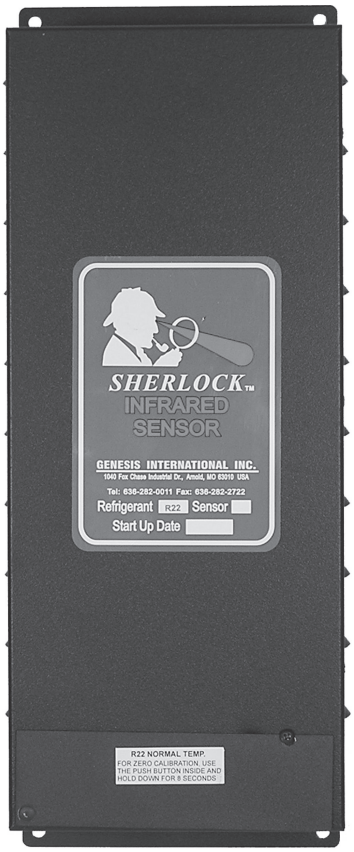
GENESIS INTERNATIONAL, INC.

SHERLOCK™

INFRA-RED REFRIGERANT GAS SENSOR



GENERAL

SHERLOCK NON-DISPERSIVE IR REFRIGERANT GAS SENSOR was designed to monitor for the presence of refrigerant gases within an enclosed space. The sensor is mounted within the space to be monitored and connected by cable to a ***SHERLOCK***, ***Wizard*** or **EMS** System. Each sensor is calibrated to a specific refrigerant gas. The IR comes in two different styles depending upon the monitoring environments: machine room and cold room for refrigerated applications in NEMA 3R Aluminum (Pictured). Water-tight ABS fiberglass housing for Wash down protection (NEMA 3R) and Stainless Steel enclosure also available for special applications.

The IR Sensor is a reliable method of monitoring for refrigerant gas leaks in environments that have air quality problems. The IR sensor will eliminate many false alarms in environments that contain gasoline, diesel, and propane exhaust and fumes from solvents, paints, cleansers, and others (Please call Genesis Customer Support for more information).

APPLICATIONS

Typical applications include:

Wineries	HVAC Chiller Equipment Rooms
Bakeries	Refrigeration Mechanical Rooms
Refrigerated Rooms	Food Processing Plants

SPECIFICATIONS

ENCLOSURE RATING NEMA 3R Aluminum, Black Powder Coat

DIMENSIONS 12.86 x 4.8 x 2.44
Inches (mm) (327 x 122 x 62)

OPERATING ENVIRONMENT

TEMPERATURE

Machine Room Model 32°-120°F (0°- 50°C)
Freezer Room Model -40°-120°F (-40°- 50°C)

HUMIDITY 0 - 90% RH Non-Condensing

POWER INPUT

Sherlock / Wizard 12VDC, 0.4 A
Stand-Alone 12V DC - 32V DC Switching

OUTPUTS (Standard) Current Driven Sherlock/Wizard 4 to 20 mA (Standalone Sensor)
(Please contact Genesis for custom voltage outputs for the stand-alone sensor)

RANGE (Parts Per Million, PPM)

Sherlock/Wizard 0 - 1500* (Control Dependent)
Stand-Alone 0 - 1032*

**Minimum effective range due to noise is 10 - 15ppm.*

SENSITIVITY ±1 ppm at 77°F (25°C), 45% RH

RESOLUTION 1 ppm

RESPONSE TIME Under 30 Seconds

CALIBRATION Every 6 Months

WARM-UP TIME Readings will stabilize in 3 hours (Up to 18 Hours in Cold Room Applications)

LIFE EXPECTANCY Average of 5 to 7 years in normal environments

AVAILABLE GAS SENSORS (Part Numbers)

Machinery Room/Walk-In Cooler Application

R11 - 60-0057	R12 - 60-0104	R22 - 60-0053
R23 - 60-0232	R123 - 60-0137	R125 - 60-0466
R134a - 60-0054	R401a - 60-0465	R402a - 60-0231
R404a - 60-0052	R407a - 60-0223	R407c - 60-0214
R407f - 60-0514	R408a - 60-0184	R409a - 60-0066
R410a - 60-0165	R422d - 60-0546	R424a - 60-0469
R438a - 60-0246	R448a - 60-0544	R500 - 60-0067
R502 - 60-0059	R507 - 60-0061	R513a - 60-0542
R514a - 60-0550	R1233zd - 60-0548	R1234yf - 60-0551

