

Overheat relay protection switch



Article Overview

An overheat relay protection switch safeguards motors and electrical equipment by detecting excessive current or temperature and disconnecting the circuit to prevent damage.

Function and Purpose

An overheat relay, often called a thermal overload relay, is designed to protect motors from overheating caused by excessive load, phase loss, shaft misalignment, or worn bearings. It monitors the current flowing through the motor and trips the circuit if the current exceeds safe operating limits for a prolonged period, preventing winding damage and costly downtime .

Types of Overheat Relays

- Thermal Relays: Use heat-sensitive elements to mimic motor heating. They respond gradually to sustained overloads and can allow brief inrush currents during motor startup .
- Magnetic Relays: React quickly to sudden current spikes, such as short circuits, providing rapid disconnection .
- Electronic Relays: Microprocessor-based devices that offer precise monitoring and adjustable trip settings for enhanced protection .

Key Components

- Setting Switch: Adjusts the trip current according to the motor's full-load amperage (FLA). Proper calibration ensures accurate protection without nuisance tripping

Article Content

Nov 28, 2025

Comprehensive Guide to Overload Relays: Motor

This guide provides a detailed overview of overload relays, including their role in protecting motors from

Oct 15, 2025

Thermal Overload Relays

Thermal Overload Relays Protect with overload relays Get to know the range of protection overload relays.

Jun 15, 2026

Arduino Overheat protection circuit using NTC thermistor

An overheat protection is used to prevent the self-destruction of devices due to excess heating resulting from prolonged use,

Apr 26, 2026

Electric Motor Reset Button

Electric motor thermal overload switch guide: This article describes how to find and reset the thermal overload button on an electric

Apr 03, 2026

Thermal Relay Working Principle Construction of Thermal Overload Relay ...

Time Delay Function: The relay's heating effect follows Joule's law, causing a delay in operation that allows temporary

Jan 25, 2026

Thermal Relay | How it works, Application & Advantages

A thermal relay is an electromechanical device that detects temperature changes in electrical circuits, protecting

Dec 07, 2025

SIRIUS 3RN2 Relays brochure

Sensors are installed directly in the motor winding. If the selected PTC sensors' rated response temperature is reached, the

Dec 25, 2025

Thermal Relay : Construction, Circuit, Types & Its

Thermal relays are the perfect solution for providing protection to motors which provides the most precise

Nov 14, 2025

How to Prevent Solid State Relay Failure

Solid state relays provide robust solutions for electronic switching in load control applications and hold many advantages over

Jan 10, 2026

What is an Overheat Protection Device?

Motor Overheat Protection Switch The overheat protector is an automatic control device that achieves equipment

Jan 09, 2026

Overheating protection circuit

How do i build an overheating protection circuit using resistor, capacitor, lm358 and 12v relay turn off hot air handle

Oct 05, 2025

Optimal Layout and Overheat Monitoring for Components of Highly ...

Effective thermal management measures are of great significance for improving the reliability of relay protection

Nov 21, 2025

Overload relay – Principle of operation, types, connection

An overload relay (OLR) protects an electric motor against overloads and phase failures. Thermal and

Nov 06, 2025

Motor Protection Overload Relays

Motor Protection Overload Relays Thermal overload relays are essential components of electric motors.

Sep 23, 2025

Thermal Relay | Overheat Protection Function

Learn how thermal relays protect electrical devices from overheating by monitoring and

Feb 11, 2026

How to Connect a Thermal Overload Relay: A Comprehensive Diagram

Learn how to connect a thermal overload relay with a helpful diagram. Ensure the proper protection of your motor with this step-by

May 18, 2026

A Beginner's Guide to Thermal Overload Relays | CHINT global

Discover the importance of thermal overload relays for motor protection. This guide explains motor overload causes

Apr 10, 2026

Thermal Overload Relay Explained: Motor Protection, Working

A thermal overload relay is a motor protection device that trips when motor current stays above the setting long

Sep 20, 2025

Amazon : Thermal Overload Switch

Discover reliable thermal overload switches to shield your appliances from current surges and high temperatures. Protect

Oct 30, 2025

Overcurrent and Overtemperature Protection for Solid State Relays ...

This reference design shows how to achieve a solid state relay solution with overcurrent and overtemperature protection, using the

Jul 27, 2025

The Complete Guide to Thermal Overload Relays: Working

Thermal overload relays are crucial protective devices designed to monitor and protect electrical circuits from such

Jul 08, 2026

Motor Protection Overload Relays

Protect your electrical circuits from overheating with Schneider Electric UK's thermal overload relays.

Jan 11, 2026

A Beginner's Guide to Thermal Overload Relays

Thermal overload relays protect motors from these dangerous situations. This guide
Sep 14, 2025

Thermal Switches and Thermal Protectors Selection Guide: Types ...

Thermal switches and thermal protectors are thermally-actuated electro-mechanical on/off switches. They differ from thermal fuses
Mar 24, 2026

Thermistor motor protection relays

The CM-MSx thermistor motor protection relays are used to monitor the temperature of motors equipped with PTC temperature
Aug 25, 2025

Your Guide to the Thermal Overload Switch

Understand the thermal overload switch inside and out. This guide explains how they work, how to choose the right
Aug 11, 2025

Contactor & Thermal Overload Relays | RS

Contactor overload relays are devices used to protect motors and electrical equipment from overloads. When a motor draws more
Nov 22, 2025

Thermal Overload Relay Explained: Motor Protection, Working

Learn what a thermal overload relay does, how bimetallic and melting alloy overload relays work, how NC/NO overload

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://www.chromadecksigns-eastrand.co.za>

Email: sales@chromadecksigns-eastrand.co.za

Phone: +32 2 318 5792

Address: Avenue Louise 500, 1050 Brussels, Belgium

This document is for informational purposes only. Specifications subject to change without notice.

