RADIUS® BZ1 AREA MONITOR
Product Guide

Is Your Worksite
READY FOR THE MOMENT?

Stop worrying about missing alarms. Stop stressing over equipment down-time. 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
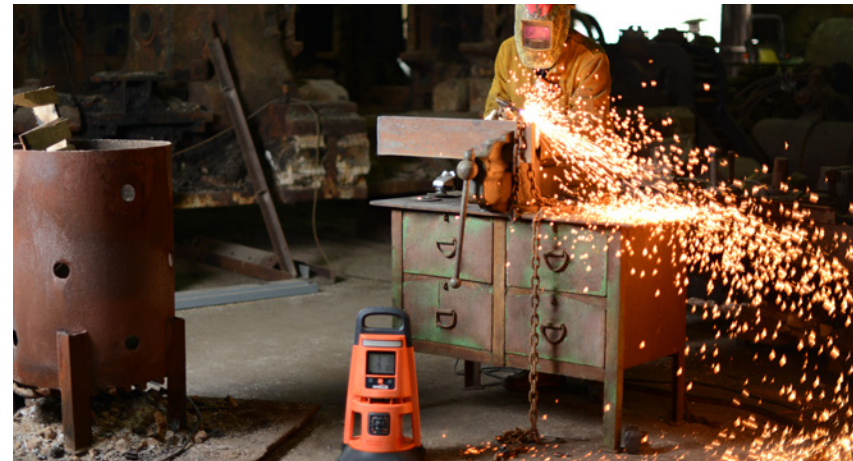
Deploy Whenever and Wherever

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.
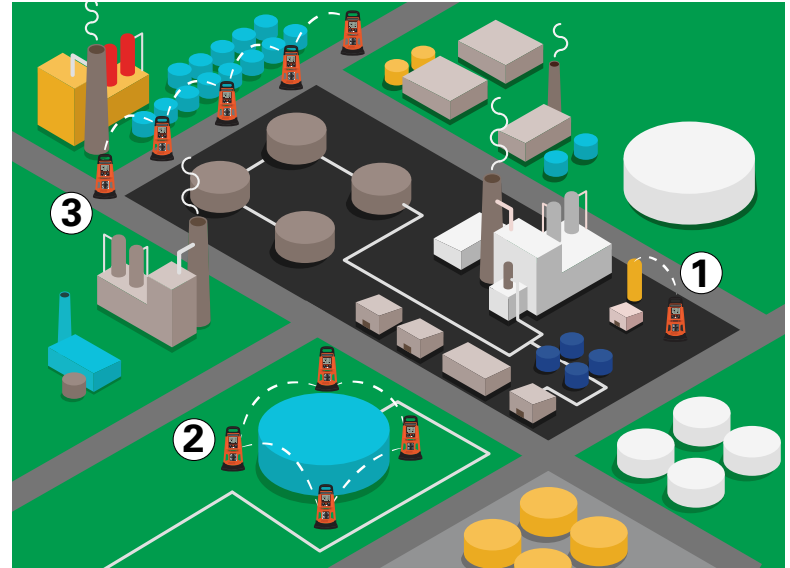
Spend Less Time Managing Your Instruments

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.

INDUSTRIAL SCIENTIFIC

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

LENS™ WIRELESS

- 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

www.indsci.com/radius

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 ºC, without pump, with wireless
3.5 days (84 hours) typical @ 20 ºC, with pump, with wireless
30 days (720 hours) typical @ 20 ºC, 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

* 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.

MEASURING RANGES
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
Oxygen (O_2):	0-30% vol in 0.1% increments
Sulfur Dioxide (SO_2):	0-150 ppm in 0.1 ppm increments
Phospine (PH_3):	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:	Cl I, 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:	Cl I, Div 1, Gr A-D, T4; Cl 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

Ready for the Moment, Day and Night

Test drive the Radius BZ1 with the
INSTRUMENT SIMULATOR
www.indsci.com/radius-simulator

Build and price your Radius BZ1 online with the
INSTRUMENT BUILDER
www.indsci.com/radius-builder

ENTECH

Difference For Greater Value