

ANSI Standard Device Numbers & Common Acronyms

Suffixes	Description
_1	Positive-Sequence
_2	Negative-Sequence
A	Alarm, Auxiliary Power
AC	Alternating Current
AN	Anode
B	Bus, Battery, or Blower
BF	Breaker Failure
BK	Brake
BL	Block (Valve)
BP	Bypass
BT	Bus Tie
BU	Backup
C	Capacitor, Condenser, Compensator, Carrier Current, Case, or Compressor
CA	Cathode
CH	Check (Valve)
D	Discharge (Valve)
DC	Direct Current
DCB	Directional Comparison Blocking
DCUB	Directional Comparison Unblocking
DD	Disturbance Detector
DUTT	Direct Underreaching Transfer Trip
E	Exciter
F	Feeder, Field, Filament, Filter, or Fan
G	Ground or Generator
GC	Ground Check
H	Heater or Housing
L	Line or Logic
M	Motor or Metering
MOC	Mechanism Operated Contact
N	Neutral or Network
O	Over
P	Phase or Pump
PC	Phase Comparison
POTT	Pott: Permissive Overreaching Transfer Trip
PUTT	Putt: Permissive Underreaching Transfer Trip
R	Reactor, Rectifier, or Room
S	Synchronizing, Secondary, Strainer, Sump, or Suction (Valve)
SOTF	Switch On To Fault
T	Transformer or Thyatron
TD	Time Delay
TDC	Time-Delay Closing Contact
TDDO	Time Delayed Relay Coil Drop-Out

Suffixes	Description
TDO	Time-Delay Opening Contact
TDPD	Time Delayed Relay Coil Pickup
THD	Total Harmonic Distortion
TH	Transformer (High-Voltage Side)
TL	Transformer (Low-Voltage Side)
TM	Telemeter
TT	Transformer (Tertiary-Voltage Side)
U	Under or Unit
X	Auxiliary
Z	Impedance

Acronyms	Description
AFD	Arc Flash Detector
CLK	Clock or Timing Source
CLP	Cold Load Pickup
DDR	Dynamic Disturbance Recorder
DFR	Digital Fault Recorder
ENV	Environmental Data
HIZ	High Impedance Fault Detector
HMI	Human Machine Interface
HST	Historian
MET	Substation Metering
PDC	Phasor Data Concentrator
PMU	Phasor Measurement Unit
PQM	Power Quality Monitor
RIO	Remote Input/Output Device
RTD	Resistance Temperature Detector
RTU	Remote Terminal Unit / Data Concentrator
SER	Sequence of Events Recorder
TCM	Trip Circuit Monitor
VTF	Vt Fuse Fail

ANSI Standard Device Numbers & Common Acronyms

Device No.	Description
1	Master Element
2	Time Delay Starting or Closing Relay
3	Checking or Interlocking Realy
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	Multifunction Device
12	Overspeed Device/Protection
13	Synchronous-Speed Device
14	Underspeed Device
15	Speed or Frequency Matching Device
16	Communication Networking Device
17	Shunting or Discharge Switch
18	Accelerating or Decelerating Device
19	Motor Starter / Starting-to-Running Transition Contactor
20	Electrically-Operated Valve
21	Distance Relay
21G	Ground Distance
21P	Phase Distance
22	Equalizer Circuit Breaker
23	Temperature Control Device
24	Volts-per-Hertz Relay / Overfluxing
25	Synchronizing or Synchronism-Check Device
26	Apparatus Thermal Device
27	Undervoltage Relay
27P	Phase Undervoltage
27TN	Third Harmonic Neutral Undervoltage
27X	Auxiliary Undervoltage
27 AUX	Undervoltage Auxiliary Input
27/27X	Bus/Line Undervoltage
28	Flame Detector
29	Isolating Contactor
30	Annunciator Relay
31	Separate Excitation Device
32	Directional Power Relay
32L	Low Forward Power
32N	Wattmetric Zero-Sequence Directional
32P	Directional Power
32R	Reverse Power

