

AMC-SIR Broadband Series Infrared Refrigerant Sensor/Transmitter

Armstrong Monitoring's AMC-SIR Series infrared refrigerant sensor/transmitters provide an economical, yet highly accurate monitoring solution for CSA B52 and ASHRAE 15 compliant refrigerant applications.

The sensor uses Non-Dispersive Infrared (NDIR) technology to precisely determine airborne refrigerant concentrations, while eliminating the nuisance and false alarms associated with other technologies.

SPECIFICATIONS

Detectable Gases: Refrigerants

Range: Reference Sensor and Display Outputs for AMC-SIR table for ranges

Calibration Gas:

AMC-SIR Use 1000ppm of R134a

AMC-SIR-ERS Use 2000ppm of R134a

Sensor Type: Dual Beam Non-Dispersive Infrared

Installation Wiring: 3 or 4 wire shielded cable

Connection: Pluggable Terminal Block

Output (3 Wire): 0-20 mA or 4-20 mA (250Ω Max)

Output (4 Wire): 0-10 VDC or 2-10 VDC

Enclosure: Polycarbonate/ABS blend

Supply Voltage: 12-28 VDC @ 170 mA

Dimensions: 11.8 cm W x 6.0 cm H x 13.8 cm L
(4.6" W x 2.4" H x 5.4" L)

Operating Temperature: -20°C to 40°C (4°F - 104°F)

Operating Humidity: 0-95% RH Non-Condensing

Zero Stability: $\leq \pm 50$ ppm / year

Span Stability: $\leq \pm 60$ ppm / year

Linearity: $\leq \pm 30$ ppm

Repeatability: ± 20 ppm

Response Time: T90 in approx 60 sec

Warm Up Time: <-2 min, full spec in 30 mins

Warranty: One year



AVAILABLE GASES

AMC-SIR

R22	R134a	R455a
R23	R407c	R507a
R32	R407f	
R123	R410a	

AMC-SIR-ERS

R125	R448a	R514a
R404a	R449a	R1233zd
R407a	R452a	R1234yf
R438a	R513a	R1234ze

Others may be available, please contact factory.



Sensor and Display Outputs for AMC-SIR

Gas	SIR Version	Target Gas	Scaling Factor	Sensor Current Output		1AREF Display Output	
				1000ppm R134a	1000ppm Target Gas	1000ppm R134a	1000ppm Target Gas
R134a	AMC-SIR	R134a	1	20	20	1000	1000
R123	AMC-SIR	R123	1.077	20	18.9	1074	1000
R22	AMC-SIR	R22	1.432	20	15.2	1429	1000
R23	AMC-SIR	R23	1.042	20	19.4	1039	1000
R32	AMC-SIR	R32	1.641	20	13.8	1633	1000
R407c	AMC-SIR	R407c	1.009	20	20	1000	1000
R407f	AMC-SIR	R407f	0.992	20	20	1000	1000
R410a	AMC-SIR	R410a	1.082	20	18.8	1081	1000
R455a	AMC-SIR	R455a	2.676	20	10	2667	1000
R507a	AMC-SIR	R507a	1	20	20	1000	1000
Gas	SIR Version	Target Gas	Scaling Factor	2000ppm R134a	1000ppm Target Gas	2000ppm R134a	1000ppm Target Gas
R1233zd	AMC-SIR-ERS	R1233zd	0.909	20	12.8	1818	1000
R1234yf	AMC-SIR-ERS	R1234yf	0.682	20	15.7	1368	1000
R1234ze	AMC-SIR-ERS	R1234ze	0.632	20	16.7	1260	1000
R125	AMC-SIR-ERS	R125	0.675	20	15.9	1345	1000
R404a	AMC-SIR-ERS	R404a	0.773	20	14.7	1495	1000
R407a	AMC-SIR-ERS	R407a	0.852	20	12.8	1818	1000
R438a	AMC-SIR-ERS	R438a	0.843	20	13.5	1684	1000
R448a	AMC-SIR-ERS	R448a	0.86	20	13.3	1720	1000
R449a	AMC-SIR-ERS	R449a	0.851	20	13.4	1702	1000
R452a	AMC-SIR-ERS	R452a	0.614	20	17	1231	1000
R513a	AMC-SIR-ERS	R513a	0.735	20	14.9	1468	1000
R514a	AMC-SIR-ERS	R514a	0.684	20	15.7	1368	1000

Warranty: All Armstrong Monitoring equipment is warranted against defects in materials and workmanship for two years from date of delivery, with the exception of sensors. Please contact factory for specific sensor warranty. During the warranty period, we will repair or replace components that prove, in our opinion, to be defective. We are not liable for auxiliary interfaced equipment, nor consequential damage. All warranty returns require a return authorization number. For more information please refer to our Terms & Conditions.

Note: Due to ongoing product development, the manufacturer reserves the right to change specifications without prior notice. The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of this data. A variety of factors, not limited to variances in temperature, humidity, pressure, vibrations, EMI/RF may impact on the performance of the equipment. Testing within harsh or unusual environments is recommended. Please contact the factory for assistance with field validation trials.

Performance data conditions: 22C, 50% RH, 1013 mbar

