



# GENESIS INTERNATIONAL, INC.

## SHERLOCK™

### INFRA-RED REFRIGERANT GAS SENSOR FOR WASHDOWN APPLICATIONS



#### 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, or Water-tight ABS fiberglass housing for Wash down protection (NEMA 3R pictured).

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

**ENCLOSURE RATING** NEMA 3R ABS Plastic

**DIMENSIONS** Inches (mm) 12 x 7 x 6 (305x178x152)

#### OPERATING ENVIRONMENT

##### TEMPERATURE

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

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

**HUMIDITY** 0 TO 90% RH Non-Condensing

#### POWER INPUT

*Sherlock / Wizard* 12VDC, 0.4 A

*Stand-Alone* 10V DC - 36V DC Switching

**OUTPUTS** (Standard) 0 to 20 mA (Sherlock/Wizard)  
4 to 20 mA (Standalone Sensor)

#### CUSTOM OUTPUTS (Stand-Alone Only)

*External 250 Ohm Resistance* 0 - 5V DC or 1 - 5V DC

*External 500 Ohm Resistance* 0 - 8 VDC or 2 - 8V DC

**EFFECTIVE RANGE** 0 -1500ppm, Control Dependent

**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 after 3 hrs

**LIFE EXPECTANCY** Average of 5 to 7 years in normal environments

#### AVAILABLE GAS SENSORS

##### Machinery Room/Walk-In Cooler Application\*

- R-22 - 60-0209
- R-23 - 60-0478
- R-123 - 60-0402
- R134a - 60-0461
- R-404a - 60-0494
- R-410a - 60-0463
- R-507 - 60-0236
- R-717, Ammonia/NH<sub>3</sub> - 60-0235

Please contact Genesis International if your sensor type is not listed.

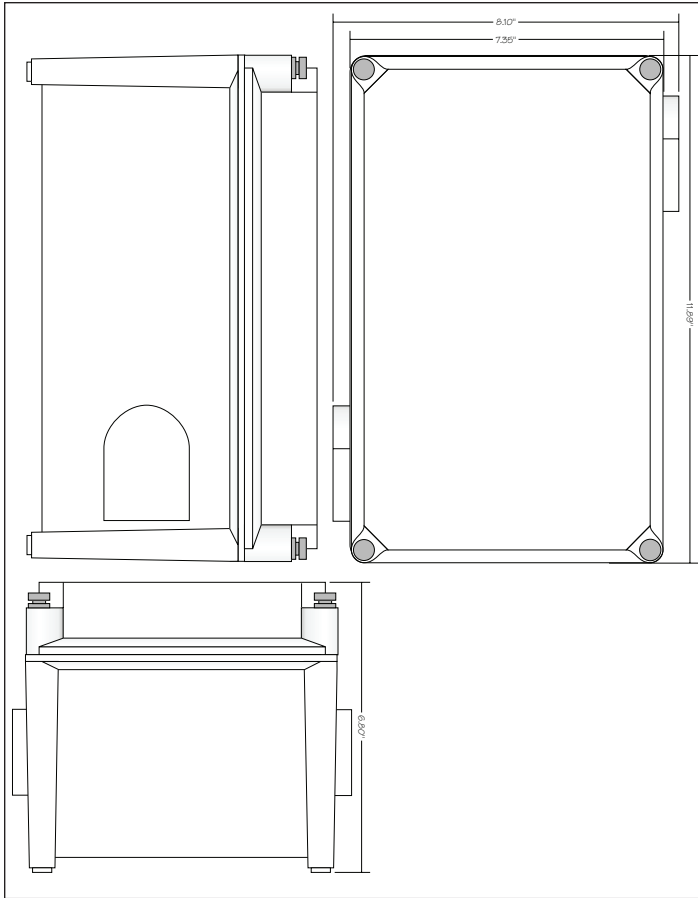
\* *Sensor has "-WD" suffix for WashDown Housing.*

##### Extended Temperature/Freezer Application\*\*

- R-22 - 60-0178
- R-401a - 60-0491
- R-404a - 60-0241
- R-507 - 60-0479
- R-717, Ammonia/NH<sub>3</sub> - 60-0247

