

Signal reset after relay protection operation



Overview

Indreset Operation Indication, Relay and Register Reset. This document describes an INDRESET function block used in protection relays. The function bloc.

Key Takeaways

Relay protection signals can be reset manually, via digital inputs, front panel controls, or through remote communication, depending on the relay type and configuration. Manual Reset

Most protective relays feature a manual reset option. This typically involves pressing a reset or enter button on the relay's front panel to clear latched alarms or trip indicators. For example, on the 857 Motor Protection Relay, pressing the Enter key or holding the Cancel button for a few seconds can reset latched indicators and output protection elements . In simpler electromechanical relays, manually opening and closing the relay contacts after disconnecting power can achieve a reset .

Digital Input Reset

Relays often allow digital inputs to trigger a reset. Any configured digital input can be used to send a release latched signal, which clears all latched relays and indicators. The selection of the input is usually done via relay configuration software, such as the SetPointPS software for 857 relays, under the menu Release output matrix latches . This method is particularly useful for automated or remote systems.

Remote Communication Reset

Modern numerical or digital relays support remote reset via communication protocols. This allows operators to reset alarms and trips from a control center without physically accessing the relay. The relay receives a reset command through the communication interface, which clears latched outputs and indicators .

Power Cycling

As a last resort, cycling the control power to the relay can reset its protection signals. This method is less preferred because it interrupts the relay's operation and may affect other connected devices .

Understanding Reset Factor

The Reset Factor is a measure of how quickly a relay returns to its normal state after a temporary fault. It is calculated as the ratio of drop-off current to pickup current. A higher reset factor indicates a faster relay response, ensuring that the relay does not remain tripped unnecessarily after a transient fault . Testing the reset factor typically involves secondary injection, gradually increasing and decreasing current to observe the relay's pickup and drop-off behavior.

Best Practices

- Always acknowledge events before resetting to ensure proper logging and troubleshooting.
- Use configured digital inputs or software commands for automated systems to avoid manual errors.
- Verify relay operation after reset by testing the output contacts or monitoring system response.
- Regularly test and commission relays to ensure reset mechanisms function correctly under fault conditions . By combining manual, digital, and remote reset methods, operators can maintain reliable protection while minimizing downtime and ensuring system safety.

Article Content

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Protective Relay Basics

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Basic protection relay knowledge

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Input Output (dry contact) Settings Current, voltage (I and V), or other quantities Set relay thresholds and operation

A Protection Engineer's Diary: Pickup & Operate

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How to Test Protective Relays Correctly

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CHAPTER-3

3.1.6 Primary and back up Protection The design of a protective system should include backup protection to allow for failures and for

Types of Electrical Protection Relays or Protective Relays

Operating Principles: Protective relays operate by detecting abnormal signals, with specific pickup and reset levels to

Protection Relay Testing and Commissioning R

PROTECTION RELAY TESTING AND COMMISSIONING The testing and verification of protection devices and arrangements

Types and Revolution of Electrical Relays

The protection system operates and isolates the faulty section. The operation of the protection system should be fast and selective

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A primary motor protective element of the motor protection relay is the thermal overload element and this is accomplished through

Terminologies used in Protective Relaying

Terminologies used in Protective Relaying Sealing relays or holding relays are auxiliary relays that are used to

How Do Reclosers Work? Settings and Operation

The recloser in reset state waits for an initiate signal before it can start timing after the breaker opens. The initiate signal is usually a

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How Protection Relays Solve Electrical Problems

Solution: Modern motor protection relays use digital signal analysis to measure true-sequence components. These sequence

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