

RG Range

VRF REFRIGERANT GAS DETECTORS



BLANK VERSION

LED VERSION

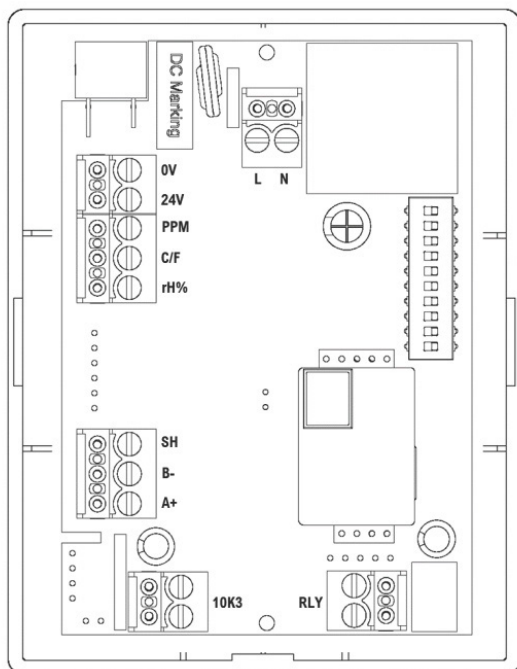
Product Overview:

The AGS Controls RG, our cutting-edge Refrigerant Gas Sensors designed for use with VRF (variable refrigerant flow) systems. Designed for a diverse array of environments spanning residential, commercial, and light industrial sectors. Engineered with precision and reliability in mind, our detectors ensure unparalleled performance and safety in spaces such as hotel rooms, apartments, food retailers, and offices. Including Digital RS-485: BACnet MS/TP communication protocols.

Key Features:

- Digital RS-485: BACnet MS/TP communication protocols
- 110V or 24VAC/DC Power Input
- 1 x 0-10V Output Signal
- Methane and R400 Blends: R1234yf / R1234ze / R134a / R32 / R404a / R407c / R410a / R454a / R454b / R454c / R455a (Others on request)
- In-Built Audible Alarm (can be disabled in the field)

Circuit Board Diagram:



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

NOTE: Connections depend on Model.

Technical Specifications

Mechanical

Mounting	Wall Mounted
Entry	1" DIA Rear Entry and Snap offs for side trunking
Size (W x H x D)	Display Screen – 3.38" x 4.48" x 1.3" / Blank & LED – 3.38" x 4.48" x 0.98"
Weight	2.31lb
Enclosure	ABS UL Flame retardant – IP40

Electrical

24V AC/DC Power Rating	12-24VDC (11-32 VDC) / 24VAC, (20-27 VAC) 50-60Hz
110VAC Power Rating	Nominal 110VAC, (90-250V AC), 50-60H
Internal Fuse	Resettable PPTC 110VAC, 400mA
Communication	127 Units Max
Power Consumption	1.5W Max

Environmental

Operating Temperature	14°F to 122°F
Storage	32-86°F
Room Humidity	0 to 95% RH (continuous) Non-Condensing
Atmospheric Pressure	70 to 110Pa
Altitude	<9500ft
Installation Cat (110V Voltage)	II (Class 2) Pollution Degree 2
Installation Cat (24V Voltage)	III (Class 3) Pollution Degree 2

Inputs / Outputs

Digital Outputs	BACnet MS/TP (Parity: None Data bit: 8bit Stop bit: 1)
Analog Outputs	1 x 0-10V Output

Cable Spec

Power	22 – 24 AWG
Analog Output	22 – 24 AWG

User Interface

Lanugage	English
Optional Display	2.8" TFT
Indication	Green: Power (OK) / Yellow: Warning (Pre-Alarm) / Red: Danger (Alarm)

Safety & EMC

Safety	IEC 61010-1
Electromagnetic Compatibility	FCC
Compliance	CE, EMC, RoHS, REACH and WEEE Compliant

Refrigerant Sensor Specification Lite (ppm)

Diffusion Type NDIR Dual Beam
Technology Response: t90<30s
Warm Up Time: ~1 Minute @ 77°F
Accuracy: ± 5% of full scale range < 50% F.S.
Lifespan: 10 Years MTBF
Resolution: 50ppm
Long Term Zero Stability +3% of FS range/year

Refrigerant Sensor Specification Pro (ppm)

Diffusion Type NDIR Dual Beam
Technology Response: t90<30s
Warm Up Time: ~1 Minute @ 77°F
Accuracy: ± 3% of full scale range < 50% F.S.
Lifespan: 10 Years MTBF
Resolution: 50ppm
Long Term Zero Stability +3% of FS range/year

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Model Number:

The model numbers for the RG range detectors will vary depending on the refrigerant that is being detected for and if the unit is blank or has an LED.

GAS	Model# with LED	Model# for Blank
R32	AGS-RG-L-BAC-LITE-R32	AGS-RG-B-BAC-LITE-R32
R123	AGS-RG-L-BAC-PRO-R123	AGS-RG-B-BAC-PRO-R123
R134a	AGS-RG-L-BAC-LITE-R134a	AGS-RG-B-BAC-LITE-R134a
R410a	AGS-RG-L-BAC-LITE-R410a	AGS-RG-B-BAC-LITE-R410a
R448a	AGS-RG-L-BAC-PRO-R448a	AGS-RG-B-BAC-PRO-R448a
R454b	AGS-RG-L-BAC-PRO-R454b	AGS-RG-B-BAC-PRO-R454b
R513a	AGS-RG-L-BAC-PRO-R513a	AGS-RG-B-BAC-PRO-R513a
R515a	AGS-RG-L-BAC-PRO-R515a	AGS-RG-B-BAC-PRO-R515a