RADIUS BZI

The new face of area monitoring

Stop worrying about missing alarms. Stop stressing over equipment downtime. The Radius™ BZ1 is built to detect gas hazards 24/7 without the hassle of elaborate wireless setups and maintenance routines. Radius just works, no questions asked, so your teams can focus on what's important and be confident that their area monitors are ready for whatever comes their way.

DEPLOY WHENEVER AND WHEREVER

Whether setting up a perimeter, or monitoring leaks or confined spaces, the Radius BZ1 allows for flexible deployments to create buffers between workers and gas hazards.

- Communicate gas hazards during emergency response, long-term projects, or while performing routine worksite maintenance by adding area monitors wherever they are needed.

- Deploy monitors for temporary work without worrying about battery life. The Radius BZ1 is the longest running area monitor on the market with 7 days (168 hours) of typical battery life and the option to extend it to over a month using the external power supply.

- Accurately detect gases regardless of environmental conditions and avoid false alarms thanks to the 360-degree gas path and all-weather sensor deployment

GET THE MESSAGE LOUD AND CLEAR

Loud audible alarms and different colored strobes for gas and non-gas events ensure workers not only know when the instrument is alarming, but why.

- Grab workers' attention with audible alarms that sound at 108 dB at 1 m to cut through high-noise environments.

- Easily distinguish between critical and non-critical events based on ultra-bright blue and red lights and differing alarm tones.

- Know what hazards are present without getting too close thanks to a display that is three times larger than its nearest competitors'.

- Focus on taking action in emergency situations with custom alarm action messages like "EVACUATE" or "VENTILATE."

KEY FEATURES

- **The Radius BZ1 is the longest running area monitor on the market with 7 days (168 hours) of typical battery life and the option to extend it to over a month using the external power supply.**

- **Accurately detect gases regardless of environmental conditions and avoid false alarms.**

- **Audible alarms that sound at 108 dB at 1 m to cut through high-noise environments.**

- **Easily distinguish between critical and non-critical events with ultra-bright blue and red lights and differing alarm tones.**

- **A display three times larger than nearest competitors'.**

- **Create wireless networks out of the box, with no setup or extra equipment needed.**

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KNOW WHAT IS HAPPENING WITHOUT APPROACHING HAZARDS

Know more, without buying more, thanks to optional LENS™ Wireless.

- Create wireless networks out of the box, with no setup or extra equipment needed, thanks to LENS Wireless and its automatic, peer-to-peer mesh network.
- Receive alarms and real-time gas readings from any other instrument on the network.
- Get long-range communication, up to 300 m (~1,000 ft) between units, with minimal impact on the instrument's best-in-class run time.

SPEND LESS TIME MANAGING YOUR INSTRUMENTS.

Your instruments will spend more time in the field and less time in the shop thanks to a unique modular design, the DSX™ Docking Station, and patented DualSense® Technology.

- Automatically bump, calibrate, manage settings, and update software for the removable, patent-pending SafeCore™ Modules using DSX™ Docking Stations.
- Have confidence that gas readings are accurate and workers are safe, even when instruments are deployed for an extended period without maintenance, thanks to the redundant sensors in patented DualSense® Technology.
- Configure your monitors, in your language, using textbased menus.

HOW WILL YOU USE YOUR RADIUS BZ1?

Area monitors are a highly flexible solution because they can be placed in temporary or long-term configurations based on your specific hazards. With the addition of LENS™ Wireless, networks are created out of the box and provide visibility into gas hazards that are happening in any location.

