# 1. Product Overview

## Product Scope

**Integrated RCBO**



NB1L N left
1PN
1~25A
6kA



NB1L N right
1PN
2~40A
6kA/10kA

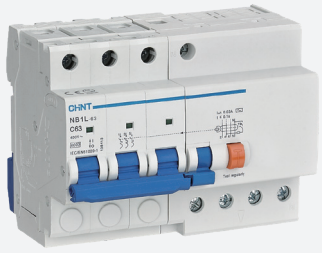


NB1L
2P
6~40A
10kA

**Add on type RCBO**



NB1L-40
1P+N, 2P, 3P, 3P+N, 4P
1~40A
10kA



NB1L-63
1P+N, 2P, 3P, 3P+N, 4P
50A, 63A
6kA

**Slim RCBO**



NB1L-20
1P+N
6-20A
6kA




# NB5LE Residual Current Circuit Breaker (ELE)

## 1. General

1.1 function

NB5LE-63 /B residual current operated circuit breaker is suitable for AC 50/60 Hz, rated voltage to 400V and rated current to 63A, which plays the role of overload, short circuit and residual current protection, and can also be used for infrequent on-off of lines under normal conditions.

1.2 Selection

**Detectable wave form**

**Type B**

Tripping is ensured for sinusoidal AC residual currents pulsed DC residual currents, alternating residual sinusoidal currents up to 1000Hz, pulsating direct residual currents and for smooth direct residual currents, whether applied suddenly or increasing slowly.

**Tripping curve**

C curve (5-10In)

protection for resistive and inductive loads with low inrush current.

D curve(10-16In)

protection for circuits which supply loads with high inrush

current at the circuit closing(LV/LV transformers, breakdown lamps).

