MVR-300™ VRF Refrigerant Leak Detector

For VRF Systems in Occupied Spaces

DESCRIPTION

The MVR-300 gas detector is specifically designed to provide continuous monitoring for refrigerants associated with high-efficiency, high volume refrigerant cooling and heating systems, such as VRF / VRV (Variable Refrigerant Flow / Variable Refrigerant Volume) sytems. Typical applications include hotels, dormitories, hospitals, office buildings and apartment buildings.

The MVR-300 audible and visual alarms alert occupants and simultaneously communicate to Building Management Systems / Building Automation Systems (BMS / BAS). Two on-board relays can be used to close valves, activate alarm devices and exhaust fans or initiate emergency calls to building management.

The on-board Modbus RTU interface provides real-time information about refrigerant concentrations, status and settings. It also enables custom configuration of the MVR-300 to any application specific requirements using multiple Modbus registers. The MVR-300 is designed for easy installation and simple maintenance.

The MVR-300 is compatible with the Bacharach MVR-SC Controller.

FEATURES	BENEFITS
Fits in standard electrical boxes	Easy to install
Low profile/Flush mount	Aesthetically non-intrusive appearance
Two relays and Modbus Communications	Notify building management & initiate counter measures
Alarm options including: LED, buzzer, two levels, configurable delay and fail-safe	Alert occupants and remotely inform building management of alarm location for rapid response as required
Refrigerant specific sensor	Enhances safety[1] and minimizes refrigerant loss
Self diagnostics and simple field calibration	Easy to maintain
Unique plug-in field replaceable pre-calibrated sensor	Low cost of ownership

[1]Important Note: Large refrigerant leaks into occupied spaces can reach concentrations that pose a suffocation risk to the occupants. The MVR-300 is not designed to be used as the sole safety device for this risk. Safety of the occupants also must take a system designed approach that includes things such as ventilation, detection, early warning, mitigation and design redundancy.

HOW TO CONTACT US:
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FOR MORE INFO:
Scan the QR code to learn more about the MVR-300 and other Bacharach products.

SPECIFICATIONS	DESCRIPTION
Detectable Gases	R-410A, R-407C, R-404A, R-32
Measuring Ranges	2,500 ppm, 5,000 ppm, 10,000 ppm
Housing	Flush mount, white ABS, Fits in most 3-gang electrical back boxes
Size (L × W × D, approx.)	6" × 4.1" × 1.75" (150 × 105 × 45 mm) including bezel
Protection	Indoor: IP40, NEMA 1
Weight (approx.)	8 oz (230 g)
Power	100 to 240 VAC, 50/60 Hz, 4 W max
Indicator	Tri-color LED: green, amber, red
Buzzer	80 dB at 12" (30 cm)
Relay	Two SPDT: low alarm and high alarm / fault, normal or fail-safe, configurable
Alarm Delay	0 to 15 minutes, configurable 0, 5, 10, 15
Wiring	Power: 3-core cable, 14 to 20 AWG (0.5 to 2.0 mm^2)
	Relay: 3-core cable, 18 to 20 AWG (0.5 to 1.0 mm^2)
	Modbus: 2-core twisted pair shielded cable 18 to 24 AWG
Modbus RTU	Baud Rate: 9,600 or 19,200, configurable
Environmental Conditions	Operating Temperature: 32 to 120 °F (0 to 50 °C)
	Storage Temperature: 5 to 100 °F (-20 to 40 °C)
	Humidity: 5 to 90% RH, non-condensing
	Pressure: 23.6 to 32.5 inch of Hg (800 to 1,100 hPa)
Elevation	0 to 6,560' (2,000 m) altitude
Sensor Life	2 year minimum life with recommended 6 month testing and / or recalibration
Approvals	CE, UL/SCA/IEC/EN 61010-1

REFRIGERANT	P/N	LOW ALARM*	HIGH ALARM*	RANGE
R-410A	6203-0001	500 ppm	2,000 ppm	2,500 ppm
	6203-0002	1,000 ppm	2,000 ppm	5,000 ppm
	6203-0003	2,000 ppm	4,000 ppm	10,000 ppm
R-407C	6203-0011	500 ppm	2,000 ppm	2,500 ppm
	6203-0012	1,000 ppm	2,000 ppm	5,000 ppm
	6203-0013	2,000 ppm	4,000 ppm	10,000 ppm
R-404A	6203-0021	500 ppm	2,000 ppm	2,500 ppm
	6203-0022	1,000 ppm	2,000 ppm	5,000 ppm
	6203-0023	2,000 ppm	4,000 ppm	10,000 ppm
R-32	6203-0041	500 ppm	2,000 ppm	2,500 ppm
	6203-0042	1,000 ppm	2,000 ppm	5,000 ppm
	6203-0043	2,000 ppm	4,000 ppm	10,000 ppm

*Factory default; can be changed through Modbus. Recommended 6 month testing / recalibration

THE MVR-SC CONTROLLER

The MVR-SC Refrigerant Leak Monitor provides centralized monitoring and alarming for multi-occupant applications utilizing the MVR-300™ VRF Refrigerant Leak Detector. The MVR-SC continuously monitors all connected gas detectors for alarm and fault conditions, and will provide alerts via the integrated color touchscreen display, integrated buzzer, and on-board relay outputs.

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