

2 Detailed Specifications

Earth Leakage Circuit Breakers

NV-H / NV-R (High-performance class) Harmonic Surge Ready

| Frame (A) | 50 | 60 | 63 | 100 | 125 | 125 | 225 | 250 | 250 | | |
|--|--|---------------------------|---------------------------|---------------------------|---------------------------|--|---------------------------|---------------------------|--|---------|---------|
| Model | NV63-HV | | | NV125-HV | | NV125-HEV | NV250-HV | | NV250-HEV | | |
| Image | | | | | | | | | | | |
| Rated current In (A) | (15) 16 20 | (60) | 63 | (15) 16 20 (30) 32 40 50 | 125 | 63-125 | 125 150 175 | 250 | 125-250 | | |
| Rated ambient temperature 40°C | (30) 32 40 50 | | | (60) 63 (75) 80 100 (*3) | | | 200 225 | | | | |
| Number of poles | 3 | 3 | 3 | 3 | 4 | 3 | 3 | 3 | 3 | | |
| Phase line (*1) | 3φ3W, 1φ3W, 1φ2W | 3φ3W, 1φ3W, 1φ2W | 3φ3W, 1φ3W, 1φ2W | 3φ3W, 1φ3W, 1φ2W | 3φ4W | 3φ3W, 1φ3W, 1φ2W | 3φ3W, 1φ2W | 3φ4W | 3φ3W, 1φ3W, 1φ2W | | |
| Rated operational voltage Ue (V) (*2) | AC 100-440 | 100-440 | 100-440 | 100-440 | 200-440 | 100-440 | 200-440 | 100-440 | 100-440 | | |
| Rated current sensitivity (mA) | 30,100/200/500 selectable | 30,100/200/500 selectable | 30,100/200/500 selectable | 30,100/200/500 selectable | 30,100/200/500 selectable | 30,100/200/500 selectable | 30,100/200/500 selectable | 30,100/200/500 selectable | 30,100/200/500 selectable | | |
| Max. operating time (s) | at IΔn 0.1 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | | |
| Max. operating time (s) | at 5IΔn 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | | |
| Rated current sensitivity (mA) | - | - | - | (100/200/500selectable) | (100/200/500selectable) | (100/200/500selectable) | (100/200/500selectable) | (100/200/500selectable) | (100/200/500selectable) | | |
| Max. operating time (s) (*4) | - | - | - | (0.45/1.0/2.0selectable) | (0.45/1.0/2.0selectable) | (0.45/1.0/2.0selectable) | (0.45/1.0/2.0selectable) | (0.45/1.0/2.0selectable) | (0.45/1.0/2.0selectable) | | |
| Internal non-operating (s) (or more) | - | - | - | (0.1/0.5/1.0) | (0.1/0.5/1.0) | (0.1/0.5/1.0) | (0.1/0.5/1.0) | (0.1/0.5/1.0) | (0.1/0.5/1.0) | | |
| Earth leakage indication system | Mechanical type (button) | | | | | | | | | | |
| Rated short-circuit breaking capacities (kA) | IEC 60947-2 EN 60947-2 (Icu/Ics) | AC | 440V | 10/8 | 10/8 | 10/8 | 50/38 | 50/38 | 65/65 | 65/65 | 65/65 |
| | | | 415V | 10/8 | 10/8 | 10/8 | 50/38 | 50/38 | 70/70 | 70/70 | 70/70 |
| | | | 400V | 10/8 | 10/8 | 10/8 | 50/38 | 50/38 | 75/75 | 75/75 | 75/75 |
| | | | 230V | 25/19 | 25/19 | 25/19 | 100/75 | 100/75 | 100/100 | 100/100 | 100/100 |
| | | | 200V | 25/19 | 25/19 | 25/19 | 100/75 | 100/75 | 100/100 | 100/100 | 100/100 |
| 100V | 25/19 | 25/19 | 25/19 | 100/75 | 100/75 | 100/100 | 100/100 | 100/100 | 100/100 | | |
| Rated impulse withstand voltage Uimp (kV) | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | | |
| Current | AC | AC | AC | AC | AC | AC | AC | AC | AC | | |
| Suitability for isolation | Compatible | Compatible | Compatible | Compatible | Compatible | Compatible | Compatible | Compatible | Compatible | | |
| Reverse connection (below 230VAC) | - | - | - | - | - | - | - | - | - | | |
| Number of operating cycles | 15,000 | 15,000 | 15,000 | 25,000 | 25,000 | 25,000 | 25,000 | 25,000 | 25,000 | | |
| Utilization category | Without current | A | A | A | A | A | A | A | A | | |
| | With current | 8,000 | 8,000 | 8,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | | |
| Rated short time withstand current Icu (kA) at 0.25s | - | - | - | - | - | - | - | - | - | | |
| Pollution degree | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | |
| EMC environment condition (environment A or B) | A | A | A | A | A | A | A | A | A | | |
| Overall dimensions (mm) | a | 75 | 75 | 75 | 90 | 120 | 90 | 140 | 105 | | |
| | b | 130 | 130 | 130 | 130 | 130 | 130 | 165 | 165 | | |
| | c | 68 | 68 | 68 | 68 | 68 | 68 | 68 | 68 | | |
| | ca | 90 | 90 | 90 | 90 | 90 | 92 | 92 | 92 | | |
| Mass of front-face type (kg) | 0.75 | 0.8 | 0.8 | 1.1 | 1.4 | 1.1 | 1.4 | 1.9 | 2.5 | | |