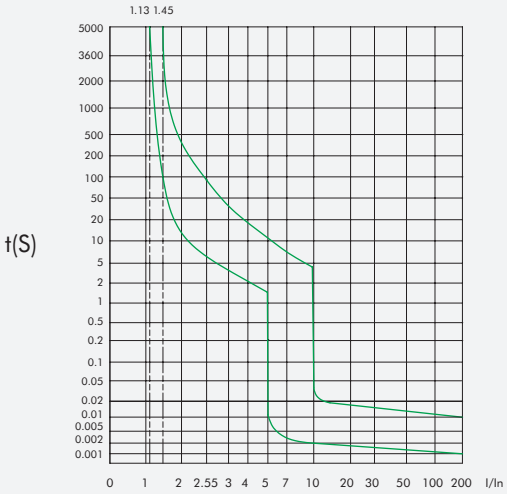
1.3 Approvals and certificates

CE, RoHS

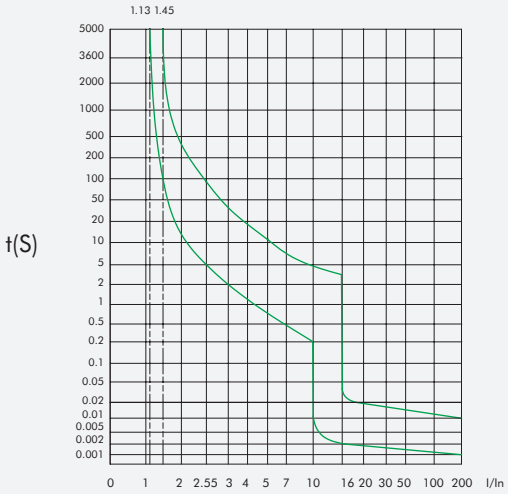
CE RoHS

## 2. Technical data

| **Product model** | | **NB5LE-63/B, NB5LE-63H/B** |
|---|---|---|
| Rated current In (A) | | 6, 10, 16, 20, 25, 32, 40, 50, 63 |
| Rated voltage Ue (V) | | AC230(1P+N, 2P)<br>AC400(3P+N) |
| Rated frequency (Hz) | | 50 |
| Number of poles | | 1P+N, 2P, 3P+N |
| Mechanical life (times) | | 20000 |
| Electrical life (times) | | 10000 |
| Rated short circuit breaking capacity Icn (A) | | NB5LE-63/B:6000<br>NB5LE-63H/B:10000 |
| Operating short circuit breaking capability Ics (A) | | NB5LE-63/B:6000<br>NB5LE-63H/B:7500 |
| Rated isolation voltage Ui (V) | | 500 |
| Rated impulse withstand voltage Uimp (kV) | | 4 |
| Rated residual operating current I △ n (mA) | | 30, 100,300 |
| Leakage protection type | | Type B |
| Action type of release | | Electronic type |
| Dielectric test voltage (V) | | (50hz, 1min) 2000 |
| Anti-vibration (IEC/EN60068-2-6) | | Where there is no obvious vibration and impact. |
