## Product Features

- One trip mechanism for both overload and short circuit protection, significantly decrease power consumption.
- Three positions for handle: OFF, Trip and ON.
- When the handle is at the position of Trip and there is fault in circuit, the handle can not be turned to ON position manually.
- Temperature stable and trip characteristic depends only on magnetic flux.
- No warm-up period to response to overload; No cool- down period after overload before it can be reset.
- The temperature change affects oil viscosity. High viscosity at low temperature means longer delay time, thus enough time must be given to start an equipment at cold state; conversely low viscosity at high temperature means shorter delay time, thus giving rise to immediately trip to protect against overload. Such is inverse time protection.
- Large opening range between contacts (≥8.5mm ). Effectively avoid break down and easy to extinguish arc.
- Tripping characteristic can be designed by adjusting the parameter of coil and the oil viscosity.
- Accurate current setting value and low repeated trip error.
- Compact size with modular width of 13mm.
- Sealed metal tube will not age and there will not be function degradation.
- Rated current can up to 63A. 3 poles in parallel can reach up to 150A.
- Max. wiring capacity is 25mm$^2$.

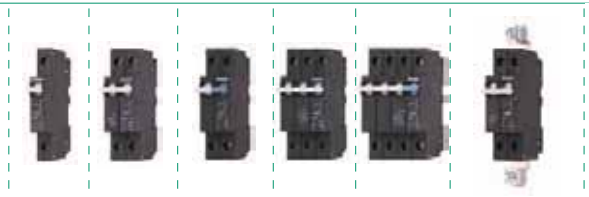
## Model and Implication

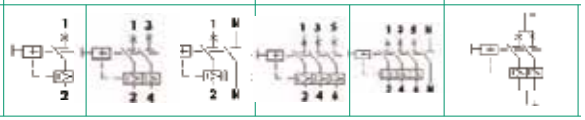
| ND | B | 5 | - | Z4 | 10 | / | 1 | P | U | 1 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | | 4 | 5 | | 6 | 7 | 8 | 9 |

| No. | Implication | NDB5 |
|---|---|---|
| 1 | Brand code | ND |
| 2 | Product code | B Circuit Breaker for Equipment |
| 3 | Design code | 5 |
| 4 | Triping curve | Z2: DC short delay Z4: DC medium delay Z6: DC long delay<br>J2: AC short delay J4: AC medium delay J6: AC long delay |
| 5 | Rated current (A) | 0.5, 0.6, 0.7, 0.8, 0.9, 1, 1.5, 2, 2.5, 3 ,3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7, 7.5, 8, 8.5, 9, 9.5, 10, 12, 15, 16, 20, 25, 30, 32, 35, 40, 45, 50, 55, 60, 63, 70, 80, 90, 100, 105, 110, 105, 120, 125, 135, 150 |
| 6 | Number of poles | 1, 2, 3 |
| 7 | Pole type | P: Phase pole, N: With neutral pole |
| 8 | Wiring method | U: 2 poles in parallel |
| 9 | Accessory code | No code: No accessory<br>1: Auxiliary contact<br>2: Alarm contact<br>3: Auxiliary contact and alarm contact |

- Note: Tripping curve, rated current, etc. can be customized upon request. The customized model will not be shown in above table.

## Main Specifications



| Product Type | NDB5-/1P | NDB5-/2P | NDB5-/1N | NDB5-/3P | NDB5-/3N | NDB5-/2PU |
|---|---|---|---|---|---|---|
| Rated current | 0.5, 0.6, 0.7, 0.8, 0.9, 1, 1.5, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7, 7.5, 8, 8.5, 9, 9.5, 10, 12, 15, 16, 20, 24, 25, 30, 32, 35, 40, 45, 50, 55, 60, 63 | | | 0.5, 0.6, 0.7, 0.8, 0.9, 1, 1.5, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7, 7.5, 8, 8.5, 9, 9.5, 10, 12, 15, 16, 20, 24, 25, 30, 32, 35, 40, 45, 50 | | 20, 30, 40, 50, 60, 63, 70, 80, 90, 100, 110, 120, 125 |
| Number of poles | 1P | 2P | 1P+N | 3P | 3P+N | 2P |
| Rated voltage (V) | AC230, DC80 | AC230/400, DC80 | AC230 | AC400 | AC400 | DC80 |
| Rail type | Mini DIN rail<br>DIN rail | | | | | |
| Tripping curve | Z2/J2, Z4/J4, Z6/J6 | | | J2, J4, J6 | | Z2, Z4,Z6 |
| Wiring Schematic |  | | | | | |

