

RS VRF Range

VRF REFRIGERANT GAS DETECTORS



BLANK VERSION

LED VERSION

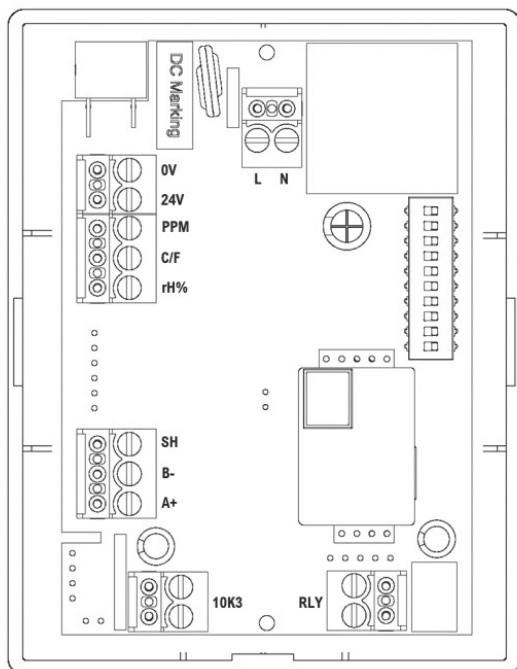
Product Overview:

The S&S Middle East RS, 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 & Modbus RTU communication protocols.

Key Features:

- Digital RS-485: BACnet MS/TP communication protocols
- 230V or 24VAC/DC Power Input
- 1 x 0-10V Output Signal
- In-Built Audible Alarm (can be disabled in the field)

Circuit Board Diagram:



CONNECTION	LABEL	TERMINATION
230V 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 - Indoor Use Only
Entry	1" DIA Rear Entry and Snap offs for side trunking
Size (W x H x D)	Blank & LED - 3.38" x 4.48" x 0.98" / 86mm x 114mm x 25mm
Weight	0.15kg
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 230VAC, (90-250V AC), 50-60H
Internal Fuse	Resettable PPTC 230VAC, 400mA
Communication	127 Units Max
Power Consumption	1.5W Max

Environmental

Operating Temperature	14°F to 122°F / -10°C to 50°C
Storage	32-86°F / 0°C to 30°C
Room Humidity	0 to 95% RH (continuous) Non-Condensing
Atmospheric Pressure	70 to 110Pa
Altitude	<9500ft / 2900m
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 or Modbus RTU (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
Sensor Agency Approvals	UL Recognized Component for ANSI/UL-2034, UL-2075

Refrigerant Sensor Specification (ppm)

Diffusion Type	NDIR Dual Beam
Technology Response:	t90<30s
Warm Up Time:	~1 Minute @ 77°F
Accuracy:	± 15% of applied concentration
Lifespan:	10 Years MTBF
Resolution:	50ppm
Long Term Zero Stability	+3% of FS range/year

Detectable Gases & Alarm Levels

Gas Type:	R422a	R422d	R424a	R427a	R434a	R438a	R442a	R448a	R449a	R449a	R450a	R452a	R452b	R453a	R454a	R454b	R454c	R455a	R507	R513a	R514a	R515a	R515b
Sensor:	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	LITE	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO
Pre Alarm:	75	75	75	75	75	75	75	75	75	175	75	75	75	75	75	75	75	75	75	75	75	75	75
Alarm:	1000	1000	990	1000	1000	990	1000	860	800	800	880	790	870	1000	690	850	620	650	1000	650	320	810	810

Gas Type:	R1233zd	R1234yf	R1234yf	R1234ze	R1234ze	R123	R125	R134a	R134a	R143a	R227ea	R22	R32	R32	R404a	R404a	R407c	R407c	R407f	R410a	R410a	R417a
Sensor:	PRO	PRO	LITE	PRO	LITE	PRO	PRO	PRO	LITE	PRO	PRO	PRO	PRO	LITE	PRO	LITE	PRO	LITE	PRO	PRO	LITE	PRO
Pre Alarm:	75	75	175	75	175	75	75	75	175	75	75	75	75	350	75	175	75	175	75	75	350	75
Alarm:	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000