



## QIRF

### *Freon Refrigerant Sensor*

The QIRF Freon gas detectors are configured to meet the international Mechanical Code, ASHRAE 15, and B52 requirements. Infrared technology facilitates specific gas type Freon detection without any cross-sensitive interferences. Sensor housings are thermally controlled at elevated temperatures to eliminate errors due to condensate formation and temperature fluctuations. This allows operation in temperatures from -49°F to 149°F (-45 to 65°C). This series has the option of being connected to either the M-Controller or Q4C controller via RS-485 digital communication for a cost effective installation method. Controllers can be equipped with internal and external horns and strobes to alert personnel prior to entering the hazardous area. Consult an ACI representative for specific gases.

The QIRF Series is covered by ACI's Two (2) Year Limited Warranty. The warranty can be found in the front of ACI's Sensors & Transmitters catalog, as well as on ACI's web site, [www.workaci.com](http://www.workaci.com).



**SPECIFICATIONS**

Supply Voltage	+18 to 30 VDC or 15 to 24 VAC
Outputs	4-20 mA, +2-10 VDC, Digital RS-485, Modbus
Accuracy/Repeatability	+/- 3% of Reading +/- 1.0% of full scale
Gas Measurement Range	0 to 100 ppm (R123)/0-1000 ppm (all other freons)
Temperature Range	-45 to 65°C (-49 to 149°F)
Operating Humidity	5 to 95% Continuous, 0 to 99% Intermittent (based on non-condensing)
Operating Pressure Range	Atmospheric +/- 10%
Sensor Type	Infra-Red Temperature Controlled
Response Time	Less than 30 seconds typical for a 90% step change
Sensor Life Span	14 years typical (under normal conditions)
Relays	(3) SPDT, 1A maximum @ 30 VDC and 0.3A maximum @ 125 VAC (for resistive loads)
Buzzer Rating	Rated for 80 dB @ 10 cm, 2700 Hz
Enclosure Materials	Polycarbonate/ABS blend IP66, NEMA 4X, 12, 13
Keypad	4 magnetic sensors with magnet tool
Indicators	(5) Red LED's for Relay Status; 2x8 character LCD display with backlight
Product Dimensions	(H) 4.72" (W) 7.87" (D) 3.54"

**ORDERING**

Select one Gas Type (A) & Options (B).

**A Gas Type** **B Options**

- 0R22x** (Gas Type: R22) (Measurement Range: 0-1000 ppm)
  - 123x** (Gas Type: R123) (Measurement Range: 0-100 ppm)
  - 134Ax** (Gas Type: R134a) (Measurement Range: 0-1000 ppm)
  - 404Ax** (Gas Type: R404a) (Measurement Range: 0-1000 ppm)
  - 407Cx** (Gas Type: R407a) (Measurement Range: 0-1000 ppm)
  - 408Ax** (Gas Type: R408a) (Measurement Range: 0-1000 ppm)
  - 410Ax** (Gas Type: R410a) (Measurement Range: 0-1000 ppm)
  - 507Ax** (Gas Type: R507a) (Measurement Range: 0-1000 ppm)
  - R114x** (Gas Type: R114) (Measurement Range: 0-1000 ppm)
  - R116x** (Gas Type: R116) (Measurement Range: 0-1000 ppm)
  - 0R11x** (Gas Type: R11) (Measurement Range: 0-1000 ppm)
  - R438Ax** (Gas Type: R438a) (Measurement Range: 0-1000 ppm)
- 0** (No Selection) (Standard)
  - P** (Sample Pump)

**BUILD PART NUMBER**

After completing (A) & (B) from the above table, fill in the Part Number Table below. The "Sensor Series" & "Revision" (X) are factory defaults. An example part number is offered.

<b>QIRF</b>	—	—	<b>X</b>	—
<small>SENSOR SERIES</small>	<small>A</small>		<small>FACTORY PROVIDED</small>	<small>B</small>

EXAMPLE: QIRF - 134Ax - X - 0