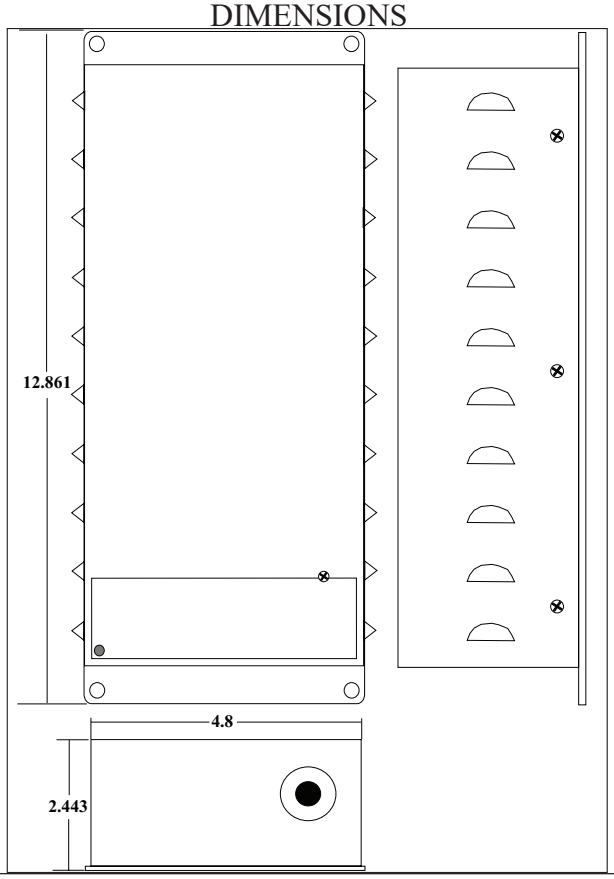
Ammonia/NH_3 - 60-0095

Extended Temperature/Freezer Application

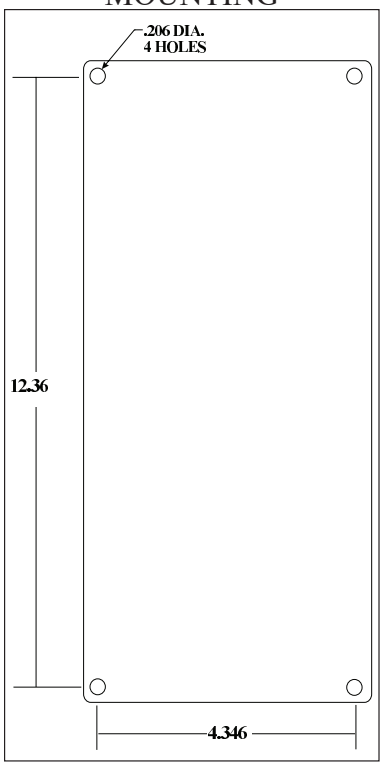
R11 - 60-0058	R22 - 60-0047	R402a - 60-0142
R404a - 60-0051	R407a - 60-0526	R407c - 60-0473
R407f - 60-0528	R408a - 60-0065	R438a - 60-0464
R448a - 60-0545	R500 - 60-0068	R502 - 60-0060
R507 - 60-0062	Ammonia/NH_3 - 60-0096	

Please contact Genesis if your sensor type is not listed.

DIMENSIONS



MOUNTING



Sensor Placement -- The Sherlock IR Sensor must be placed in locations where a refrigerant leak is likely to occur and where leaked refrigerant gas is likely to concentrate so as to provide warning of a potentially hazardous condition. Mounting locations are dependent upon the application and the refrigerant gas to be monitored.

For Halocarbon refrigerants such as R11, R22, R123, R134a, R404a, etc... Place the sensor 18 to 24 inches off the floor. For Ammonia, place the sensor 18 to 24 inches from the ceiling.

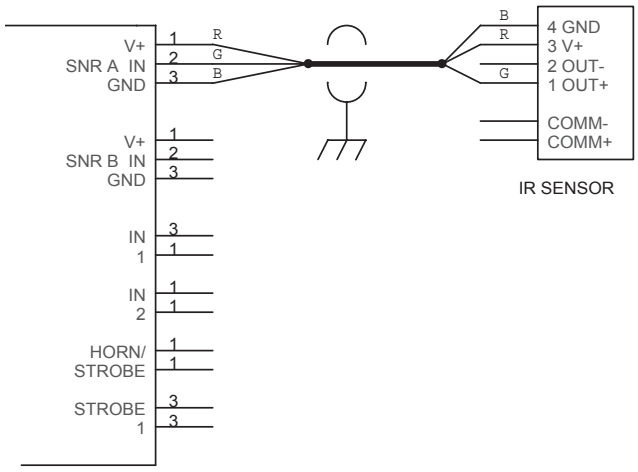
HVAC/Refrigeration Machinery Room -- Prior to placement of the IR Sensor, the room air currents need to be determined. The maximum air flow rate past the sensor should not exceed 3 feet per second.

Mounting - The sensor must be mounted with the wire terminal blocks oriented to the lower right and the sampling chamber in a vertical position. Failure to mount the sensor in this fashion may result in inaccurate readings and can allow moisture to enter the housing and destroy the sensor.

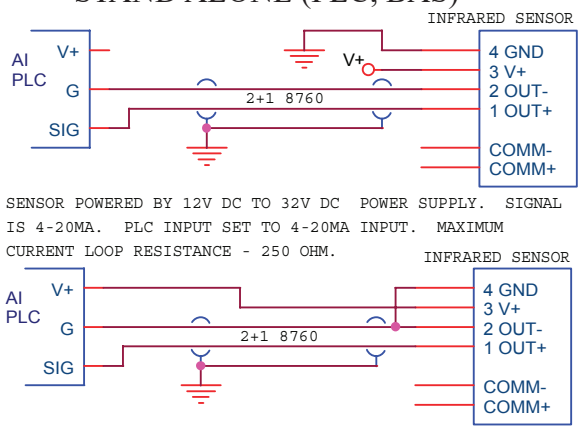
WARNING!!!! The infrared sensor is not to be applied into all refrigerated storage applications where other toxic gases are used in the same room. Some installations are not suitable for Infrared technology. Misapplication may result in damage to sensor. Contact the factory for a specific list of approved applications.

TYPICAL WIRING DIAGRAMS

SHERLOCK / WIZARD



STAND ALONE (PLC, BAS)



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