

GG-R

REFRIGERANT SENSOR

**Key Features**

- R22, R134a, R404a, R507a, R422d and other refrigerant gases detected
- Gas-specific infrared sensor technology
- Industry standard linear 4-20 mA output
- Corrosion, weather, and chemical resistant sensor enclosure
- Sensor designed to adapt to any harsh environment from -50°F to +120°F
- Real-time continuous monitoring
- 0-500 ppm, 0-1,000 ppm, and 0-3,000 ppm ranges available
- Self-diagnostics of sensor elements for fail-safe operation
- Meets California Air Resources Board specifications with 0-500 ppm range

HFC's, CFC's and HCFC's. Industrial strength refrigerant leak detection.

The GG-R utilizes proven infrared sensor technology for fast and accurate leak detection. With no moving parts and no cells to replace, the GG-R provides real-time continuous monitoring and inexpensive long-term operating costs.

The GG-R is refrigerant gas specific, so false alarms from floor cleaners and food off-gassing is non-existent. The output signal is not affected by EMI/RFI, or moisture. R11, R22, R134, R507, R401, R402, R404, R407, R410, R448, R422D are a few common refrigerants the GG-R sensor can detect.

The GG-R provides an industry standard linear 4/20 mA output signal compatible with most gas detection systems and PLCs. The high-quality polycarbonate enclosure offer excellent chemical corrosion protection and high impact resistance.

Applications

- Refrigeration Systems
- Food Processing areas
- Perimeter Monitoring
- Bottling Plants
- Breweries
- Ice Rinks
- Supermarkets
- Rack Houses
- Compressor Rooms
- Pharmaceuticals
- Sea Vessels

Benefits

- Extremely long life
- Low cost of ownership
- Simple operation
- Rugged and reliable
- Versatile for any application

The standard **GG-R** sensor comes equipped with a corrosion proof enclosure. With only one sensor for any application; designing, ordering, and maintaining your refrigerant monitoring system is simple. The 0-500 ppm model provides the highest accuracy and lowest leak detection ability starting at 10 ppm, to meet the California Air Resources Board specifications.

The **GG-R** is available for two different target gas classes. The R8 model operates at approximately 8 microns wavelength and detects R134a, R404a, R410a, R507a, and other HFC gases. The R9 model operates at approximately 9 microns wavelength and detects R22, R11, and other CFC/HCFC gases.

The adaptive temperature control system allows the **GG-R** to automatically adjust to temperature fluctuations. Each circuit board is sealed forever in potting compound, protecting electronic components and copper tracing from corrosion. A specially vented chemical-resistant polycarbonate enclosure protects the sensor from accidental damage, weather, and direct hose-hits from clean-up crews.

Ordering Information

The **GG-R** is delivered calibrated and ready to install. Use the model numbers below to order.

Order #:	*0-500 ppm	0-1000 ppm	0-3000 ppm
	GG-R134a-500	GG-R134a-1000	GG-R134a-3000
	GG-R404a-500	GG-R404a-1000	GG-R404a-3000
	GG-R410a-500	GG-R410a-1000	GG-R410a-3000
	GG-R507a-500	GG-R507a-1000	GG-R507a-3000
	GG-R22-500	GG-R22-1000	GG-R22-3000

**Meets California Air Resources Board specifications.*

Other gases available. Contact us if your target gas is not listed.



Intelligent heater for temperature and moisture control of optics

Internal splash guard re-directs water from high-pressure hose-hits

Single-screw door latch for easy access

Large surface area gas-permeable tubes for fast leak detection

Potted sensor circuit board for complete corrosion protection

SPECIFICATIONS

Due to ongoing research and product improvement, specifications are subject to change

Input Power:

+24 VDC, 1A

Detection Principle:

NDIR (Non-Dispersive Infrared)

Detection Method:

Diffusion

Gases:

R8 model: R123, R125, R134a, R404a, R410a, R422d, R434a, R507a

R9 model: R11, R22, R401a, R402a

Contact us for more HFC / CFC / HCFC gases

Ranges:

0-500 ppm (standard)

0-1,000 ppm

0-3,000 ppm

Contact us for custom ranges

Output Signal:

Linear 4/20 mA (max input impedance: 700 Ohms)

Linearity:

+/- 3% of full-scale

Repeatability:

+/- 1% of full-scale

Response Time:

T50 = less than 30 seconds

T90 = less than 60 seconds

Accuracy:

+/- 2% of full-scale

Zero Drift:

Less than 1% of full-scale per month, non-cumulative

Span Drift:

Less than 1% of full-scale per month, non-cumulative

Temperature Range:

-50°F to +120°F (-45°C to +49°C)

Humidity Range:

5% to 100% condensing

Enclosure:

NEMA 3RX injection-molded, washdown-duty polycarbonate sensor housing with hinged lid and captive screw. For non-classified areas. Optional 316 18 GA, NEMA 3RX washdown-duty stainless steel housing with hinged lid and captive screw. For non-classified areas.

Wiring Connections:

3 conductor, shielded, stranded, with drain wire.

Temperatures down to -10°F (max cable run):

1000 ft: 18AWG cable (General Cable C2535A)

1700 ft: 16AWG cable (General Cable C2536A)

Temperatures down to -40°F (max cable run):

500 ft: 18 AWG cable (General Cable C2535A)

800 ft: 16 AWG cable (General Cable C2536A)

1300 ft: 14 AWG cable (General Cable C2538A)

Contact us for cable recommendations for other temperatures.

Terminal Block Plugs: (Field Wiring)

26-12 AWG, torque 4.5 lbs-in

Dimensions:

7.5" high x 6.5" wide x 3.75" deep

Weight:

3 lbs

Certification:

ETL listed to UL standard 61010-1, and CSA standard C22.2 No. 61010-1-12

Warranty:

2 years

