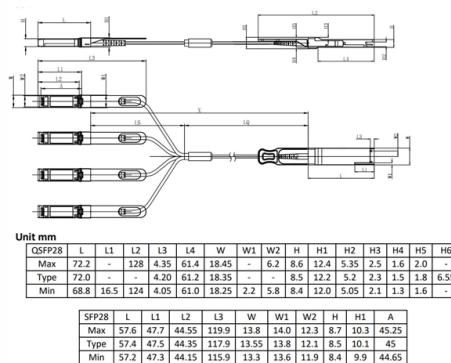


How about thermal relay protectors



Article Overview

A thermal relay protector safeguards motors and electrical devices from overheating by tripping the circuit when excessive current causes dangerous temperature rise.

Function and Working Principle

A thermal relay protector is designed to prevent damage from sustained overcurrent that can overheat motors or other electrical equipment. It operates primarily using a bimetallic strip that bends when heated by excessive current. This bending triggers a mechanism that opens the control circuit, stopping current flow and allowing the device to cool down, thereby preventing thermal damage or fire hazards . Unlike fuses or circuit breakers, thermal relays do not protect against short-circuit faults; they specifically guard against prolonged overloads, locked rotor conditions, long starting times, or phase-loss overcurrent .

Key Features

- Trip Class and Reset Mode: Thermal relays have selectable trip classes (e.g., class 10) and can be set for manual or automatic reset after cooling .
- Contact Arrangement: Typically includes a normally closed (NC) contact to stop the motor and a normally open (NO) auxiliary contact for alarms or signaling .
- Temperature Compensation: Some models adjust for ambient temperature variations to ensure accurate protection .
- Phase-Loss Sensitivity: Protects motors from damage if one phase fails, preventing overheating

Article Content

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A thermal relay works depending upon the above mentioned property of metals. The basic working principle of

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Power system protection relays can be categorized into different types of relays. Types of Relays Types of protection

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