

Classification of Secondary Relay Protection



AI Overview

Secondary relay protection can be classified based on function, actuating quantity, connection type, and operating principle.

Classification by Function

Secondary relays are categorized according to their role in the protection scheme :

- Main Relays: Respond directly to changes in electrical quantities such as current, voltage, or power.
- Auxiliary Relays: Operate under the control of other relays to perform auxiliary tasks like time delays, tripping circuit breakers, or signaling alarms.
- Signal Relays: Indicate the operation of other relays through visual or audible signals and can trigger alarms.

Classification by Actuating Quantity

Relays can also be classified based on the electrical quantity they respond to :

- Overrelays: Operate when the quantity exceeds a set value (e.g., overcurrent relays).
- Underrelays: Operate when the quantity falls below a set value (e.g., undervoltage relays).
- Other types: React to power, reactance, impedance, frequency, or directional cha...

Article Content

Jan 31, 2026

Classification | Types of Protective Relays

Relay application practices can be classified according to relay characteristics and the special requirements of various elements.

Nov 12, 2025

Types and Revolution of Electrical Relays

Types and Revolution of Electrical Relays Introduction: Protective relays work in concert with sensing and control devices to

Apr 23, 2026

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

Oct 24, 2025

Types of Electrical Protection Relays or Protective Relays

Protective relays can be categorized based on their operating mechanisms into electromagnetic relay, static, and

Jan 14, 2026

Secondary Protection Relays | ABB

ABB's Relion family of protection and control relays for secondary distribution offers a wide range of products for protection, control,

Mar 05, 2026

Operation, maintenance, and field test procedures for protective relays

One approach to test the total protection system is to use primary injection techniques (see appendix H) that trigger

Mar 27, 2026

Types of Protection Relays and Testing procedures

Regular testing and maintenance of protection relays are essential to verify their proper operation, detect faults, and

Mar 06, 2026

Protection Basics

Relay Classification Protective Regulating Reclosing and synchronism check Monitoring

Jun 12, 2026

Classification of Protective Relays | PDF

It provides definitions and examples for each type, highlighting their operational characteristics. Additionally, it lists ANSI/IEEE

May 03, 2026

Primary and Secondary Protection Schemes

The Secondary relay Protection scheme is intended to operate in the event of a failure of the primary supply. Hence, the secondary

Jan 23, 2026

Comparison of Protection Relay Types

This comparison summarize characteristics of all protection relay types described in

Jan 28, 2026

Relay Classification in Power System Protection:

(3) According to the connection of sensing element primary relays are those whose sensing elements are directly connected in the

May 27, 2026

Types of Protection | Primary Protection | Back-up Protection

2. Back-up protection: It is the second line of defense in case of failure of the primary protection. It is designed to operate with

Feb 14, 2026

Types of Protective Relays

This article covers various types of protective relays, such as overcurrent, directional, and differential relays, highlighting their

Mar 25, 2026

Basic protection relay knowledge

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

Sep 07, 2025

Protection relay selection table

Protection relay selection table Please note before using selection table! number =
Number of stages, shots, X =

May 18, 2026

Basic protection relay knowledge

On the other hand, unselective protection operation in the extra high voltage network
- i.e. at the national grid level- may endanger

May 30, 2026

Differential Protection Relay

A differential protection relay is defined as the relay that operates when the phase
difference of two or more identical electrical

Mar 20, 2026

Fundamentals of Modern Protective Relaying

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

Jun 13, 2026

Distribution Automation Handbook

On faults inside the area of protection, the current transformers attempt to feed a
secondary current proportional to the short-circuit

Mar 16, 2026

Comprehensive Principles and Classification of Power

An in-depth lecture on power system protection zones, relay principles,
classifications, and

Jun 08, 2026

Types of Relay in Power System: Types, Applications & Functions of Relay

Types of Relay Notes PDF The Types of Relay in Power System Notes PDF helps
students understand the working, classification,

Feb 14, 2026

POWER SYSTEM PROTECTION

Backup/secondary/nonunit Protection Zone: Located outside the primary protection zone, this zone provides a secondary layer of

Dec 17, 2025

Protective Relay: Working, Types, and Applications

Learn about protective relays, their working principle, types, and applications in power systems. Discover how relays

Nov 15, 2025

Protective Relaying Principles and Applications

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

Apr 19, 2026

Basic Theories of Power System Relay Protection

This chapter first introduces the basic theories of power system relay protection, summarizes the functions and basic requirements of

Feb 25, 2026

Relays Part 4: The Protective Relay Basic Theory

The types of protective relays that exist are overcurrent, electromechanical, directional, distance, pilot, and differential

Contact Us

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

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

Email: sales@ntmmgroup.co.za

Phone: +27 82 471 2596

Address: Unit 7, Optic Park, 24 High-Tech Lane, Century City, Cape Town,
7441, South Africa

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