| Terminal | Minimum accessible conductor cross-sectional area ($mm^2$) | 1 |
| | Maximum accessible conductor cross-sectional area ($mm^2$) | 25 |
| | Standard connection torque (N·m) | 2 |
| | Maximum torque (N·m) | 2.5 |
| | Wire insertion depth (mm) | 12 |
| Reference temperature (℃) | | 30 |
| Working environment temperature (℃) | | -35～+70 |
| Storage ambient temperature (℃) | | -35～+85 |
| Applicable altitude (m) | | 2000 |
| Tripping type | | Thermomagnetic trip |
| Instantaneous trip type | Type C (5In～10In) | ■ |
| | Type D (10In～16In) | ■ |
| Connections | | Electric feed from the top |
| Installation mode | | TH35-7.5 standard DIN rail |

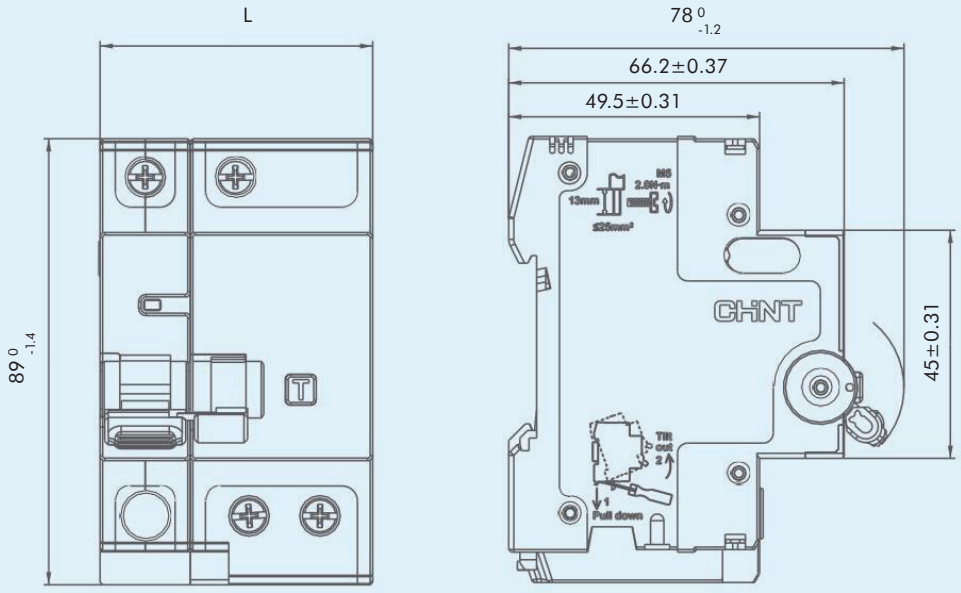



C curve (5~10In)




D curve (10~16In)

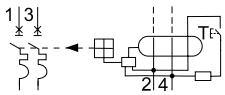
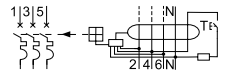
## 3. Overall and mounting dimensions (mm)

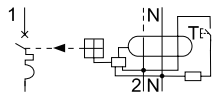
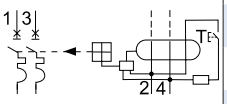


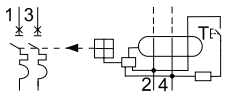
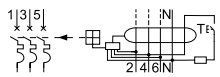

| Number of poles | 1P+N | 2P | 3P+N |
|---|---|---|---|
| L(mm) | 54 0 -0.74 | 72 0 -1.2 | 117 0 -1.4 |

