

Relay Protection Equipment Information Table



AI Overview

Relay protection equipment is classified by standard ANSI/IEEE device numbers, each representing a specific protective function for power system components.

ANSI/IEEE Standard Device Number	Function	Typical Application	Notes
50	Instantaneous Overcurrent	Lines, Transformers	Trips immediately when current exceeds set value
50N	Instantaneous Ground Overcurrent	Ground Fault Protection	Detects earth faults
51	Time Overcurrent	Lines, Transformers	Operates with time delay based on current magnitude
51N	Time Ground Overcurrent	Ground Fault Protection	Time-delayed earth fault protection
27	Undervoltage	Busbars, Transformers	Trips when voltage drops below set value
59	Overvoltage	Busbars, Transformers	Trips when voltage exceeds set value
67	Directional Overcurrent	Lines, Feeders	Trips only if fault occurs in set direction
67N	Directional Ground Overcurrent	Ground Faults	Combines directionality with earth fault detection
87	Differential	Transformers, Generators	Detects internal faults by comparing currents
87T	Transformer Differential	Transformers	Specialized differential relay for transformer protection
86	Lockout Relay	Circuit Breakers, Transformers	Provides lockout function after fault trip
79	Reclosing Relay	Lines	Automatically recloses breakers after temporary faults

Key Notes on Relay Protection:

- Directional Overcurrent Relays (67/67N)** require both current and voltage inputs to determine fault direction, ensuring the breaker trips only for faults in the set direction.
- Differential Relays (87/87T)** compare currents at different points to detect internal faults in transformers or generators.
- Lockout Relays (86/86T)** prevent repeated operation after a fault until manual reset.
- Time and Instantaneous Overcurrent Relays (50/51)** provide selective...

Article Content

Feeder protection and control

Feeder protection, or more exactly protection for overhead lines and cables, is the most commonly used type of protection. The protection has to ensure that the power grid continues to supply energy. In

Asset Management Plan Protection Relays

Protection relays are designed to trip circuit breakers in response to network faults or abnormal network conditions to prevent or minimise damage to plant and equipment, and play a significant role in

Protective Relay Basics

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

Installing and Maintaining Protective Relay Systems

Introduction Relay systems protect high-voltage equipment and transmission lines to ensure safe, stable systems. Although failure of a protective relay system may have severe local or regional impacts,

Relay Technical Information

This is listed in the data column for each type of relay as the maximum value of the contact capacity and is an interrelationship of the maximum switching power, maximum switching voltage, and maximum

SIPROTEC 4 Catalog

Selection guide for SIPROTEC and Reyrolle: The selection guide offers an overview of the device series of the Siemens protection devices, and a device selection table.

Table of ANSI IEEE Standard Device Numbers

This table details ANSI IEEE Standard Device Numbers as used for protective relaying in North America. Suffixes for numbers are also suggested.

ANSI Standard Device Numbers & Common Acronyms

ANSI Standard Device Numbers & Common Acronyms ANSI Standard Device Numbers & Common Acronyms

Protection relay selection table

Protection relay selection table Please note before using selection table! number = Number of stages, shots, X = Function supported inputs or outputs O = Function available as option

ANSI Table | PDF | Relay | Manufactured Goods

The table lists protection elements and their respective numbers, including relays, circuit breakers, contactors, and other devices. The table is supplemented with more details about some elements

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 start to finish. You'll learn the basic skills needed to test any

The essentials of power systems: Relay protection and

Table of contents: Protection systems Overcurrent protection Directional overcurrent protection Differential protection Distance protection

SELECTION TABLE PROTECTION RELAY

SELECTION TABLE PROTECTION RELAYS Download this table in PDF Download this table in Excel

ANSI device numbers

In electric power systems and industrial automation, ANSI Device Numbers can be used to identify equipment and devices in a system such as relays, circuit breakers, or instruments.

Protection Basics

Protection System Elements Protective relays Circuit breakers CTs and VTs (instrument transformers) Communications channels

Electronic relays and controls selection tables

This portfolio includes pluggable relays for easy interchange-ability and optocouplers for an extended electrical life. The portfolio includes electromechanical relays and optocouplers - the

Protective relay

In electrical engineering, a protective relay is a relay device designed to trip a circuit breaker when a fault is detected. : 4 The first protective relays were

SIPROTEC 4 Catalog

SIPROTEC protection relays from Siemens can be consistently used throughout all applications in medium and high voltage. With SIPROTEC, you have their systems firmly and safely under control,

Practical handbook for relay protection engineers | EEP

Also principles of various protective relays and schemes including special protection schemes like differential, restricted, directional and distance relays are explained with sketches.

ANSI/IEEE Relay Protection Codes

This document lists ANSI/IEEE protection codes that are used to identify different types of protective relay devices and monitoring equipment. There are over 100

Transformer Protection Application Guide

Transformer Protection Application Guide This guide focuses primarily on application of protective relays for the protection of power transformers, with an emphasis on the most prevalent protection schemes

Electronic relays and controls catalog 2022

Chapter 2 - Measuring and monitoring relays Choose among a large range of products to ensure reliable protection, save cost and avoid unplanned downtime

Protection Relay Testing and Commissioning

Since type testing of a digital or numerical protection relay includes software and hardware testing, the type testing procedure is very complex and more challenging than a static or electromechanical relay.

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 systems. They are intended to quickly identify a fault and isolate it so the

Contact Us

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

Website: <https://www.sky-connect.co.za>

Email: info@sky-connect.co.za

Phone: +44 20 7946 0958

Address: 1 Cornhill, London EC3V 3ND, United Kingdom

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