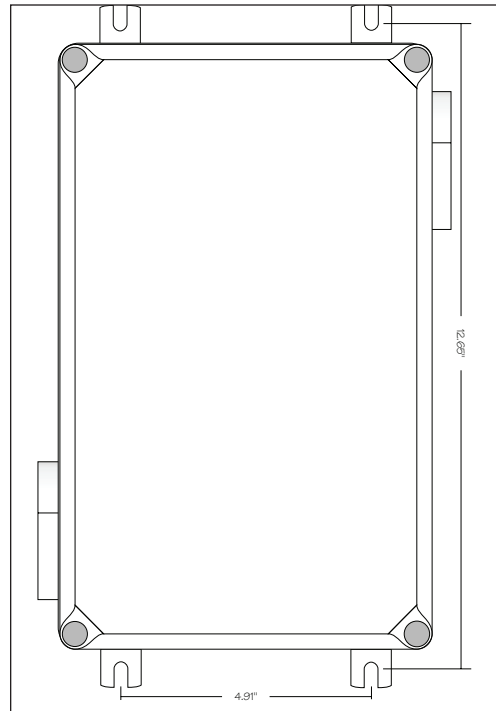
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\*\* *Sensor has "-WD" suffix for WashDown Housing & "-LT" to represent Extended (Low Temp).*



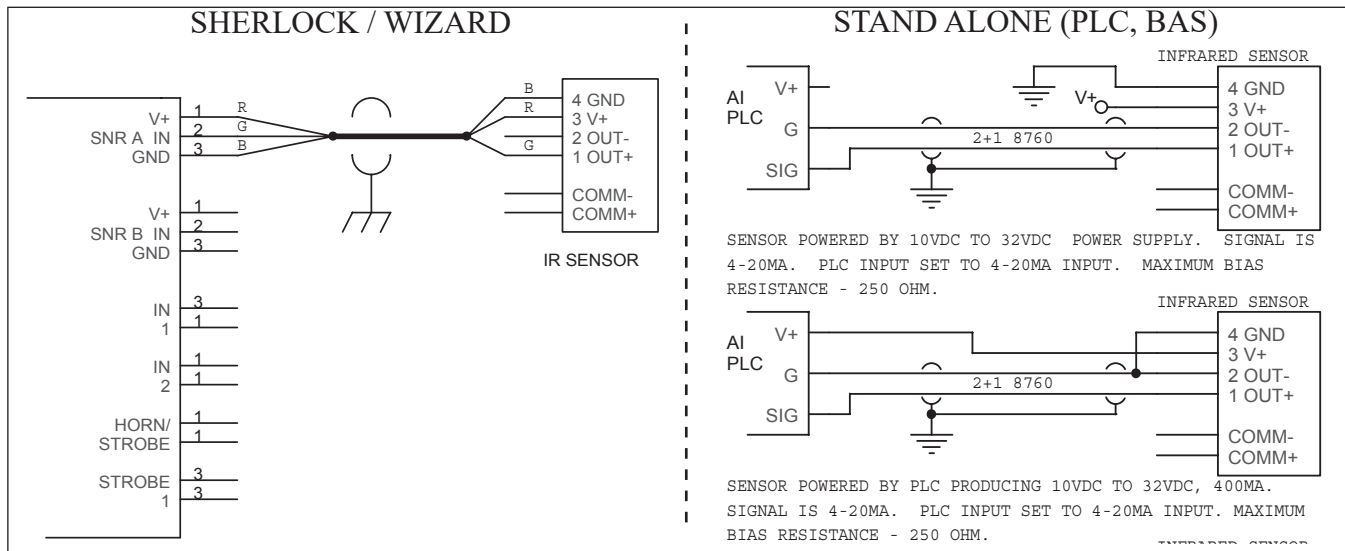
DIMENSIONS

**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.



MOUNTING

TYPICAL WIRING DIAGRAMS



# GENESIS INTERNATIONAL, INC.

1040 FOX CHASE INDUSTRIAL DRIVE  
ARNOLD, MISSOURI 63010

PHONE: (636) 282-0011  
FAX: (636) 282-2722

WEBSITE:  
WWW.GENESIS-INTERNATIONAL.COM

EMAIL:  
MAIL@GENESIS-INTERNATIONAL.COM