- Standards: IEC 60934, GB 17701, UL1077
- Rated working voltage: DC 80V, AC 230/400V(50/60Hz)
- Mechanical endurance: 10000 times (including 6000 times electrical endurance)
- Certificates: TÜV, CE, CCC, UL
- Auxiliary contact: AC 250V, 5A
- Rated breaking capacity:

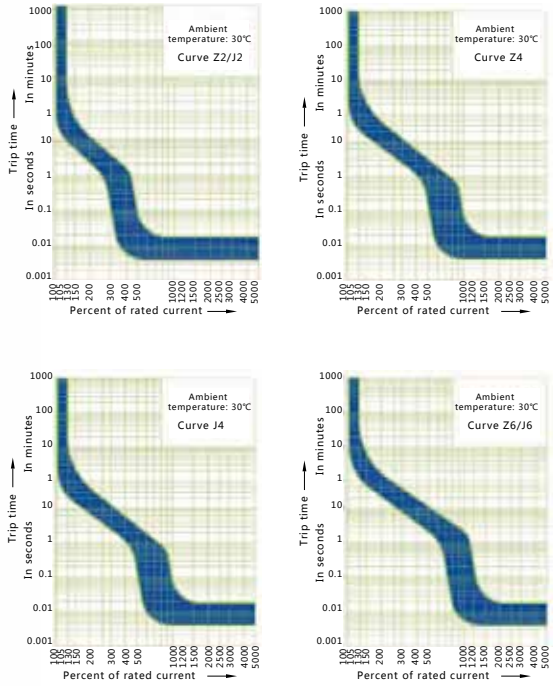
| Type | Rated Current (A) | Voltage (V) | Breaking Capacity (kA) | | |
|---|---|---|---|---|---|
| | | | 3C | UL | TUV |
| NDB5 | 1-63 | DC80 | 10 | 10 | 10 |
| | | AC230/400 | 3 | 3 | 3 |
| | 20-150 (Multi-pole in parallel) | DC80 | 10 | 10 | 10 |

## Tripping Characteristic

Tripping timetable ( in seconds )

| Curve \ Percent of rated current | 105% | 130% | 150% | 200% | 500% | 600% | 800% | 1000% |
|---|---|---|---|---|---|---|---|---|
| Z2/J2 | No trip | 9-240 | 5.5-45 | 2-12 | 0.004-0.06 | 0.004-0.03 | 0.004-0.018 | 0.004-0.018 |
| Z4 | No trip | 15-240 | 9-80 | 4-20 | 0.1-1.8 | 0.035-0.35 | 0.0035-0.1 | 0.0035-0.1 |
| J4 | No trip | 20-360 | 15-150 | 6-40 | 0.15-3 | 0.01-1.8 | 0.0035-0.85 | 0.0035-0.1 |
| Z6/J6 | No trip | 60-1200 | 40-300 | 20-100 | 1.8 -10 | 1.2-7 | 0.02-3 | 0.02-3.2 |

## Tripping Curves

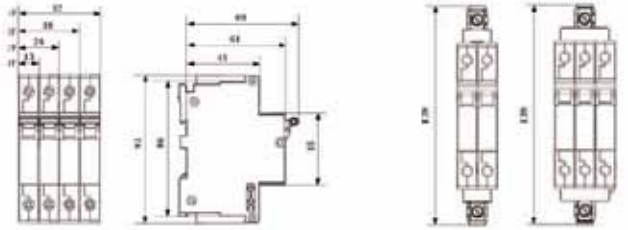



## Working Condition

- Ambient temperature: -40℃ ~ +85℃
- Altitude: ≤2000m
- Humidity: ≤95%
- Service place wirhout explosive media, gas and dust which are corrosive and conductive.
- Be mounted free from rain and snow.

## Dimension

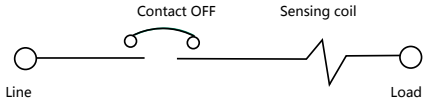
Outline Dimension



Installation Dimension

## Auxiliary Contact

Schematic diagram




Series trip without auxiliary contact