

How to use a relay protection schedule



Article Overview

A relay protection schedule is used to coordinate protective relays by setting current and time parameters to ensure selective fault isolation and system stability.

Understanding the Relay Protection Schedule

A relay protection schedule lists all protective relays in a system along with their settings, including current pickup, time delays, and coordination hierarchy. Its purpose is to ensure that only the relay closest to a fault operates first, preventing unnecessary outages and protecting equipment from damage. Key elements in a relay protection schedule include:

- Relay type: Overcurrent, differential, distance, or directional relays.
- Plug Setting Multiplier (PSM): Indicates how many times the actual current exceeds the relay's pickup current. It determines the speed of operation on IDMT (inverse definite minimum time) curves.
- Time Setting Multiplier (TSM): Scales the base operating time from the relay's characteristic curve to achieve proper coordination with upstream or downstream relays.
- Earth Leakage (EL) and Overload (OL) settings: Define thresholds for earth faults and thermal overload protection.
- Multiplying Factor (MF): Adjusts metering or scaling for accurate relay operation.

Steps to Use a Relay Protection Schedule

- Identify the system layout: Determine feeders, transformers, generators, and other equipment requiring protection....

Article Content

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Setting the generator protective relay functions

Protective relay functions and data This technical article will cover the gathering of information needed to calculate

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What to Know About Protective Relays | EC& M

Protective relays are arguably the least understood component of medium voltage (MV) circuit protection. In fact, some believe that

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Power System Protection & Relay Coordination Studies

Power System Protection & Relay Coordination Studies Goal of the analysis: To ensure that protective

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Basic protection relay knowledge

Selectivity Selectivity is a mandatory requirement for all protection, but the importance of it depends on the application. For example,

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Five Steps to Set Up Protective Relays for Power Systems

Learn how to ensure proper set-up of protective relays for power systems by following these steps: identify the protection scheme,

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Introduction to Protective Relaying | Electric Power

Introduction to Protective Relaying What are Protective Relays, or Protection Relays? Protective relays are

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Protective Relays

Protect critical components in your power system with a wide range of SEL protective relays covering applications and use cases

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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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Distribution Automation Handbook

Because the protection areas of the interlocking-based protection concept are not overlapping and because they do not reach into

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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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Protective Relay Coordination Tutorial: From Fuse-MCCB-Relay

Step-by-step tutorial on building a time-current coordination chart for a three-level protection system. Covers TCC reading,

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The Relay Testing Handbook: Principles and Practice

This online protective relay testing seminar follows Chris Werstiuk (author of The Relay Testing Handbook) as he tests a relay from

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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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Protection Basics

Review What is the function of power system protection? Name two protective devices For what purpose is IEEE device 52 used?

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A Guide for Calculating Step Distance Relay Settings

The relay setting development process should include a series of steps that guides the settings engineer to achieve reliable and

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Relay Setting in Real Power System

Relay setting plays an important role in maintaining the reliability of a Power System. Read this blog to find out more

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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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Relay Maintenance and Testing

Ensure optimum system performance, efficiency, and safety with preventive relay maintenance and testing Today's challenges in

Jan 09, 2026

Fundamentals of Modern Protective Relaying

Where it is desired to have more time delay before element operates for purpose of coordinating with other protective relays or

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

The handbook for protection engineers includes guidelines on protective circuitry, protective relay principles, and testing procedures

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Relay Protection: Scheme Design And Coordination

Relay protection is the discipline of designing schemes that detect faults, coordinate relays, and isolate equipment without outages. It

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Protective Relaying Principles and Applications

Protective Relaying Principles and Applications The article provides an overview of protective relaying principles and their

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Protective relay basics | Eaton PSEC

Learn everything you need to know about protective relays, the essential devices used to

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Protective Relays: Types, Working Principle & Uses

Learn how protective relays detect faults, trip breakers, coordinate protection zones, and

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Basic protection relay knowledge

Protection is needed to detect electrical faults and abnormal operating conditions. Protection is also needed for protecting people and

Contact Us

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