

RIVO MULTITRADE OPTICAL SYSTEMS

General-purpose relay protection devices



Overview

Choose from our selection of general purpose relays, including spade-terminal relays, circular-pin relays, and more.

Key Takeaways

General-purpose relays are versatile electromechanical or electronic devices used to control, protect, and automate electrical circuits across industrial, commercial, and consumer applications.

General-purpose relays (GPRs) are designed to switch electrical loads, control sequences, and provide basic protection in a wide range of applications. They are commonly used in industrial automation, motor control, lighting systems, HVAC, and consumer electronics. These relays can handle both AC and DC loads and are available in various contact ratings, typically ranging from 1 A to 15 A or higher, depending on the application and manufacturer .

Key Features

- **Versatility:** Suitable for controlling motors, compressors, heaters, and lighting circuits .
- **High Inrush Current Capability:** Some relays are designed to withstand high inrush currents, making them ideal for inductive loads like motors and transformers .
- **Compact and Modular Designs:** Many GPRs are plug-in or miniature types, allowing space-saving installation and easy replacement .

- **Environmental Adaptability:** Certain models meet UL Class I Division 2 or IEC standards for hazardous locations, enabling safe operation in explosive or harsh environments .
- **Multi-Pole Options:** Multi-pole relays provide higher capacity and dielectric strength for complex control circuits .

Applications

- **Industrial Automation:** Sequence control, motor starters, conveyor systems, and assembly lines .

- **Consumer and Commercial Electronics:** Street lighting, air conditioners, water management systems, and smart appliances .

- **Protection Functions:** While general-purpose relays primarily control circuits, some can be integrated with protection relays to safeguard motors, feeders, and distribution lines against overloads, phase failures, or short circuits .

Examples of Devices

- **CHINT JD-8 Integrated Motor Protector:** Protects three-phase AC motors from overload and phase breakdown .
- **TE Connectivity Relays:** Offer high inrush resistance and compact designs for indoor and harsh environments .
- **OMRON G7L/G7J Relays:** Suitable for compressors, heaters, and motors with high dielectric strength .
- **Schneider Electric Plug-in Relays:** Provide modular, RoHS-compliant solutions for industrial machines and hazardous locations .
- **Siemens SIPROTEC 7SX82:** A universal protection relay for medium-voltage grids, combining control, monitoring, and protection in one device .

Selection Considerations

When choosing a general-purpose relay, consider:

- **Load Type and Current Rating:** Ensure the relay can handle the expected load and inrush current.
- **Environmental Conditions:** Check for compliance with safety standards for hazardous or high-temperature environments.
- **Control Requirements:** Determine if single-pole, multi-pole, or latching functionality is needed.
- **Integration with Protection Systems:** For critical applications, pairing GPRs with protection relays ensures both control and safety. General-purpose relays provide a cost-effective, flexible, and reliable solution for controlling and protecting electrical circuits across diverse applications, from simple on/off switching to integration with advanced protection systems.

Article Content

General Purpose Relays | TE Connectivity

Browse TE's extensive general purpose relays by popular design trends, applications, space-saving solutions, high and low power

What Is a General Purpose Relay? Complete Guide

Learn what a general purpose relay is, how it works, key specs, contact configuration, and how to choose the right one

What is a General Purpose Relay?

General Purpose relays are the origin of the Aratas relays, and they meet various needs with a wide

General Purpose Power Relays | McMaster-Carr

These relays accept voltage drops up to 50% of the rated voltage without switching. They're often used with industrial automation

General Purpose Relays – Mouser

General purpose relays are electromechanical switching devices designed to control electrical circuits by using a low-power signal

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When mated with SE Relays sockets and accessories, these RoHS compliant relays provide a complete

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Improve project efficiency with prepackaged, UL Listed, and pre-wired General Purpose Relays housed in NEMA 1 enclosures.

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General relays, compact size, broad compatibility, and durable performance for versatile control in low-to-medium power circuits

Protective Relay Basics

Traditionally, protective relays were electromechanical devices that utilized induction disk, coils, contacts, and solenoid elements to

What is Protection Relay?

A protection relay is a crucial component of electrical systems that safeguard infrastructure, employees, and

Unleashing the Ultimate General Purpose Relay Model

General-purpose relay models play a crucial role in various industries and applications, serving as the backbone of

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Where it is desired to have more time delay before element operates for purpose of coordinating with other protective relays or

Protective Relay: Working, Types, and Applications

Learn about protective relays, their working principle, types, and applications in power systems. Discover how relays

Protective Relaying Principles and Applications

The article provides an overview of protective relaying principles and their applications for high-voltage power system components. It

PC37.90/D1, Sept 2024

Purpose: This standard establishes a common reproducible basis for validating designs and testing for the service conditions,

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General Purpose Relay Features General Purpose Relay Application Examples General purpose relays are mainly used as a control

Types and Revolution of Electrical Relays

Types and Revolution of Electrical Relays Introduction: Protective relays work in concert with sensing and control devices to

Types of Relays

Introduction To Relay and Different Types of Relays | Its Terminals, Working and Applications Relays are the essential component

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Browse TE's extensive general purpose relays by popular design trends, applications, space-saving solutions, high and low power

What are Protection Relay, Time Relay and General Purpose Relay

What is a General Purpose Relay? General purpose relays are primarily utilized as a control system (relay series) for

Service Offerings | Protection and Controls

Will your protection scheme operate when you need it to? Routine maintenance of your protection scheme, including switchgear,

Types of Electrical Relays: Guide to EMR, SSR, Reed & Protective Relays

A simple explanation of electrical relay types. We cover how electromechanical, solid-state, and protective relays work

Protective Relay: Advantages, Types & Applications

Used in switchgear and control systems, protective relays enhance system stability, minimize downtime, and

Power System Protective Relays: Principles & Practices

This presentation reviews the established principles and the advanced aspects of the selection and application of protective relays in

Types of Protective Relays

This article covers various types of protective relays, such as overcurrent, directional, and differential relays, highlighting their

Protective Relays

Protect critical components in your power system with a wide range of SEL protective relays covering applications and use cases

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Relays Part 4: The Protective Relay Basic Theory

From protection to power flow control and so on, relays have proved to be compulsory devices in many power

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A Complete Guide to Protective Relays and Their Role in Power

Protective relays work in conjunction with various electrical protection and control devices, such as Miniature Circuit

The basics of power system protection that every

Introduction to relay protection Protection is the branch of electric power engineering

Relays, Fuses, and Circuit Breakers | Protection Devices for Electrical ...

Comprehensive guide to electrical protection devices including relays, fuses, and circuit breakers, with specifications,

What is Overload Protection?

Overload relays protect the motor, motor branch circuit, and motor branch circuit components from excessive heat from the overload

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General Purpose Relay Configuration | Control Relays and Timers

Installation of general purpose relays are quick, easy and secure with little risk of damage, and various relay models are specifically

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