

The standard for relay protection return coefficient is



Summary of Content

The return coefficient in relay protection typically ranges from 0.85 to 0.95, ensuring reliable dropout without false tripping while maintaining selectivity.

Definition and Purpose

The return coefficient (also called dropout ratio) is the ratio of the relay current at which the relay resets or drops out to its pickup current. It ensures that once a fault is cleared, the relay does not remain energized or operate unnecessarily due to minor fluctuations in current or voltage. A properly chosen return coefficient improves relay selectivity, reliability, and stability in the system .

Typical Values

- For instantaneous overcurrent relays, the return coefficient is usually 0.85–0.95 of the pickup current .
- For voltage or directional relays, similar ratios are applied to ensure the relay resets promptly after fault clearance.
- Numerical relays may allow adjustable return coefficients to fine-tune performance based on system characteristics and coordination requirements .

Application in Relay Coordination

- The return coefficient affects time-current coordination between downstream and upstream relays.

Article Content

IEC Standard For Protection Relays : Electrical Engineering Hub

The IEC standard for protection relays plays a vital role in modern electrical power systems. Protection relays are

Practical handbook for relay protection engineers | EEP

Relay protection circuitry This handbook covers the code of practice in protection circuitry

IEC 60255 1xx: Protection relay functional standards for all

In short, standards in the new IEC 60255-1xx series are relevant and important for everyone whose work involves relay

HANDBOOK

ACKNOWLEDGEMENTS The "Hand Book" covers the Code of Practice in Protection Circuitry including standard lead and device

NOTICE OF NEW STANDARD PRODUCTS

Includes 47 active IEEE standards, guides, recommended practices in the Power Systems Relays family.

13 terms concerning relaying, measurements, and

This technical article is dedicated to graduates and engineers coming from other disciplines

PC37.90/D1, Sept 2024

This standard establishes a common reproducible basis for designing and evaluating relays and relay systems. Scope: This standard

Detailed graphic explanation: the connection between

The following is a detailed explanation of the return coefficient of the relay. I hope you will have a better

VSWR to Return Loss Conversion Chart

This table converts between VSWR, Return Loss, reflection coefficient, mismatch loss, reflected power and through power.

Return Loss

The cable industry most often uses return loss, which fits in nicely with our use of the decibel for various other measurements. As

Protective Relay Basics

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

IEC 60255 1xx: Protection relay functional standards for all

This identified a need for revising some of the existing standards and for developing new standards taking into account

Protection Basics

Ground fault protection for these systems is usually provided by residual protection, either calculated by relay or by

Protection Relay

In the design of electrical power systems, the ANSI Standard Device Numbers denote what features a protective

PC37.90/D1, Sept 2024

This standard establishes the service conditions, ratings (electrical, thermal, and mechanical), and testing requirements for relays,

IEEE Std C37.90 -2005, IEEE Standard for Relays and Relay Systems ...

This standard specifies standard service conditions, standard ratings, performance requirements, and testing requirements for relays

IEC 60255 Protection Relay Standards

This document provides specifications for various protection relays and their functions. It outlines the thermal ratings and operating

Instantaneous and Time-overcurrent (50/51) Protection

How Does Instantaneous and Time-Overcurrent Protection Work? Overcurrent protection prevents damage from the overheating of

Untitled 1 [techlib]

SWR, Return Loss, and Reflection Coefficient This paper is intended to give the newcomer to RF terminology a brief overview of

Understanding Protective Relays in Power Systems

Protective relays are critical components in power systems, providing essential protection for various elements such

Overcurrent Protection Fundamentals R

OVERCURRENT PROTECTION FUNDAMENTALS Relay protection against high current was the earliest relay protection

Practical handbook-for-relay-protection-engineers | PDF

It covers standard codes, wiring practices, and norms for protecting generators, transformers, and lines, and provides detailed

IEEE Guide for Protective Relay Applications to Transmission Lines

IEEE-SA Standards Board Abstract: Information on the concepts of protection of ac transmission lines is presented in this guide.

What is the Reset Factor for Protective Device? How can it be tested

Reset Factor The Reset Factor refers to the speed of a relay's reaction. The closer the return coefficient, the faster

Inverse Time Overcurrent Relays and Curves Explained

Overcurrent relaying is one of the simplest and most economical types of protection employed for power system

Basics of Protective Relaying and Design Principles

This chapter focuses on the basics of power system relaying with special attention paid to the overcurrent, impedance, and

Practical handbook for relay protection engineers | EEP

This handbook covers the code of practice in protection circuitry including standard lead and device numbers, mode of

Power System Protective Relays: Principles & Practices

(of a relay) The extent of the protection afforded by a relay in terms of the impedance or circuit length as measured from the relay

Reflection Coefficient vs. Return Loss vs. VSWR Explained

Understand the relationship between reflection coefficient, return loss, and VSWR in transmission lines and impedance matching.

IEEE PSRCC and IEC Standards for Protective Relays

Write IEEE standards for protective relays (& control systems). "Standards" includes standards, trial-use standards, recommended

Contact Us

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

Website: <https://benniedesignstudio.co.za>

Email: sales@benniedesignstudio.co.za

Phone: +27 82 391 4765

Address: The Towers, 1 St Georges Mall, Cape Town, 8001, South Africa

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

