and herbicides

These are common industrial compounds you find in – or bring into – a confined space.

LEL sensors can be poisioned by common chemicals, including:

- Silicone compounds
- Lead compounds
- Sulfur compounds
- Phosphates

Just a few parts per million of these compounds can degrade an LEL sensor.

A PID detects VOCs!

A PID is a reliable backup for your LEL sensor. Combine a PID and a 4-gas monitor and you have **true protection from the unexpected.**

Key Features

- Reliable, self-cleaning VOC detector
- Also includes CO, H_2S, LEL and O_2 sensors
- Simple to operate
- Easy to calibrate
- Durable, weather-resistant rubber body
- Datalogging included – and automatic
- Big display with auto-backlight
- Loud alarm
- Bright red flashing LED alarms
- Up to 16 hours of continuous operation
- Interchangeable Lithium-ion and alkaline battery packs
- Charging cradle doubles as an external battery charger
- Powerful pump allows sample draws up to 100 feet (30 meters)
- Low-flow pump alarm

Applications

- Refineries
- Chemical processing
- Water & wastewater facilities
- Semiconductor manufacturing
- Rail car and tank truck cleaning
- Resin and nylon production
- Underground storage
- Sewer entries
- Cable vaults
- Agriculture

ATEX

ISO 9001 CERTIFIED

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*Specifications**

Sensor Specifications

Sensor	Range	Resolution
PID	0-999 ppm VOC	1 ppm VOC
Oxygen	0-30.0%	0.1%
Combustible Gases	0-100% LEL	1% LEL
	0-5% Volume	1% Volume
Carbon Monoxide	0-500 ppm	1 ppm
Hydrogen Sulfide	0-100 ppm	1 ppm

Detector Specifications

Size	5.9"L x 3.3"W x 1.9"H (15 x 8.3 x 4.8 cm) without clip
Weight	20 oz (567 g) with battery and clip
Sensors	5 sensors: • Protected catalytic bead for combustible gases (LEL) • Electrochemical sensors for oxygen (O_2) and hydrogen sulfide (H_2S) and carbon monoxide (CO) • Modular photoionization detector for broadband detection of VOCs using 10.6 eV lamp
Battery	• Drop-in rechargeable Li-ion battery pack • Standard alkaline battery adapter • Charging cradle doubles as external battery charger
Operating Hours	Up to 16 hours continuous with Li-ion (typical) Up to 12 hours with alkaline
Display	Large 1.4" x 1.8" (3.5 x 4.5 cm) display with automatic back-lighting in dim light or alarm condition
Keypad	Three-button operation
Direct Readout	Instantaneous for 5 values: • Oxygen as percentage by volume • Combustible gas as percentage of lower explosive limit (LEL), percentage by volume • VOCs, CO and H_2S as parts per million • TWA and STEL values for VOCs, CO and H_2S • High and low values for all gases
Alarms	• Audible (95dB at 30 cm), visible, and vibration • High: 3 beeps and flashes per second • Low: 2 beeps and flashes per second • STEL and TWA: 1 beep and flash per second • Low battery displays empty battery symbol, 1 beep per minute
EMI/RFI	Highly resistant to EMI / RFI. Compliant with EMC Directive 89/336/EEC
IP Rating	IP-55: protected against dust, protected against low pressure jets of water from all directions
Communication	PC to monitor via RS232 (USB adapter available)
Calibration	Two-point field calibration for zero and span gas
Sampling Pump	Built-in pump, 300 cc per minute flow rate
Low Flow Alarm	Auto shutoff at low-flow condition
Hazardous Area Approval	US/Canada: UL, cUL Class 1 Division 1, Groups A, B, C, D T3C. Europe ATEX II 2G EEx ia d IIC T4
Temperature	UL/cUL: -20° to 50°C; ATEX: -20° to 47°C
Humidity	0% to 95% relative humidity (non-condensing)
Attachments	Stainless-steel alligator clip (installed), wrist strap
Warranty	Lifetime on non-consuming components (per RAE Systems Standard Limited Warranty) 2 years for O_2, LEL, CO, and H_2S sensors 1 year for PID 1 year for pump and battery

*Ongoing projects to enhance our products mean that these specifications are subject to change.

EntryRAE

Monitor only includes:

- Monitor as specified
- VOC sensor (PID)
- CO, H_2S, LEL and O_2 sensors
- Lithium-ion rechargeable calibration adapter battery
- Alkaline battery adapter
- 5 external filters
- Charging cradle
  - 120 V wall charger, US plug, or 230 V wall charger, Euro plug
- ProRAE Studio software package
- Computer interface cable
  - RS232 to RS232 with USB adapter
- Calibration adapter
- User manual
- Shipping case

Optional CSK II Calibration Kit

- Hard transport case with pre-cut foam
- Sampling wand with 15 feet (3 meters) of self-coiling Teflon® tubing
- Tool kit
- Four-gas mix – 34L (50% LEL, 20.9% O_2, 10 ppm, H_2S, 50 ppm CO)
- Isobutylene – 34L (100 ppm, balance air)
- Regulators and tubing

Truck Mount

Truck Mount (Accessory)

- Cradle attachment for mounting on a wall
- 12 V adapter

AutoRAE Docking Station (Accessory)

- Automated bump test and calibration system
- Drop-in, pushbutton operation

AutoRAE Docking Station

DISTRIBUTED BY:

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www.allsafeindustries.com

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