Rds Relay Protection Measurement and Control Device



Overview

SGD43S-M3-S5 It is based on the thermal conductivity measurement principle and features a dual contact relay output that can trigger a signal relay to star.

Key Takeaways

RDS relay protection and control devices are specialized systems that monitor, measure, and protect equipment by triggering relay outputs to control connected loads or alert operators. OverviewRDS (Refrigerant Detection System) relay devices and electrical protection relays serve similar protection and control functions in different domains. They detect abnormal conditions—such as refrigerant leaks in HVACR systems or electrical faults in power systems—and respond by activating relays to mitigate risks, control equipment, or notify operators.

HVACR RDS Relay Devices

In HVAC

R applications, devices like the Sensirion SGD43S-M3-Sx or Aspen RDS kits are designed to detect refrigerant leaks using thermal conductivity sensors. Key features include: Dual dry-contact relay outputs to start blowers, shut down compressors, or trigger alarms. Fast response and multi-refrigerant calibration, compatible with A2L refrigerants such as R32, R454B, R454A, R454C, and R455A.

© 2026 KENHARDT OPTICAL NETWORKS - All rights reserved

UL60335-2-40 compliance, ensuring safety and reliability in residential and commercial installations. Installer-friendly design, including status LEDs and flexible wiring for easy integration. These devices can automatically control auxiliary equipment to reduce flammability risks, such as turning on a furnace blower to dilute leaked refrigerant or shutting down the condenser.

Electrical Protection and Measurement Relays

In power systems, numerical or multifunction protection relays and Intelligent Electronic Devices (IEDs) provide measurement, control, and protection for feeders, transformers, and substations: Protection functions: overcurrent, earth fault, differential protection, and multi-stage overcurrent protection. Measurement and monitoring: disturbance recording, event logging, and SCADA communication for real-time system supervision. Programmable and multifunctional: numerical relays allow configurable settings and can combine multiple protection functions in a single device.

Standards compliance: devices often comply with IEC 61850 and other international standards, ensuring interoperability and cybersecurity. Integration with control systems: IEDs can interface with merging units, switchgear control units, and protection management tools like PCM600 for centralized monitoring and control. These devices are critical for ensuring reliability, safety, and operational efficiency in both conventional and digitally-enabled substations.

Key TakeawaysRDS relay devices in HVACR systems focus on safety and leak mitigation, using sensor-triggered relays to control equipment and prevent hazards. Electrical protection relays and IEDs focus on fault detection, measurement, and automated control in power systems, often with multifunctional capabilities and SCADA integration. Both types of devices rely on relay outputs to execute protective actions, ensuring system safety, operational continuity, and compliance with industry standards.

These devices are essential for automated protection and control, whether in HVACR environments or electrical power networks, providing both real-time monitoring and actionable responses to abnormal conditions.

© 2026 KENHARDT OPTICAL NETWORKS - All rights reserved

Article Content

SGD43S-M3-S5

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

A2L RDS KIT SPEC SHEET

Aspen provides specific RDS kits for R32 and R454B to provide optimal performance and avoid nuisance or false alarms that can occur in inferior products. The innovative RDS kits have unique

SGD43S-M3-Sx A2L RDS

It is based on the thermal conductivity measurement principle and features a dual dry-contact relay output that can trigger a signal relay to start a

SGD43S-M3-Sx Safe and complete refrigerant leakage detection system

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

Refrigerant Detection System Kit

The RDS mitigates the flow of refrigerant concentration and cuts power to ignition sources in the HVAC system when it detects a refrigerant leak in the indoor coil. After refrigerant concentrations have been

Protective Relays: Types, Working Principle & Uses

What Is a Protective Relay? A protective relay is a control and measurement device used in power systems to detect faults, unsafe operating

.ASPENMFG

Mitigation + accessory control kit (R) – includes the same functionality as standard option plus ability to energize/de-energize up to four inputs for accessories such as electric heat, gas furnace, air

Stand-alone RDS−ON sensor for In-Situ Prognostic, Protection and ...

The sensor digitizes and transmits values for voltage, current, and on-state resistance. This integrated package facilitates in situ prognostics, provides robust device protection, and enables improved

Protection and Control Intelligent Electronic Devices (IED)

© 2026 KENHARDT OPTICAL NETWORKS - All rights reserved

PS640 Series Medium-voltage Protection Relays Hitachi Energy''s PSF640 is designed for the protection, control, measurement, and supervision of utility distribution substations and industrial

Residual Current Monitors, RCMs

In industrial applications, residual current relays are used in combination with external toroids to detect and evaluate earth fault current. They can also be used in conjunction with protective devices to

Centralized Substation Protection and Control

A centralized substation protection and control system is comprised of a high-performance computing platform capable of providing protection, control, monitoring, communication and asset management

Detect and Protect: Everything Techs Need to Know

The RDS control and sensor are expected to last the life of the Daikin equipment in which they are installed. Barr stated that no maintenance of

IED (Intelligent Electronic Device) advanced functions that make

The highly precise measured values and status information provided by the protection relays can be transmitted over the high-performance communication system to automation systems

Protection relays

Numerical relays are based on the use of microprocessors. Numeric relays are programmable. Most numerical relays are also multi-functional.

The essentials of power systems: Relay protection and communication ...

Protection functions and communications First, I would like to make a note that there are many essentials when we speak about power systems in general. The main relay protection

RDS-32™ Radiation Survey Meters | Mirion

The RDS-32 Survey Meters are small handheld, battery operated radiation survey instruments. Due to its versatile functions and durability it is suited for a wide range of applications in civil defense,

RDS (Refrigerant Detection System) | Lineup

The Senseair RDS (Refrigerant Detection System) R290 is a refrigerant leak detection sensor module compatible with the highly flammable refrigerant R290.

.ASPENMFG

© 2026 KENHARDT OPTICAL NETWORKS - All rights reserved

OPTION R Standard + Accessory Control Refrigerant Detection System (RDS) Kit Mitigation + accessory control kit (R) – includes the same functionality as standard option plus ability to

Related Video Reference

This video was associated with the source search result. Verify technical details against current product documentation and project requirements.

Contact Us

Continue your research online:

Website: https://kenhardtprimary.co.za
Technical inquiry: https://kenhardtprimary.co.za/project-desk.html
African project coordination: Century City, Cape Town, Western Cape, South Africa

This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

© 2026 KENHARDT OPTICAL NETWORKS - All rights reserved