Unit: mm

| NB5LE-63/B | 1PN | C | 16 | 30mA | 6kA |
|---|---|---|---|---|---|
| **Frame** | **Poles** | **Curve** | **Current(In)** | **Rated sensitivity (IΔn)** | **Breaking capacity** |
| NB5LE-63/B | 1P+N<br>2P<br>3P+N | C<br>D | 6A~63A | 30mA<br>100mA<br>300mA | 6kA |

| Diagram | Curve | Poles | In(A) | Icu(kA) | Ue(V) | IΔn(mA) | Leakage type | Description | Code |
|---|---|---|---|---|---|---|---|---|---|
|  | C | 2P | 50 | 6 | AC230 | 30 | B | NB5LE-63/B 2P C50 30mA | 568458 |
| | C | 2P | 50 | 6 | AC230 | 100 | B | NB5LE-63/B 2P C50 100mA | 568462 |
| | C | 2P | 32 | 6 | AC230 | 100 | B | NB5LE-63/B 2P C32 100mA | 568464 |
| | C | 2P | 25 | 6 | AC230 | 100 | B | NB5LE-63/B 2P C25 100mA | 568465 |
| | C | 2P | 63 | 6 | AC230 | 100 | B | NB5LE-63/B 2P C63 100mA | 568466 |
| | C | 2P | 10 | 6 | AC230 | 300 | B | NB5LE-63/B 2P C10 300mA | 568467 |
| | C | 2P | 6 | 6 | AC230 | 300 | B | NB5LE-63/B 2P C6 300mA | 568468 |
| | C | 2P | 16 | 6 | AC230 | 300 | B | NB5LE-63/B 2P C16 300mA | 568469 |
| | C | 2P | 32 | 6 | AC230 | 300 | B | NB5LE-63/B 2P C32 300mA | 568470 |
| | C | 2P | 25 | 6 | AC230 | 300 | B | NB5LE-63/B 2P C25 300mA | 568471 |
| | C | 2P | 20 | 6 | AC230 | 300 | B | NB5LE-63/B 2P C20 300mA | 568472 |
| | C | 2P | 40 | 6 | AC230 | 300 | B | NB5LE-63/B 2P C40 300mA | 568473 |
| | C | 2P | 63 | 6 | AC230 | 300 | B | NB5LE-63/B 2P C63 300mA | 568474 |
| | C | 2P | 50 | 6 | AC230 | 300 | B | NB5LE-63/B 2P C50 300mA | 568476 |
|  | C | 3P+N | 6 | 6 | AC400 | 30 | B | NB5LE-63/B 3P+N C6 30mA | 568475 |
| | C | 3P+N | 10 | 6 | AC400 | 30 | B | NB5LE-63/B 3P+N C10 30mA | 568477 |
| | C | 3P+N | 20 | 6 | AC400 | 30 | B | NB5LE-63/B 3P+N C20 30mA | 568478 |
| | C | 3P+N | 25 | 6 | AC400 | 30 | B | NB5LE-63/B 3P+N C25 30mA | 568479 |
| | C | 3P+N | 32 | 6 | AC400 | 30 | B | NB5LE-63/B 3P+N C32 30mA | 568480 |
| | C | 3P+N | 16 | 6 | AC400 | 30 | B | NB5LE-63/B 3P+N C16 30mA | 568481 |
| | C | 3P+N | 6 | 6 | AC400 | 100 | B | NB5LE-63/B 3P+N C6 100mA | 568482 |
| | C | 3P+N | 50 | 6 | AC400 | 30 | B | NB5LE-63/B 3P+N C50 30mA | 568483 |
| | C | 3P+N | 40 | 6 | AC400 | 30 | B | NB5LE-63/B 3P+N C40 30mA | 568484 |
| | C | 3P+N | 63 | 6 | AC400 | 30 | B | NB5LE-63/B 3P+N C63 30mA | 568485 |
| | C | 3P+N | 25 | 6 | AC400 | 100 | B | NB5LE-63/B 3P+N C25 100mA | 568486 |
| | C | 3P+N | 20 | 6 | AC400 | 100 | B | NB5LE-63/B 3P+N C20 100mA | 568487 |
| | C | 3P+N | 16 | 6 | AC400 | 100 | B | NB5LE-63/B 3P+N C16 100mA | 568488 |
| | C | 3P+N | 10 | 6 | AC400 | 100 | B | NB5LE-63/B 3P+N C10 100mA | 568489 |
| | C | 3P+N | 63 | 6 | AC400 | 100 | B | NB5LE-63/B 3P+N C63 100mA | 568490 |
| | C | 3P+N | 32 | 6 | AC400 | 100 | B | NB5LE-63/B 3P+N C32 100mA | 568491 |
| | C | 3P+N | 40 | 6 | AC400 | 100 | B | NB5LE-63/B 3P+N C40 100mA | 568492 |
| | C | 3P+N | 50 | 6 | AC400 | 100 | B | NB5LE-63/B 3P+N C50 100mA | 568493 |
| | C | 3P+N | 10 | 6 | AC400 | 300 | B | NB5LE-63/B 3P+N C10 300mA | 568494 |
| | C | 3P+N | 6 | 6 | AC400 | 300 | B | NB5LE-63/B 3P+N C6 300mA | 568495 |
| | C | 3P+N | 25 | 6 | AC400 | 300 | B | NB5LE-63/B 3P+N C25 300mA | 568496 |
| | C | 3P+N | 20 | 6 | AC400 | 300 | B | NB5LE-63/B 3P+N C20 300mA | 568497 |
| | C | 3P+N | 32 | 6 | AC400 | 300 | B | NB5LE-63/B 3P+N C32 300mA | 568498 |
| | C | 3P+N | 16 | 6 | AC400 | 300 | B | NB5LE-63/B 3P+N C16 300mA | 568499 |
| | C | 3P+N | 40 | 6 | AC400 | 300 | B | NB5LE-63/B 3P+N C40 300mA | 568500 |
| | C | 3P+N | 50 | 6 | AC400 | 300 | B | NB5LE-63/B 3P+N C50 300mA | 568501 |
| | C | 3P+N | 63 | 6 | AC400 | 300 | B | NB5LE-63/B 3P+N C63 300mA | 568502 |

