



Specification Sheet



RADIUS ^{BZ1}

Built for the world's harshest environments, the Radius™ BZ1 Area Monitor is always working – even when you're not. With the ability to leave the area monitor in the field for nearly two months on battery or indefinitely with external power supplies you can control and monitor up to seven hazards anywhere across your site – ensuring the right level of response when workers are exposed to those dangers. Plus, with the ability to seamlessly share alarms between monitors, you can rest assured that someone's always got your back.

Up and Running, Even When You Aren't

- Runtime up to 50 days on battery (based on configuration)*
- Unlimited runtime with external power supply options
- Removable SafeCore™ Module – leave the device in the field and minimize downtime by swapping ready-to-use sensor modules without removing the entire device from its location

RADIUS BZ1 EXPECTED RUNTIME

CONFIGURATION	EXPECTED RUNTIME	POWER SOURCE
Standard 4-Gas (LEL-CAT Bead, H2S, CO, O2) with LENS™	Up to 7 days	Built-in Battery
Standard 4-Gas (LEL-IR, H2S, CO, O2) with LENS™*	Up to 30 days	Built-in Battery
Standard 4-Gas (LEL-MPS, H2S, CO, O2) with LENS™	Up to 45 Days	Built-in Battery

Trusted Reliability to Keep Teams Safe

- Detect up to seven gases simultaneously (including PID)
- Get more accurate detection with all-weather sensor options and the ability to detect gases across a 360-degree path
- Reliably alert workers to all hazards with:
 - » Bold LED lights
 - » Alarms that sound at 105dB, cutting right through any high-noise environment
 - » Large, easy-to-read display

*Devices relying on a wireless connection feature a runtime up to 30 days; devices without a wireless connection feature a runtime up to 50 days. Additional configurations may affect runtime depending on your site and application.

Make Quicker Decisions

- Customizable alarm messages such as "EVACUATE" or "VENTILATE"
- Seamlessly share alarms between personal and area monitors across an entire site with our LENS™ Wireless technology
- Ensure accurate readings and reduces false alarms by relying on two sensors to detect the same gas with DualSense™ technology

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
≤8 hour recharge time

ALARMS

105 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, electrochemical, and infrared)
Up to 7 simultaneous readings

SPECIFICATIONS*

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 ₂ S: 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 ₂ S):	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
Phosphine (PH ₃):	0-5 ppm in 0.01 ppm increments
Nitric Oxide (NO):	0-1,000 ppm in 1 ppm increments
Chlorine Dioxide (ClO ₂):	0-1 ppm in 0.01 ppm increments
Hydrogen Chloride (HCl):	0-30 ppm in 0.1 ppm increments

INFRARED

Carbon Dioxide (CO ₂):	0-5% vol in 0.01% increments
Hydrocarbon (HC)	0-100% LEL in 1% LEL increments
Methane (CH ₄)	0-100% LEL in 1% LEL increments

MOLECULAR PROPERTY SPECTROMETER

Combustible Gases 0-100% LEL in 0.1% increments

PHOTOIONIZATION

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

PUMP

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

WIRELESS

Optional LENS™ Wireless, 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 II 2G

China EX: Ex da ia IIC T4 Ga; Ex db ia IIC T4 Gb

CSA: CI I, Div 1, Gr A - D; Ex da ia IIC T4 Ga

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

IECEX: Ex da ia IIC T4 Ga; Ex db ia IIC T4 Gb with IR Sensor

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

KC: Ex d ia IIC T4

UL: CI I, Div 1, Gr A-D, T4; CI 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), product manual, hand tool, charging power supply and region-specific cord

LANGUAGE

English, French, Spanish, German

LENS™ Wireless

LENS Wireless is a local team-based peer-to-peer (P2P) communications that gives your team improved hazard awareness that leads to faster emergency responses. Devices connect within seconds after being turned on – with no need for IT setup, configuration, or additional infrastructure. Simply link devices to form a connected group of monitors to create a dynamic safety net across your worksite. Devices will communicate between one another even in the harshest environments.

SafeCore™ Module:

Each piece of critical technology for the Radius BZ1, such as sensors, software, pumps, and wireless configurations, live inside the SafeCore Module. This module is positioned face down to prevent the elements from interfering with gas readings, resulting in fewer false alarms – even in the harshest environments.

The module also slides out from the Radius BZ1 base for easy docking and automated maintenance, ensuring that your sensors are always ready to go. Plus, you can even swap SafeCore Modules out in the field, so the Radius BZ1 base never has to leave its spot.

DSX™ Docking Station:

Manual maintenance and record keeping are time-consuming and prone to error. The DSX Docking Station is a cloud-connected solution that gives you complete control to schedule maintenance and firmware updates – so your area monitors are always ready when you need them. Plus, the DSX Docking Station can automatically perform any calibrations needed for your SafeCore Module.

RGX™ Gateway:

The portable RGX Gateway transmits location, gas readings, and real-time alerts from anywhere, including hazardous locations, giving you the power to respond faster and to improve site productivity. By using the Radius BZ1 and the RGX Gateway, you can ensure your information is always backed up and available on the cloud – making it easier to access wherever you are.

For a list of all accessories, visit
www.indsci.com/radius

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SCIENTIFIC**