Device No.	Description
33	Position Switch
34	Master Sequence Device
35	Brush-Operating or Slip-ring Short Circuiting Device
36	Polarity or Polarizing Voltage Device
37	Undercurrent or Underpower Relay
37P	Underpower
38	Bearing Protective Device / Bearing Rtd
39	Mechanical Condition Monitor
40	Field Relay / Loss of Excitation
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 or Stator Current Unbalance
47	Phase-Sequence or Phase Balance Voltage Relay
48	Incomplete Sequence Relay / Blocked Rotor
49	Machine or Transformer Thermal Relay / Thermal Overload
49RTD	RTD Biased Thermal Overload
50	Instantaneous Overcurrent Relay
50BF	Breaker Failure
50DD	Current Disturbance Detector
50G	Ground Instantaneous Overcurrent
50N	Neutral Instantaneous Overcurrent
50P	Phase Instantaneous Overcurrent
50_2	Negative Sequence Instantaneous Overcurrent
50/27	Accidental Energization
50/74	Ct Trouble
50/87	Instantaneous Differential
50EF	End Fault Protection
50IG	Isolated Ground Instantaneous Overcurrent
50LR	Acceleration Time
50NBF	Neutral Instantaneous Breaker Failure
50SG	Sensitive Ground Instantaneous Overcurrent
50SP	Split Phase Instantaneous Current
51	Ac Time Overcurrent Relay
51	Overload
51G	Ground Time Overcurrent
51N	Neutral Time Overcurrent
51P	Phase Time Overcurrent
51V	Voltage Restrained Time Overcurrent
51R	Locked / Stalled Rotor

Device No.	Description
51_2	Negative Sequence Time Overcurrent
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 Device
58	Rectification Failure Relay
59	Overvoltage Relay
59B	Bank Phase Overvoltage
59P	Phase Overvoltage
59N	Neutral Overvoltage
59NU	Neutral Voltage Unbalance
59P	Phase Overvoltage
59X	Auxiliary Overvoltage
59_2	Negative Sequence Overvoltage
60	Voltage or Current Balance Relay
60N	Neutral Current Unbalance
60P	Phase Current Unbalance
61	Density Switch or Sensor
62	Time-Delay Stopping or Opening Relay
63	Pressure Switch Detector
64	Ground Protective Relay
64F	Field Ground Protection
64S	Sub-harmonic Stator Ground Protection
64TN	100% Stator Ground
65	Governor
66	Notching or Jogging Device/Maximum Starting Rate/Starts Per Hour/Time Between Starts
67	Ac Directional Overcurrent Relay
67G	Ground Directional Overcurrent
67N	Neutral Directional Overcurrent
67P	Phase Directional Overcurrent
67SG	Sensitive Ground Directional Overcurrent
67_2	Negative Sequence Directional Overcurrent
68	Blocking Relay / Power Swing Blocking
69	Permissive Control Device
70	Rheostat
71	Liquid Switch
72	Dc Circuit Breaker
73	Load-Resistor Contactor
74	Alarm Relay
75	Position Changing Mechanism

Device No.	Description
76	Dc Overcurrent Relay
77	Telemetry Device
78	Phase Angle Measuring or Out-of-Step Protective Relay
78V	Loss of Mains
79	Ac Reclosing Relay / Auto Reclose
80	Liquid or Gas Flow Relay
81	Frequency Relay
81O	Over Frequency
81R	Rate-of-Change Frequency
81U	Under Frequency
82	Dc Reclosing Relay
83	Automatic Selective Control or Transfer Relay
84	Operating Mechanism
85	Carrier or Pilot-Wire Receiver Relay
86	Locking-Out Relay
87	Differential Protective Relay
87B	Bus Differential
87G	Generator Differential
87GT	Generator/Transformer Differential
87LG	Ground Line Current Differential
87S	Stator Differential
87S	Percent Differential
87L	Segregated Line Current Differential
87M	Motor Differential
87O	Overall Differential
87PC	Phase Comparison
87RGF	Restricted Ground Fault
87T	Transformer Differential
87V	Voltage Differential
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
50/74	Ct Supervision
27/50	Accidental Generator Energization
27TN/59N	100% Stator Earth Fault