

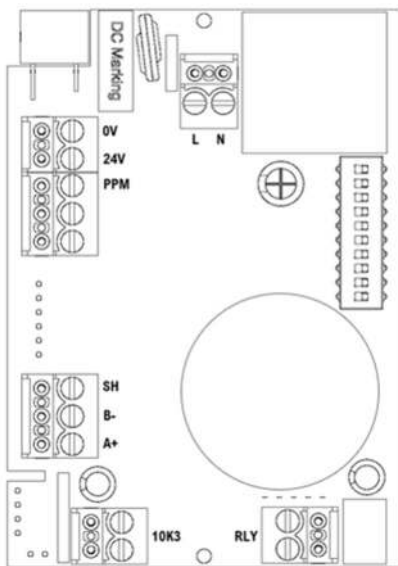
Merlin RG Lite Series

VRF REFRIGERANT GAS SENSORS

Designed for all areas utilizing variable refrigerant flow in excess of the ASHRAE standard guidelines of where local AHJ requires the additional protection of a VRF detector, e.g., residential, public, commercial, and light industrial environments, such as, food retailers, hotel rooms, apartments and offices which support the following outputs:

- ✓ Analog: 1x 0-10V signals for Refrigerants (PPM).
- ✓ Digital RS-485: Modbus RTU or BACnet MS/TP communication protocols.
- ✓ Thermistor output for 3rd party temperature monitoring.
- ✓ Excellent stability and strong anti-interference, long-life sensors.
- ✓ Fully calibrated.
- ✓ Designed in USA.
- ✓ Standard 3 year manufacturers warranty.
- ✓ Audible Alarm
- ✓ Visual LED for Alarm Status

R32 / R410a / R454b (Other A2L gasses on request)



NOTE: Connections depend on Model.

CONNECTION	LABEL	TERMINATION
110V IN	POWER LINE IN	L (LINE)
		N (Neutral)
24V AC/DC INPUT	24V IN	+24V
		0V (Common GND)
ANALOG OUT/P	+10V OUT	PPM (RF Sensor O/P)
DIGITAL OUT/P	RS-485	A+
		B-
		SH (Shield)
THERMISTOR	10K3	(No Polarity)
VFC RELAY	RLY 70mA	(Open/Close Circuit)

Technical Specification

Mechanical	Mounting	Wall Mounted
	Entry	1" DIA Rear Entry and snap offs for side trunking
	Size (W x H x D)	3.38 x 4.48 x 1.3"
	Weight	10oz Max
Electrical	Enclosure	ABS UL Flame retardant – IP40
	24V AC/DC Power Rating	12-24VDC (11-32 VDC) / 24VAC, (20-27 VAC) 50-60Hz
	120VAC Power Rating	Nominal 110VAC, (90-250V AC), 50-60Hz
	Internal Fuse	Resettable PPTC 110VAC, 400mA
	Communication	127 units max
	Power Consumption	5W Max
Environmental	Operating Temperature	14 to 122°F
	Storage	32-86°F
	Room Humidity	0 to 95% RH (continuous) non-condensing.
	Atmospheric Pressure	70 to 110Pa
	Altitude	<9500 ft2
	Installation Cat (110V Voltage)	II (Class 2) Pollution Degree 2
Installation Cat (24V Voltage)	III (Class 3) Pollution Degree 2	
I/Os	Analog Outputs	1x Linear 0-10V/2-10V Refrigerant. Thermistor (10K3)
	Digital Networks	BACnet MS/TP / MODBUS RTU (Parity: None Data bit: 8bit Stop bit: 1)
	Default Alarm Levels	Low Level 350 ppm / High Level 1000 ppm
	Relay Outputs	1x SPST 70mA
Cable Spec	Power	120VAC 18-14 AWG
	Analog Output	24V: 18-22 AWG
	Digital Output	18/2 AWG twisted pair + ground, shielded cable with 120 Ω characteristic impedance.
	Relays	18 – 14 AWG
User Interface	Language	English
	Audible Alarm	>76dB @ 10ft.
	LED Indications (Refrigerant Values Only)	Green: Power (OK) Yellow: Warning (Pre-Alarm) (Blinking = Fault) Red: Danger (Alarm)
Safety/EMC	Safety	IEC 61010-1
	Electromagnetic Compatibility	FCC Part 15
Sensing		
Refrigerants (ppm)		
<p>Diffusion Type NDIR Dual Beam Technology Response: t90 <30s</p> <p>Warm Up Time: ~1 Minute @ 25°C</p> <p>Detector range 0-5000 ppm</p> <p>Accuracy: ± 5% < 50% Full Scale ± 7% > 50% Full Scale</p> <p>Lifespan: 10 Years MTBF</p> <p>Resolution: 0.5% of F.S range</p>		



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