

Relay protection end-of-period calculation



Overview

With this Protection Relay Setting Calculator, you'll be able to work out pickup current, time multiplier settings (TMS), operating time, coordination time interval (CTI), and plug setting multiplier (PSM) based on fault current, CT ratio, and the IEC 60255 curve parameters. Selective short-circuit protection can be achieved in different ways, such as: Time-graded protection Time- and current-graded protection A straightforward way of obtaining selective protection is to use time grading. The principle is to grade the operating times of the relays in such a way that. Calculate the multiple of Pick Up value for the I_{sc} corresponding to the instantaneous setting. All calculations are based on the available documentation/ information. These settings may be revaluated during the commissioning, according to actual and/or measured values. PSM – Plug Setting Multiplier (Current Setting Multiplier) What is PSM?

2). TSM – Time. The IEC 60255 IDMT trip time is calculated as $t = TMS \times \frac{k}{(I_{sc})^{\alpha} - 1}$, where the constants k and α define the curve shape.



Article Content

Oct 23, 2025

Relay Setting Calculation Overview

The document provides calculations for relay settings for different components in a power system network. It calculates the fault

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Fundamentals of Distance Protection

Distance protection is a very extensive aspect of power system protection. This article offers the reader a simple overview of distance

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Overcurrent Relay Setting Calculator | IEC 60255 & IEEE C37.112

Overcurrent Relay Setting Calculator based on IEC 60255 and IEEE C37.112 standards. Calculate pickup current, time

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Efficient searching of extreme operating conditions for relay ...

This paper presents a novel deep reinforcement learning-based approach for the rapid identification of Extreme

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The Relay Testing Handbook: Principles and Practice

Chapter 15: Line Distance (21) Element Testing Impedance Relays Settings Preventing Interference in Digital Relays 3-Phase Line

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Societal and technology trend report

The crisis of traditional relay protection: A disruption of the technological paradigm Using the high short-circuit currents and system

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Time Overcurrent Relay Calculator

Calculate time overcurrent relay settings with IEEE & IEC standards. Learn IDMT relay formulas, TMS/TD settings

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The basic calculation of transmission line protection | EEP

Transmission line protection The excessive currents accompanying a fault, are the basis of overcurrent protection

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Protection Basics

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

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Mastering Distance Protection and Calculations: Never Mess Up ...

One of the key challenges in distance protection is the correct setting and calibration of relays to account for real-world

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Relay Protection in HV/MV Substations: Calculations, Settings ...

Effective relay protection in HV/MV substations requires a thorough approach encompassing calculations, precise

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Setting Calculation Method and Protection Coordination for Relay ...

Then, the electrical engineering software is used to perform a more accurate setting calculation and protection coordination. Also, the

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RELAY SETTING CALCULATION

Calculation for Transformer Differential Protection 87T settings : ... Rated Current @ 67 MVA at Highest tap= $MVA \times 1000 / \sqrt{3}$ x

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Understanding Protective Relays in Power Systems

Protective relays are vital for safeguarding power systems, ensuring protection against faults and abnormalities. This

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The Useful Life of Microprocessor-Based Relays: A Data-Driven

One utility reported that they attempted to quantify the useful life of several relay technologies and fit a failure curve based on

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Distribution Automation Handbook

When the protection is implemented using a current relay, the current value at which the relay should operate must be determined

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FEEDER PROTECTION CALCULATIONS & SETTINGS

Relay 8 backs up relays 6 and 7, and should be co-ordinated with the slowest of these two relays. Relay 7 has an instantaneous

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Relay Protection Settings (PSM, TSM, EL, OL, MF)

Protection relays employ a wide range of configurable parameters to identify defects & trip the breaker in a controlled

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Distance Protection

Such protection relays are known as “distance protection relays” and only function in case of faults that occur between the location of

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The fundamentals of protection relay co-ordination and time ...

Among the various possible methods used to achieve correct relay co-ordination are those using either time or

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Protection Relay Settings Calculations Made Easy

Power System Protection Setting Calculations The electrical grid is a vast and intricate system designed to ensure the

Dec 13, 2025

Overcurrent Protection Settings Guide | PDF | Relay | Engineering

The document discusses overcurrent protection calculations and settings for a power system network. It provides a single line

Aug 02, 2025

Power System Protective Relays: Principles & Practices

Abstract: Protective relays and devices have been developed over 100 years ago to provide “last line” of defense for the electrical

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Delgado Relay Protection Reference

The Interactive Relay Protection Reference Visualize Phasors. Draw TCC Curves. Analyze Faults. Browser-based tools for phasor

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Protection Relay Setting Interactive Calculator | FIRGELLI

With this Protection Relay Setting Calculator, you'll be able to work out pickup current, time multiplier settings (TMS),

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Relay Settings Calculations

Protection selectivity is partly considered in this report, and could be also reevaluated. Names of parameters in this calculation may

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PSM and TMS Settings Calculation of a Relay: Protection

PSM and TMS Settings are used to specify the tripping limits of a relay when a fault occurs. How to calculate the

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