ANSI CODES FOR PROTECTION FUNCTIONS

The ANSI(American National Standards Institute) has standardized the codes to be used for protection relays. Each protective function is indicated by a specific no. such as 50 for instantaneous overcurrent protection and 59 for overvoltage protection.

Following is the list of the functions. The codes are sometimes followed by an alphabet which gives some additional information for instance, the code 51G may indicate an overcurrent ground relay. 50N may indicate a ground sensitive overcurrent relay based on neutral current measurement. 87T may indicate that a differential relay may be used for Transformer protection.

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 - Anode Circuit Breaker
8 - Control Power Disconnecting Device
9 - Reversing Device
10 - Unit Sequence Switch
11 - Reserved for future application
12 - Overspeed Device
13 - Synchronous-speed Device
14 - Underspeed Device
15 - Speed - or Frequency, Matching Device
16 - Reserved for future application
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 - Over-Excitation Relay (V/Hz)
25 - Synchronizing or Synchronism-Check Device
26 - Apparatus Thermal Device
27 - Undervoltage Relay
28 - Flame Detector
29 - Isolating Contactor
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 Conduction Monitor
40 - Field Relay
41 - Field Circuit Breaker
42 - Running Circuit Breaker
43 - Manual Transfer or Selector Device
44 - Unit Sequence Starting Relay
45 - Atmospheric Condition Monitor
46 - Reverse-phase or Phase-Balance Current Relay
47 - Phase-Sequence Voltage Relay
48 - Incomplete Sequence Relay
49 - Machine or Transformer, Thermal Relay
50 - Instantaneous Overcurrent or Rate of Rise, Relay
51 - AC Time Overcurrent Relay
52 - AC Circuit Breaker
53 - Exciter or DC Generator Relay
54 - High-Speed DC Circuit Breaker
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 - Machine Split Phase Current Balance
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 Relay
69 - Permissive Control Device
70 - Rheostat
71 - Level Switch
72 - DC Circuit Breaker
73 - Load-Resistor Contactor
74 - Alarm Relay
75 - Position Changing Mechanism
76 - DC Overcurrent Relay
77 - Pulse Transmitter
78 - Phase-Angle Measuring or Out-of-Step Protective 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 - Carrier or Pilot-Wire Receiver 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 - Reluctance Torque Synchrocheck
96 - Autoloading Relay