1. **Confined Space Monitoring** – Know what's happening in a confined space by using the pumped SafeCore Module and tubing to draw air samples to the monitor.
2. **Perimeter Monitoring** – Set up monitors around a tank, hot work, or other known hazardous areas to continuously monitor for gas leaks.
3. **Fence Line Monitoring** – Create a barrier between a safe zone and hazardous work area. Use the hopping capability of LENS Wireless to know what is happening up to 1.5 km away.
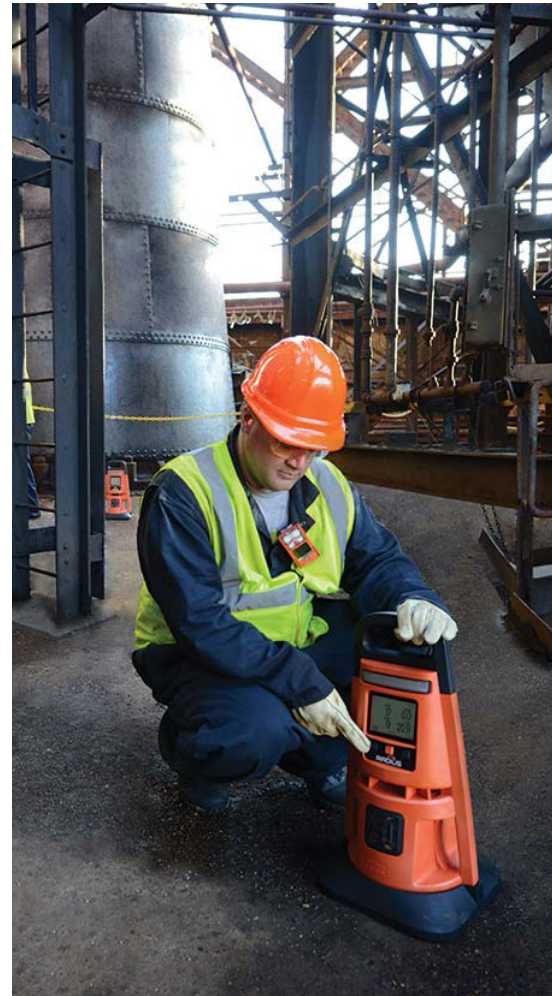
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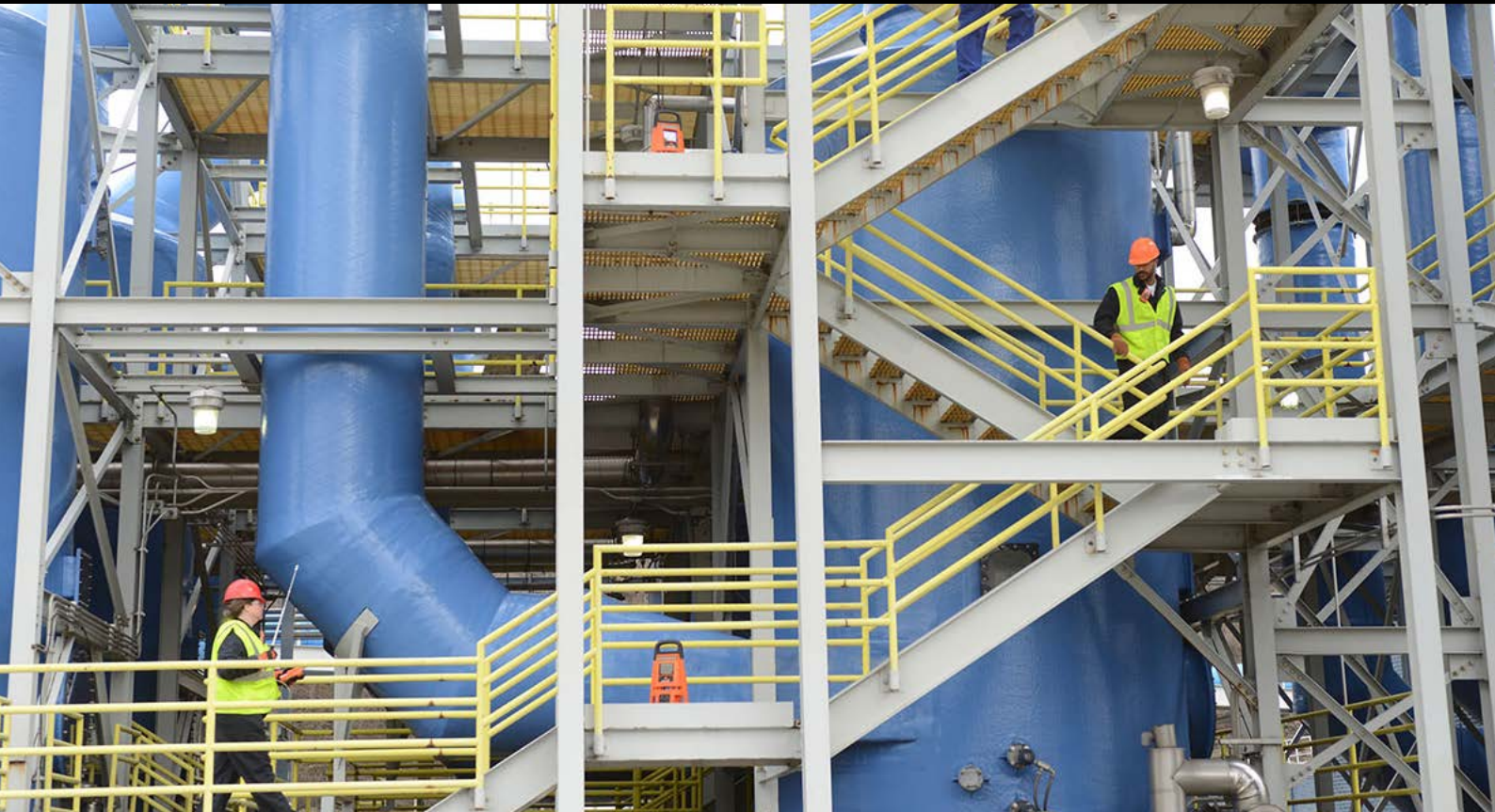
TYPICAL RANGE OF GASES DETECTED

