

## NC of relay protection devices



### Overview

In and, ANSI Device Numbers can be used to identify equipment and devices in a system such as,, or. The device numbers are enumerated in In and, ANSI Device Numbers can be used to identify equipment and devices in a system such as,, or. The device numbers are enumerated in / Standard C37.2 Standard for Electrical Power System Device Function Numbers, Acronyms, and Contact Designations. Many of these devices protect electrical systems and individual system components from damage when an unwanted event occurs such as an. Historically, a single protective function was performed by one or more distinct devices, so each device would receive its own number. Today, -based relays can perform many protective functions in one device.

- 1 - Master Element
- 2 - Time-delay Starting or Closing Relay
- 3 - Checking or Interlocking Relay, complete Sequence
- 4 - Master Protective
- 5 - Stopping Device, Emergency Stop Switch
- 6 - Starting Circuit Breaker
- 7 - Rate of Change Relay
- 7F - Alternative number for Rate Of Change Of Frequency Relay ( )
- 8 - Control Power Disconnecting Device
- 9 - Reversing Device
- 10 - Unit Sequence Switch
- 11 - Multifunction Device
- 12 - Overspeed Device
- 13 - Synchronous-Speed Device
- 14 - Underspeed Device
- 15 - Speed or Frequency Matching Device
- 16 - Data Communications Device
- 17 - Shunting or Discharge Switch
- 18 - Accelerating or Decelerating Device
- 19 - Starting-to-Running Transition Contactor
- 20 - Electrically-Operated Valve (Solenoid Valve)
- 21 - Distance Relay
- 21G - Ground Distance
- 21P - Phase Distance
- 22 - Equalizer Circuit Breaker
- 23 - Temperature control device, Heater
- 24 - Volts per Hertz Relay (in some old analog applications, a 59 and an 81 device would be chained together as a 59/81 to implement the equivalent of V/Hz protection)

A suffix letter or number may be used with the device number; for example, suffix N is used if the device is connected to a Neutral wire (example: 59N in a relay is used for protection against Neutral Displacement); and suffixes X, Y, Z are used for auxiliary devices. Similarly, the "G" suffix can denote a...

## Article Content

### Protection and Control Device Numbers and Functions

The protection and control devices in electrical equipment can be referred to by numbers, with appropriate suffix letters when necessary, according to the functions they perform.

### 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

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### ANSI codes and IEC Relay Symbols – Electrical Engineering

To assist the Protection Engineer in converting from one system to the other, a select list of ANSI device numbers and their IEC equivalents are given in the following figure.

### 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.

### Intro to Relays #2

This article will explain the basics of the relay numbers used to design a relay's functionality.

To: [Customer Name]

In North America protective relays are generally referred to by standard device numbers. Letters are sometimes added to specify the application (IEEE Standard C37.2-2008).

### ANSI Protective Device Numbering Guide | PDF | Relay | Switch

It provides a comprehensive list of the standard device numbers (such as 51 for time overcurrent relay and 50 for instantaneous overcurrent) and explains how prefixes and suffixes are used to further ...

### ANSI (IEEE) Protective Device Numbering

Protective relays are commonly referred to by standard device numbers. For example, a time overcurrent relay is designated a 51 device, while an instantaneous overcurrent is a 50 device.

## Protection Relay

In the design of electrical power systems, the ANSI Standard Device Numbers denote what features a protective device supports (such as a relay or circuit breaker). These types of ...

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