| Installation and connectors | Front connection (F) | Page | ●Screw terminal | ●Screw terminal | ●Screw terminal | ●Screw terminal | ●Screw terminal | ●Screw terminal | ●Screw terminal | | |
| | Solderless (BOX) terminal (SL) | - | - | - | - | - | - | - | - | | |
| | Rear (B) | 94 | ●Round stud | ●Round stud | ●Round stud | ●Bar stud | ●Bar stud | ●Bar stud | ●Bar stud | | |
| | Plug-in (PM) | - | - | - | - | - | - | - | - | | |
| Cassette-type accessories | Alarm switch (AL) | 104 | ●(*5) | ●(*5) | ●(*5) | ●(*5) | ●(*5) | ●(*5) | ●(*5) | | |
| | Auxiliary switch (AX) | ●(*5) | ●(*5) | ●(*5) | ●(*5) | ●(*5) | ●(*5) | ●(*5) | ●(*5) | | |
| | Shunt trip (SHT) | ●(*5) | ●(*5) | ●(*5) | ●(*5) | ●(*5) | ●(*5) | ●(*5) | ●(*5) | | |
| | Undervoltage trip (UVT) | ●(*5) | ●(*5) | ●(*5) | ●(*5) | ●(*5) | ●(*5) | ●(*5) | ●(*5) | | |
| | Earth leakage alarm switch (EAL) | - | - | - | - | - | - | - | - | | |
| | With lead-wire terminal block (SLT) | 116 | ● | ● | ● | ● | ● | ● | ● | | |
| Test button module (TBM) | 117 | ●(*6) | ●(*6) | ●(*6) | ●(*6) | ●(*6) | ●(*6) | ●(*6) | | | |
| External accessories | Enclosure | 132 | - | - | - | - | - | - | - | | |
| | Closed (S) | - | - | - | - | - | - | - | - | | |
| | Dustproof (D) | - | - | - | - | - | - | - | - | | |
| | Waterproof (W) | - | - | - | - | - | - | - | - | | |
| | Electrical operation device (NFM) | 135 | ● | ● | ● | ● | ● | ● | ● | | |
| | Mechanical interlock (M) (*7) | 131 | ● | ● | ● | ● | ● | ● | ● | | |
| | Panel mounting | - | - | - | - | - | - | - | - | | |
| | Breaker mounting | - | - | - | - | - | - | - | - | | |
| | LC | - | - | - | - | - | - | - | - | | |
| | Handle lock device | 129 | ● | ● | ● | ● | ● | ● | ● | | |
| HL | ● | ● | ● | ● | ● | ● | ● | ● | | | |
| HL-S | ● | ● | ● | ● | ● | ● | ● | ● | | | |
| External operating handle | 119 | ● | ● | ● | ● | ● | ● | ● | | | |
| (F) | ● | ● | ● | ● | ● | ● | ● | ● | | | |
| (V) | ● | ● | ● | ● | ● | ● | ● | ● | | | |
| Terminal cover (TC-L, TC-S, TTC, BTC, PTC) | 123 | ● | ● | ● | ● | ● | ● | ● | | | |
| Rear stud (B-ST) | 96 | ● | ● | ● | ● | ● | ● | ● | | | |
| Plug-in (PM) | - | - | - | - | - | - | - | - | | | |
| IEC 35mm rail mounting adapters | 139 | ● | ● | ● | ● | ● | ● | ● | | | |
| CE marking | Self-declaration | Self-declaration | Self-declaration | Self-declaration | Self-declaration | Self-declaration | Self-declaration | Self-declaration | Self-declaration | | |
| CCC recognition | Recognition in process | Recognition in process | Recognition in process | Recognition in process | Recognition in process | Recognized | Recognition in process | Recognition in process | Recognized | | |
| Marine use approval (NK, LR, ABS, GL) | - | - | - | - | - | - | - | - | - | | |
| Automatic tripping device | Thermal-magnetic | Thermal-magnetic | Thermal-magnetic | Thermal-magnetic | Thermal-magnetic | Electronic (effective value detection) | Thermal-magnetic | Thermal-magnetic | Electronic (effective value detection) | | |
| Trip button | Equipped | Equipped | Equipped | Equipped | Equipped | Equipped | Equipped | Equipped | Equipped | | |
| Page of Characteristics and dimensions | 182 | | | 184 | | 188 | 186 | | 188 | | |

Notes: *1 If using a 3-pole earth leakage circuit breaker as a 1-pole 2-phase device, connect the left and right poles and not the central pole. When wiring to single-phase 3-wire, connect the neutral line to the central pole.
 *2 In case of time delay type, rated voltage is 200-440VAC.
 *3 In case of time delay type, rated current is produced with 20 amp. or less.
 *4 When the operating time are 0.45, 1.0 and 2.0 seconds, the Earth Leakage circuit breaker operates between 0.15 and 0.45 seconds, between 0.6 and 1.0 seconds and between 1.2 and 2.0 seconds respectively.

*5 Cassette type accessories are field mountable type. It can respond to adhesion attachment of a breaker as standard. (excluding UVT.)
 *6 Standard type is SLT equipped.
 *7 Not isolation compatible.
 *8 AC100V does not acquire the CCC certification.

