



**INDUSTRIAL**  
**SCIENTIFIC**

# RADIUS® BZ1 AREA MONITOR

Product Guide

# Is Your Worksite **READY FOR THE MOMENT?**

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 BZ1 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.

## Meet the New Face of **AREA MONITORING**



## 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."





## Know What is Happening Without Approaching Hazards

Know more, without buying more, thanks to optional LENS™ Wireless — the first wireless platform that allows area monitors and personal monitors to share gas readings and alarms.

- 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.
- See gas readings and alarms from Ventis® Pro Series personal monitors that have joined the wireless group.

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## 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, patented 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 text-based 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.



## LENS Wireless Highlights:

- No infrastructure required
  - Out-of-the-box operation
  - No need for IT setup
  - Self-forming, self-healing networks
- Long-range communication up to 300 m (~1,000 ft) without sacrificing run time
  - View peer readings from Radius BZ1 Area Monitors and Ventis Pro Series personal monitors within a group

**LENS™**  
**WIRELESS**

## 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% to 95% non-condensing (continuous)

### DISPLAY/READOUT

11.2 cm (4.4 in) monochrome backlit graphical liquid crystal display (LCD)

### 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

### ALARMS:

108 decibel (dB) at 1 m (3.3 ft) redundant audible alarms

Redundant, visual alarm LEDs (red and blue)

### SENSORS:

Up to 6 sensors (catalytic bead, photoionization detector, and electrochemical)

Up to 7 simultaneous readings

### PUMP

Optional integral pump, up to 30.48 m (100 ft) sample draw

## MEASURING RANGES

### CATALYTIC BEAD

Combustible Gases: 0-100% LEL in 1% increments

### ELECTROCHEMICAL

Ammonia (NH<sub>3</sub>): 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<sub>2</sub> Low): 0-1,000 ppm in 1 ppm increments

Carbon Monoxide/Hydrogen Sulfide: CO: 0-1,500 ppm in 1 ppm increments

H<sub>2</sub>S: 0-500 ppm in 0.1 ppm increments

Chlorine (Cl<sub>2</sub>): 0-50 ppm in 0.1 ppm increments

Hydrogen (H<sub>2</sub>): 0-2,000 ppm in 1 ppm increments

Hydrogen Sulfide (H<sub>2</sub>S): 0-500 ppm in 0.1 ppm increments

Hydrogen Cyanide (HCN): 0-30 ppm in 0.1 ppm increments

Nitrogen Dioxide (NO<sub>2</sub>): 0-150 ppm in 0.1 ppm increments

Oxygen (O<sub>2</sub>): 0-30% vol in 0.1% increments

Sulfur Dioxide (SO<sub>2</sub>): 0-150 ppm in 0.1 ppm increments

Phosphine (PH<sub>3</sub>): 0-5 ppm in 0.01 ppm increments

Nitric Oxide (NO): 0-1,000 ppm in 1 ppm increments

### PHOTOIONIZATION

Volatile Organic Compounds (10.6 eV): 0-2,000 ppm in 0.1 ppm increments

### WIRELESS

Optional LENS™ Wireless, proprietary mesh network

Frequency: ISM license-free band (2.405 - 2.480 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, IC, CE/RED, others\*\*

### CERTIFICATIONS

INGRESS PROTECTION IP66

ATEX: Ex da ia IIC T4 Ga, Equipment Group and Category II 1G

China CPC: Pending

China EX: Ex d ia IIC T1 Ga; Ex d ia IIC T4 Gb IR sensor

CSA: CII, Div 1, G A-D, T4

C22.2 No. 152 applies only to %LEL thermo-catalytic reading

IECEX: Ex da ia IIC T4 Ga

INMETRO: Ex da ia IIC T4 Ga; Ex db ia IIC T4 Gb IR sensor

UL: CII, Div 1, Gr A-D, T4; C1 1 Zone 0 AEx da ia IIC T4 Ga1

### SUPPLIED WITH MONITOR

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

### LANGUAGE

English, French, Spanish, German

\* These specifications are based on performance averages and may vary by instrument.

\*\* See [www.indsci.com/wireless-certifications](http://www.indsci.com/wireless-certifications) for country-specific wireless approvals and certifications.

# Ready for the Moment, Day and Night

Test drive the Radius BZ1 with the  
**INSTRUMENT SIMULATOR**

[www.indsci.com/radius-simulator](http://www.indsci.com/radius-simulator)

Build and price your Radius BZ1 online with the  
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