| Diagram | Curve | Poles | In(A) | Icu(kA) | Ue(V) | IΔn(mA) | Leakage type | Description | Code |
|---|---|---|---|---|---|---|---|---|---|
| | D | 1P+N | 10 | 6 | AC230 | 30 | B | NB5LE-63/B 1P+N D10 30mA | 568503 |
| | D | 1P+N | 6 | 6 | AC230 | 30 | B | NB5LE-63/B 1P+N D6 30mA | 568504 |
| | D | 1P+N | 16 | 6 | AC230 | 30 | B | NB5LE-63/B 1P+N D16 30mA | 568505 |
| | D | 1P+N | 40 | 6 | AC230 | 30 | B | NB5LE-63/B 1P+N D40 30mA | 568506 |
| | D | 1P+N | 20 | 6 | AC230 | 30 | B | NB5LE-63/B 1P+N D20 30mA | 568507 |
| | D | 1P+N | 32 | 6 | AC230 | 30 | B | NB5LE-63/B 1P+N D32 30mA | 568508 |
| | D | 1P+N | 25 | 6 | AC230 | 30 | B | NB5LE-63/B 1P+N D25 30mA | 568509 |
| | D | 1P+N | 10 | 6 | AC230 | 100 | B | NB5LE-63/B 1P+N D10 100mA | 568510 |
| | D | 1P+N | 50 | 6 | AC230 | 30 | B | NB5LE-63/B 1P+N D50 30mA | 568511 |
| | D | 1P+N | 63 | 6 | AC230 | 30 | B | NB5LE-63/B 1P+N D63 30mA | 568512 |
| | D | 1P+N | 6 | 6 | AC230 | 100 | B | NB5LE-63/B 1P+N D6 100mA | 568513 |
| | D | 1P+N | 20 | 6 | AC230 | 100 | B | NB5LE-63/B 1P+N D20 100mA | 568514 |
| | D | 1P+N | 25 | 6 | AC230 | 100 | B | NB5LE-63/B 1P+N D25 100mA | 568515 |
|  | D | 1P+N | 16 | 6 | AC230 | 100 | B | NB5LE-63/B 1P+N D16 100mA | 568516 |
| | D | 1P+N | 32 | 6 | AC230 | 100 | B | NB5LE-63/B 1P+N D32 100mA | 568517 |
| | D | 1P+N | 50 | 6 | AC230 | 100 | B | NB5LE-63/B 1P+N D50 100mA | 568518 |
| | D | 1P+N | 6 | 6 | AC230 | 300 | B | NB5LE-63/B 1P+N D6 300mA | 568519 |
| | D | 1P+N | 40 | 6 | AC230 | 100 | B | NB5LE-63/B 1P+N D40 100mA | 568520 |
| | D | 1P+N | 63 | 6 | AC230 | 100 | B | NB5LE-63/B 1P+N D63 100mA | 568521 |
| | D | 1P+N | 10 | 6 | AC230 | 300 | B | NB5LE-63/B 1P+N D10 300mA | 568522 |
| | D | 1P+N | 25 | 6 | AC230 | 300 | B | NB5LE-63/B 1P+N D25 300mA | 568523 |
| | D | 1P+N | 16 | 6 | AC230 | 300 | B | NB5LE-63/B 1P+N D16 300mA | 568524 |
| | D | 1P+N | 20 | 6 | AC230 | 300 | B | NB5LE-63/B 1P+N D20 300mA | 568525 |
| | D | 1P+N | 40 | 6 | AC230 | 300 | B | NB5LE-63/B 1P+N D40 300mA | 568526 |
| | D | 1P+N | 32 | 6 | AC230 | 300 | B | NB5LE-63/B 1P+N D32 300mA | 568527 |
| | D | 1P+N | 50 | 6 | AC230 | 300 | B | NB5LE-63/B 1P+N D50 300mA | 568528 |
| | D | 1P+N | 63 | 6 | AC230 | 300 | B | NB5LE-63/B 1P+N D63 300mA | 568531 |
| | D | 2P | 20 | 6 | AC230 | 30 | B | NB5LE-63/B 2P D20 30mA | 568529 |
| | D | 2P | 16 | 6 | AC230 | 30 | B | NB5LE-63/B 2P D16 30mA | 568530 |
| | D | 2P | 10 | 6 | AC230 | 30 | B | NB5LE-63/B 2P D10 30mA | 568532 |
| | D | 2P | 6 | 6 | AC230 | 30 | B | NB5LE-63/B 2P D6 30mA | 568533 |
| | D | 2P | 32 | 6 | AC230 | 30 | B | NB5LE-63/B 2P D32 30mA | 568534 |
| | D | 2P | 40 | 6 | AC230 | 30 | B | NB5LE-63/B 2P D40 30mA | 568535 |
|  | D | 2P | 25 | 6 | AC230 | 30 | B | NB5LE-63/B 2P D25 30mA | 568536 |
| | D | 2P | 6 | 6 | AC230 | 100 | B | NB5LE-63/B 2P D6 100mA | 568537 |
| | D | 2P | 50 | 6 | AC230 | 30 | B | NB5LE-63/B 2P D50 30mA | 568538 |
| | D | 2P | 10 | 6 | AC230 | 100 | B | NB5LE-63/B 2P D10 100mA | 568539 |
| | D | 2P | 63 | 6 | AC230 | 30 | B | NB5LE-63/B 2P D63 30mA | 568540 |
| | D | 2P | 32 | 6 | AC230 | 100 | B | NB5LE-63/B 2P D32 100mA | 568541 |
| | D | 2P | 25 | 6 | AC230 | 100 | B | NB5LE-63/B 2P D25 100mA | 568542 |
| | D | 2P | 16 | 6 | AC230 | 100 | B | NB5LE-63/B 2P D16 100mA | 568543 |

