

# Refrigerant Leak Detection System (RLDS)

## High precision refrigerant monitor

### *The most effective refrigerant monitor in the industry*

Copeland's RLDS delivers the best refrigerant monitoring available, with industry-leading MDL (minimum detectable level) of 1 ppm for halogenated gases, the fastest sampling frequency and the widest range of refrigerants accurately detected. The large graphic LCD display and LED status indicators provide a system-wide overview at a glance.

The RLDS enhances effective refrigerant management, detecting leaks early to enable cost savings by reducing refrigerant discharge, enhancing energy efficiency and reducing risk of refrigeration failure and product loss. A variety of communication interfaces are available, including Modbus, BACnet and LonWorks, allowing easy integration into BMS systems and remote monitoring solutions.

### Technical data

Measurement	Unit	Description
Gas library	RLDS	CFC: R11, R12, R113, R114, R502, HFP HFC: R125, R134a, R236FA, R245Fa, R32, R404a, R407a, R407c, R-407F, R410a, R422a, R422d, R427a, R507, R508b HCFC: R123, R124, R21, R22, R227, R23, R401a, R402a, R402b, R408a, R409a, R500, R503 Halon: H1211, H1301, H2402 Other: FA188, FC72, H1234YF, H1234ZE, N1230, N7100, N7200, N7300, N7600, R424A, R426A, R438A, CUSTOM
	RLDS CO <sub>2</sub>	CO <sub>2</sub> /R744
Measuring range	RLDS	All gases 0 to 10,000 ppm
	RLDS CO <sub>2</sub>	CO <sub>2</sub> 0 to 8,000 ppm
Accuracy	RLDS	1 ppm MDL (most gases) +1ppm +10% of reading from 0-1,000 ppm (most gases) +1ppm +2% of reading with field calibration (most gases) +10ppm +15% of reading from 0-1,000 ppm (R-11, R-21, R32)
	RLDS CO <sub>2</sub>	+5 ppm +5% of reading from 0-1,000 ppm +10% of reading from 1,000-4,000 ppm +15% of reading from 4,000-8,000 ppm
Temperature drift	RLDS	+0.8% (R134a) of reading per OC between purge cycles
	RLDS CO <sub>2</sub>	Less than 1 ppm per OC between purge cycles



Front



Left

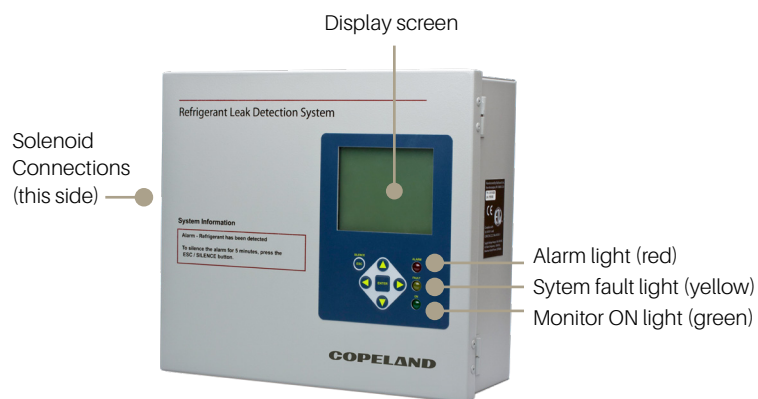


Right



## Technical specifications

Specification	Description
Coverage	Zones: 4, 8, 12 and 16 zone systems available
Sensor	Proprietary non-dispersive infrared (NDIR) technology
Dimensions	12.23"H x 13.7" x 4.96 (21.0642 cm x 34.7980 cm x 12.5984 cm)
Weight	15 lbs (6.8 kg)
User interface front panel with 3 indicator lights:	Front Panel with 3 Indicator Lights: <ul style="list-style-type: none"> <li>• Green = Monitor is powered on. LED glows during normal operation; flashes when unit is in warm-up mode</li> <li>• Red = Alarm. LED flashes when any point has exceeded the alarm setting</li> <li>• Yellow = Fault. LED flashes when there is a system fault</li> </ul>
Communications	Full two-way communication with BMS via RS-485 serial interface. RS-232C communication port standard.
Alarms	Four SPDT alarm contacts are provided rated 2A at 250 VAC (inductive), 5A at 250 VAC (resistive). Three assigned to ppm level alarms, one assigned to system faults.
Conditioned signal	Optional dual 4-20mA DC isolated outputs. Channel 1 = zone area, Channel 2 = ppm
System noise	Less than 40dB(A) @ 10 feet (3 meters)
Response time	5 to 315 seconds - depending on air line length and number of zones
Sampling mode	Automatic or manual (hold)
Monitoring distance	1200 ft max (500 ft for NH3) for combined length of sample and exhaust tubing (each zone)
Power safety mode	Fully automatic system reset. All programmed parameters retained.
Operating temperature	32°F to 122°F (0°C to 50°C)
Ambient humidity	5% to 90% RH non-condensing
Altitude limit	6,562 ft (2,000 m)
Power	100 to 240 VAC, 50/60 Hz, 20W
Approvals	UL 61010-14, CAN/CA 22.2 No. 61010-1; EN61010-1, EN61326; EN14624; CE Mark



## Order information

Part #	Description
808-2004	RLDS 4 Zone
808-2005	RLDS 4 Zone, w/HHT & Gateway
808-2008	RLDS 8 Zone
808-2009	RLDS 8 Zone, w/HHT & Gateway
808-2012	RLDS 12 Zone
808-2013	RLDS 12 Zone, w/HHT & Gateway
808-2016	RLDS 16 Zone
808-2017	RLDS 16 Zone, w/HHT & Gateway
808-2104	RLDS CO <sub>2</sub> 4 Zone
808-2105	RLDS CO <sub>2</sub> 4 Zone, w/HHT & Gateway
808-2108	RLDS CO <sub>2</sub> 8 Zone
808-2109	RLDS CO <sub>2</sub> 8 Zone, w/HHT & Gateway
808-2112	RLDS CO <sub>2</sub> 12 Zone
808-2113	RLDS CO <sub>2</sub> 12 Zone, w/HHT & Gateway
808-2116	RLDS CO <sub>2</sub> 16 Zone
808-2117	RLDS CO <sub>2</sub> 16 Zone, w/HHT & Gateway

To learn more, visit [copeland.com](https://www.copeland.com)

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