SGD43S-M3-Sx

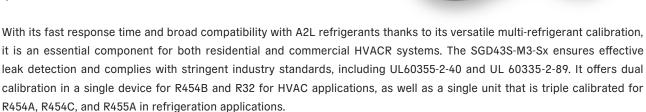
Safe and complete refrigerant leakage detection system



SGD43S-M3-Sx

Safe and complete refrigerant leakage detection system for modern HVACR systems

The SGD43S-M3-Sx is specifically designed for the HVACR industry as a complete refrigerant detection system (RDS). It is based on the thermal conductivity measurement principle and features a dual contact relay output that can trigger a signal relay to start a blower, switch off the load or warn a control board. Easy integration and installer-friendly feedback is enabled by a status-indicating LED for quick visual feedback.



Key features

Advanced TC technology

Detects refrigerant leaks quickly and reliably, minimizing false alarms and operational disruptions.

· UL compliance

Meets UL 60335-2-40 ed. 4.1 and UL 60335-2-89 standards with self-monitoring capabilities, functioning as either a refrigerant sensor or a complete detection system.

Long lifetime

Operates maintenance-free for over 15 years with factory life-time calibration and no need for re-zeroing.

· Dual contact relay switch output

Integrates seamlessly with modern HVAC systems using new A2L refrigerants, eliminating the need for an external mitigation board.

RS-485 serial interface

Enables easy communication and data transmission, along with the relay output, enhancing system testing and design processes.

Dual color status light

Provides clear and immediate status indication for installer convenience.

· Wide refrigerant compatibility

Supports R32, R454A, R454B, R454C, and R455 refrigerants, and is resistant to refrigerant poisoning.

Robust and reliable performance

The thermal conductivity (TC) measuring principle offers superior protection against contamination, avoiding optical, chemical, or vibrating sensor components, and their associated drift and degradation mechanics. The robust glass-passivated silicon MEMS chip thermal conductivity sensors, which have been reliably used in medical and automotive applications for decades, proving their technical reliability and widespread validation to the A2L refrigerant detection application.

Specifications

Monitored refrigerants	R-32, R-454B (SGD43S-M3-S5)
	R-454A, R-454C, R-455A (SGD43S-M3-S7)
Connector	8-pin sealable connector
Response time	≤30 s
Operating conditions	-40 to +185°F (-40 to +85°C)
	0 to 100 % RH including condensing environments
	(max. dew point 40°C)
	800 to 1,100 mbar
Supply voltage	24 V AC/DC
Accuracy at ambient conditions	±2.5% LFL
Interface	RS-485/MODBUS and dual contact relay
	switch output
Relay output	Dual contact relay output
Norm compliance	UL 60335-2-40 (4th editions)
	UL 60335-2-89
Visual monitoring	Red/green LED status light
IP protection	IP54, if IP54 rated connector is used
Expected lifetime	> 15 years/self-monitored sensor
Size	3.54 × 2.17 × 0.94 in (90 × 55 × 24 mm)

Interested in samples?



Technology at heart, future in mind.