SENSOR	RANGE
CATALYTIC BEAD	
Combustible Gases	0-100% LEL in 1% increments
ELECTROCHEMICAL	
Ammonia (NH_3)	0-500 ppm in 1 ppm increments
Carbon Monoxide (CO)	0-1,500 ppm in 1 ppm increments
Carbon Monoxide (CO High Range)	0-9,999 ppm in 1 ppm increments
Carbon Monoxide (CO/H_2 Low)	0-1,000 ppm in 1 ppm increments
Carbon Monoxide/Hydrogen Sulfide	CO: 0-1,500 ppm in 1 ppm increments
H_2S	0-500 ppm in 0.1 ppm increments
Chlorine (CL_2)	0-50 ppm in 0.1 ppm increments
Hydrogen (H_2)	0-2,000 ppm in 1 ppm increments
Hydrogen Sulfide (H_2S)	0-500 ppm in 0.1 ppm increments
Hydrogen Cyanide (HCN)	0-30 ppm in 0.1 ppm increments
Nitrogen Dioxide (NO_2)	0-150 ppm in 0.1 ppm increments
Phosphine (PH_3)	0-5 ppm in 0.01 ppm increments
Oxygen (O_2)	0-30% vol in 0.1% increments
Nitric Oxide (NO)	0-1000 ppm in 1 ppm increments
Sulfur Dioxide (SO_2)	0-150 ppm in 0.1 ppm increments
PHOTOIONIZATION	
Volatile Organic Compounds	(10.6 eV): 0-2,000 ppm in 0.1 ppm increments

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SPECIFICATIONS

Warranty	Two-year warranty, including sensors and battery
Keypad	Three buttons
Data Log	At least 3 months at 10-second intervals
Event Logging	60 alarm events
Ingress Protection	IP66
Case Material	Impact-resistant polycarbonate alloys
Dimensions	29 x 29 x 55 cm (11.5 x 11.5 x 21.5 in)
Weight	7.5 kg (16.5 lb)
Temperature Range	-20 °C to 55 °C (-4 °F to 131 °F)
Humidity Range	15%-95% non-condensing (continuous)
Display/Readout	11.2 cm (4.4 in) monochrome backlit graphical liquid crystal display (LCD)
Alarms	108 decibel (dB) at 1 m (3.3 ft) redundant audible alarms Redundant, visual alarm LEDs (red and blue)

Power Source/Run Time
Rechargeable nickel-metal hydride (NiMH) battery pack
7 days (168 hours) typical @ 20 °C, without pump, with wireless
3.5 days (84 hours) typical @ 20 °C, with pump, with wireless
30 days (720 hours) typical @ 20 °C, electrochemical sensors only, without pump, with wireless
≤8 hour recharge time

Sensors	Up to 6 sensors (catalytic bead, photo-ionization detector, and electrochemical) Up to 7 simultaneous readings
Pump	Optional integral pump, up to 30.48 m (100 ft) sample draw

Wireless
Optional LENS™ Wireless, proprietary mesh network
Frequency: ISM license-free band (2.4 GHz)
Max Peers: 25 devices per network group
10 independent, configurable network groups
Range: 300 m (~1,000 ft) line of sight
Encryption: AES-128
Approvals: FCC Part 15, Others**

Certifications

UL	Class I, Division 1, Groups A, B, C, and D; T4 Class 1 Zone 0 AEx da ia IIC T4 Ga1
CSA	Class I, Division 1, Groups A, B, C, and D; T4 C22.2 No. 152 applies only to %LEL thermo-catalytic reading
ATEX	Ex da ia IIC T4 Ga, Equipment Group and Category II 1G
IECEx	Ex da ia IIC T4 Ga

Supplied With Monitor
Calibration cup (without pump), sample tubing and pump inlet water barrier (with pump), product manual, hand tool, charging power supply and region-specific cord

REFERENCE GUIDE LANGUAGE:
English, French, Spanish, German

* These specifications are based on performance averages and may vary by instrument.
** See www.indsci.com/wireless-certifications for country-specific wireless approvals and certifications.

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