

# MRLDS-250 Infrared Refrigerant Gas Detector

## ***Description***

The Modular Refrigeration Leak Detection Sensor is Copeland's state-of-the-art infrared refrigerant gas detector which can detect a wide range of gases. The MRLDS can be used on a stand-alone basis or integrated into a supervisory controller. The MRLDS-250 can be used in locations that require continuous monitoring and to add gas detection solutions to an existing system.

## ***Broadband vs gas specific***

The MRLDS-250 is available in two versions:

- The broadband gas detector is used as a general purpose gross leak detector and is factory tested and certified to +/- 35% accuracy.
- The gas specific version comes factory certified and calibrated with +/- 3% accuracy to the target refrigerant when there is a need for more accurate detection.

## ***Benefits***

- Refrigerant monitoring can reduce energy consumption and keep equipment cooling properly.
- The MRLDS-250 can pay for itself by reducing the amount of refrigerant being lost when used in a continuous monitoring program.
- MRLDS-250 is immune to cross sensitivities to combustible and toxic gas as well as changes in temperature and humidity.
- Protect people, products, and equipment from dangerous situations and costly failures
- IR sensing technology allows for low-level leak detections (0-3,500ppm), delivering up to 5-7 years of maintenance free operation without the need for costly annual gas calibrations.
- Simple to use interface gives the ability to set all parameters and outputs without opening the unit, moving jumpers, using multimeters or adjusting potentiometers.



## ***Features***

- Detects all refrigerants (CFC, HFC's, HCFC, HFO's) including HFO1234YF, HFO1234ZE, R410a & R22
- Bright alpha-numeric LED real-time display
- On-board LED indicator and audible alarm to alert personnel in the area that levels have exceeded the desired limit
- Can connect to any controller through analog output on-board or Modbus RTU interface
- No field calibrations required
- Maintenance mode to avoid false alarms during maintenance
- Scalable 0-3500ppm detection range
- Onboard relay NO, NC: can be programmed to be fail safe (normally energized)

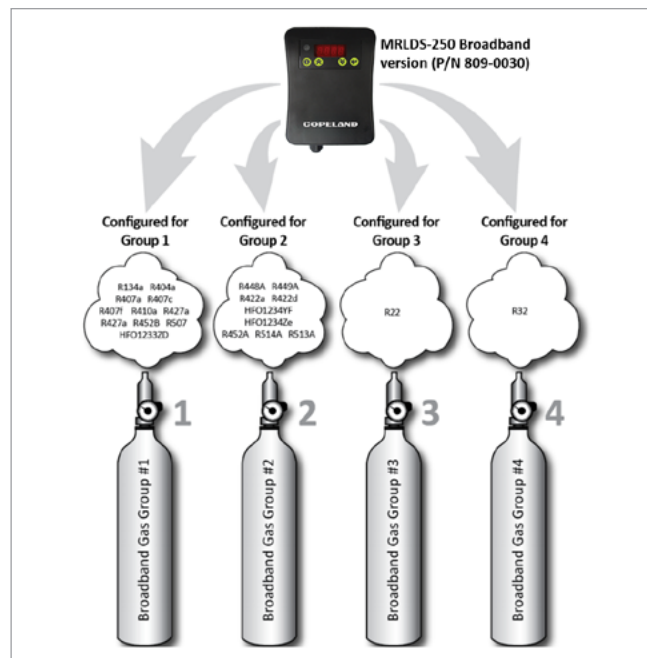


## Data sheet

Specifications	Description
Power Supply	24 VDC, 24 VAC 50/60 Hz, 2.5 W max
Power Monitoring	Green LED
Visual Alarm Red	4-digit LED display
Audible Alarm	Buzzer (audible alarm), enable/disable (Default enabled)
Fault Monitoring	Fault codes presented to user
Analog Outputs	4-20 mA; 0-5 V; 0-10 V; 1-5 V; 2-10 V (Default 1-5V)
Relay	1 relay rated 1 A @ 24 VAC/VDC (0.5A, 125V AC UL rating)
Range	0-3500 ppm
Squelch 1	Readings below 75 ppm are squelched by default
Communication	Modbus RTU over RS-485 Baud rate: 9,600 or 19,200 (selectable)
Alarm Delay	Selectable; 0 to 15 minutes
Response Time, T90	5 minutes
Temperature Rating	-22° to 104° F (-30° to 40° C)
Humidity and Elevation	5-90% RH, non-condensing, 0-10,000 ft. altitude
IP Rating	Not IP rated. An accessory splash guard is available for areas requiring additional protection from wash down.
Dimensions	4.0" x 5.5" x 1.5", 102 x 140 x 37 mm
Weight	6.3 oz, 180 g
Approvals	CE, MET/IEC/EN 61010-1

## Order Information:

Part #	Description
809-0030	MRLDS-250, Broadband
809-0031	MRLDS-250, Calibrated to R-22
809-0034	MRLDS-250, Calibrated to R-404A
809-0035	MRLDS-250, Calibrated to R-407A
809-0040	MRLDS-250, Calibrated to R-422D
809-0041	MRLDS-250, Calibrated to R-448A
809-0042	MRLDS-250, Calibrated to R-449A
809-0043	MRLDS-250, Calibrated to R-513A
809-0044	MRLDS-250, Calibrated to R-507
603-1100	MRLDS Splash Guard Mounting Kit



R22	R22	P/N: 809-0031
R404a	R404a	P/N: 809-0034
R407a	R407a	P/N: 809-0035
R407c	R407c	P/N: 809-0036
R407f	R407f	P/N: 809-0037
R410a	R410a	P/N: 809-0038
R422a	R422a	P/N: 809-0039
R422d	R422d	P/N: 809-0040
R448A	R448A	P/N: 809-0041
R449A	R449A	P/N: 809-0042
R513A	R513A	P/N: 809-0043
R513A	R513A	P/N: 809-0044