| Diagram | Curve | Poles | In(A) | Icu(kA) | Ue(V) | IΔn(mA) | Leakage type | Description | Code |
|---|---|---|---|---|---|---|---|---|---|
|  | D | 2P | 20 | 6 | AC230 | 100 | B | NB5LE-63/B 2P D20 100mA | 568544 |
| | D | 2P | 50 | 6 | AC230 | 100 | B | NB5LE-63/B 2P D50 100mA | 568545 |
| | D | 2P | 40 | 6 | AC230 | 100 | B | NB5LE-63/B 2P D40 100mA | 568546 |
| | D | 2P | 63 | 6 | AC230 | 100 | B | NB5LE-63/B 2P D63 100mA | 568547 |
| | D | 2P | 16 | 6 | AC230 | 300 | B | NB5LE-63/B 2P D16 300mA | 568548 |
| | D | 2P | 10 | 6 | AC230 | 300 | B | NB5LE-63/B 2P D10 300mA | 568549 |
| | D | 2P | 6 | 6 | AC230 | 300 | B | NB5LE-63/B 2P D6 300mA | 568550 |
| | D | 2P | 20 | 6 | AC230 | 300 | B | NB5LE-63/B 2P D20 300mA | 568551 |
| | D | 2P | 50 | 6 | AC230 | 300 | B | NB5LE-63/B 2P D50 300mA | 568552 |
| | D | 2P | 40 | 6 | AC230 | 300 | B | NB5LE-63/B 2P D40 300mA | 568553 |
| | D | 2P | 32 | 6 | AC230 | 300 | B | NB5LE-63/B 2P D32 300mA | 568554 |
| | D | 2P | 25 | 6 | AC230 | 300 | B | NB5LE-63/B 2P D25 300mA | 568555 |
| | D | 2P | 63 | 6 | AC230 | 300 | B | NB5LE-63/B 2P D63 300mA | 568558 |
| | D | 3P+N | 6 | 6 | AC400 | 30 | B | NB5LE-63/B 3P+N D6 30mA | 568557 |
| | D | 3P+N | 10 | 6 | AC400 | 30 | B | NB5LE-63/B 3P+N D10 30mA | 568556 |
| | D | 3P+N | 16 | 6 | AC400 | 30 | B | NB5LE-63/B 3P+N D16 30mA | 568559 |
| | D | 3P+N | 25 | 6 | AC400 | 30 | B | NB5LE-63/B 3P+N D25 30mA | 568560 |
| | D | 3P+N | 20 | 6 | AC400 | 30 | B | NB5LE-63/B 3P+N D20 30mA | 568561 |
| | D | 3P+N | 32 | 6 | AC400 | 30 | B | NB5LE-63/B 3P+N D32 30mA | 568562 |
| | D | 3P+N | 40 | 6 | AC400 | 30 | B | NB5LE-63/B 3P+N D40 30mA | 568563 |
| | D | 3P+N | 50 | 6 | AC400 | 30 | B | NB5LE-63/B 3P+N D50 30mA | 568564 |
| | D | 3P+N | 6 | 6 | AC400 | 100 | B | NB5LE-63/B 3P+N D6 100mA | 568565 |
| | D | 3P+N | 10 | 6 | AC400 | 100 | B | NB5LE-63/B 3P+N D10 100mA | 568566 |
| | D | 3P+N | 63 | 6 | AC400 | 30 | B | NB5LE-63/B 3P+N D63 30mA | 568567 |
| | D | 3P+N | 16 | 6 | AC400 | 100 | B | NB5LE-63/B 3P+N D16 100mA | 568568 |
|  | D | 3P+N | 25 | 6 | AC400 | 100 | B | NB5LE-63/B 3P+N D25 100mA | 568569 |
| | D | 3P+N | 20 | 6 | AC400 | 100 | B | NB5LE-63/B 3P+N D20 100mA | 568570 |
| | D | 3P+N | 63 | 6 | AC400 | 100 | B | NB5LE-63/B 3P+N D63 100mA | 568571 |
| | D | 3P+N | 6 | 6 | AC400 | 300 | B | NB5LE-63/B 3P+N D6 300mA | 568572 |
| | D | 3P+N | 50 | 6 | AC400 | 100 | B | NB5LE-63/B 3P+N D50 100mA | 568573 |
| | D | 3P+N | 40 | 6 | AC400 | 100 | B | NB5LE-63/B 3P+N D40 100mA | 568574 |
| | D | 3P+N | 32 | 6 | AC400 | 100 | B | NB5LE-63/B 3P+N D32 100mA | 568575 |
| | D | 3P+N | 10 | 6 | AC400 | 300 | B | NB5LE-63/B 3P+N D10 300mA | 568576 |
| | D | 3P+N | 16 | 6 | AC400 | 300 | B | NB5LE-63/B 3P+N D16 300mA | 568577 |
| | D | 3P+N | 20 | 6 | AC400 | 300 | B | NB5LE-63/B 3P+N D20 300mA | 568578 |
| | D | 3P+N | 32 | 6 | AC400 | 300 | B | NB5LE-63/B 3P+N D32 300mA | 568579 |
| | D | 3P+N | 25 | 6 | AC400 | 300 | B | NB5LE-63/B 3P+N D25 300mA | 568580 |
| | D | 3P+N | 40 | 6 | AC400 | 300 | B | NB5LE-63/B 3P+N D40 300mA | 568581 |
| | D | 3P+N | 50 | 6 | AC400 | 300 | B | NB5LE-63/B 3P+N D50 300mA | 568582 |
| | D | 3P+N | 63 | 6 | AC400 | 300 | B | NB5LE-63/B 3P+N D63 300mA | 568583 |