



Notes

Note 1:

A suffix letter 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 Siemens Relay is used for protection against Neutral Displacement); and suffixes X,Y,Z are used for auxiliary devices. Similarly, the "G" suffix denotes a "ground", hence a "51G" being a time overcurrent ground relay.

Note 2:

A suffix number may also be used with a device number: numbers are used to distinguish multiple "same" devices in the same equipment such as 51-1, 51-2.

Note 3:

Device numbers may be combined if the device provides multiple functions, such as the instantaneous/time-delay AC over current relay denoted as 50/51.

Note 4:

For function descriptions, refer to IEEE standards reference library or American Standards C37.2 2008. For understanding and learning application of these devices, many technical reference books have been published and are available. These device numbers and their application are typically in the domain of electrical engineers, specifically power generation, transmission or distribution system engineers in regards to safely controlling and protecting users and equipment.

Note 5:

For device 16, the suffix letters further define the device: the first suffix letter is S for Serial or E for Ethernet. The subsequent letters are: C Security Processing Function VPN, Encryption F Firewall or message Filter M Network Managed Function R Router S Switch T Telephone Component. So a managed Ethernet switch would be 16ESM.

Part A

Section 11

ANSI Device Numbers & Acronyms

- 1 - Master Element
- 2 - Time Delay Starting or Closing Relay
- 3 - Checking or Interlocking Relay
- 4 - Master Contactor
- 5 - Stopping Device
- 6 - Starting Circuit Breaker
- 7 - Rate of Change Relay
- 8 - Control Power Disconnecting Device
- 9 - Reversing Device
- 10 - Unit Sequence Switch
- 11 - Multi-function Device
- 12 - Overspeed Device
- 13 - Synchronous-speed Device
- 14 - Underspeed Device
- 15 - Speed - or Frequency, Matching Device
- 16 - Data Communications Device (see note 5)
- 17 - Shunting or Discharge Switch
- 18 - Accelerating or Decelerating Device
- 19 - Starting to Running Transition Contactor
- 20 - Electrically Operated Valve
- 21 - Distance Relay
- 22 - Equalizer Circuit Breaker
- 23 - Temperature Control Device
- 24 - Volts Per Hertz Relay
- 25 - Synchronizing or Synchronism-Check Device
- 26 - Apparatus Thermal Device
- 27 - Undervoltage Relay
- 28 - Flame Detector
- 29 - Isolating Contactor or Switch
- 30 - Annunciator Relay
- 31 - Separate Excitation Device
- 32 - Directional Power Relay
- 33 - Position Switch
- 34 - Master Sequence Device
- 35 - Brush-Operating or Slip-Ring Short-Circuiting Device
- 36 - Polarity or Polarizing Voltage Devices
- 37 - Undercurrent or Underpower Relay
- 38 - Bearing Protective Device
- 39 - Mechanical Condition Monitor
- 40 - Field (over/under excitation) Relay
- 41 - Field Circuit Breaker
- 42 - Running Circuit Breaker
- 43 - Manual Transfer or Selector Device
- 44 - Unit Sequence Starting Relay
- 45 - Abnormal Atmospheric Condition Monitor
- 46 - Reverse-phase or Phase-Balance Current Relay
- 47 - Phase-Sequence or Phase-Balance Voltage Relay
- 48 - Incomplete Sequence Relay
- 49 - Machine or Transformer, Thermal Relay



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Acronyms

AFD	- Arc Flash Detector
CLK	- Clock or Timing Source
DDR	- Dynamic Disturbance Recorder
DFR	- Digital Fault Recorder
ENV	- Environmental Data
HIZ	- High Impedance Fault Detector
HMI	- Human Machine Interface
HST	- Historian
LGC	- Scheme Logic
MET	- Substation Metering
PDC	- Phasor Data Concentrator
PMU	- Phasor Measurement Unit
PQM	- Power Quality Monitor
RIO	- Remote Input/Output Device
RTU	- Remote Terminal Unit/Data Concentrator
SER	- Sequence of Events Recorder
TCM	- Trip Circuit Monitor
SOTF	- Switch On To Fault

Part A

Section 10

ANSI Device Numbers & Acronyms

- 50 - Instantaneous Overcurrent Relay
- 51 - AC Inverse Time Overcurrent Relay
- 52 - AC Circuit Breaker
- 53 - Exciter or DC Generator Relay
- 54 - Turning Gear Engaging Device
- 55 - Power Factor Relay
- 56 - Field Application Relay
- 57 - Short-Circuiting or Grounding (Earthing) Device
- 58 - Rectification Failure Relay
- 59 - Overvoltage Relay
- 60 - Voltage or Current Balance Relay
- 61 - Density Switch or Sensor
- 62 - Time-Delay Stopping or Opening Relay
- 63 - Pressure Switch
- 64 - Ground (Earth) Detector Relay
- 65 - Governor
- 66 - Notching or Jogging Device
- 67 - AC Directional Overcurrent Relay
- 68 - Blocking or "Out-of-Step" Relay
- 69 - Permissive Control Device
- 70 - Rheostat
- 71 - Liquid Level Switch
- 72 - DC Circuit Breaker
- 73 - Load-Resistor Contactor
- 74 - Alarm Relay
- 75 - Position Changing Mechanism
- 76 - DC Overcurrent Relay
- 77 - Telemetry Device
- 78 - Phase-Angle Measuring Relay
- 79 - AC Reclosing Relay
- 80 - Flow Switch
- 81 - Frequency Relay
- 82 - DC Reclosing Relay
- 83 - Automatic Selective Control or Transfer Relay
- 84 - Operating Mechanism
- 85 - Communications, Carrier or Pilot-Wire Relay
- 86 - Lockout Relay
- 87 - Differential Protective Relay
- 88 - Auxiliary Motor or Motor Generator
- 89 - Line Switch
- 90 - Regulating Device
- 91 - Voltage Directional Relay
- 92 - Voltage and Power Directional Relay
- 93 - Field Changing Contactor
- 94 - Tripping or Trip-Free Relay
- 95 - *For specific applications where other numbers are not suitable*
- 96 - *For specific applications where other numbers are not suitable*
- 97 - *For specific applications where other numbers are not suitable*
- 98 - *For specific applications where other numbers are not suitable*
- 99 - *For specific applications where other numbers are not suitable*



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