

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



NB3LE-AFD Arc Fault Detection Device (ELE)

1. General

1.1 Function

NB3LE-AFD arc fault detection circuit-breaker with residual current operated function applies to circuits with frequency of 50Hz, rated voltage AC230/240V, and rated current up to 32A. It provides overload, short circuit, leakage protection and arc fault detection, and can also be used for infrequent switching of the circuit under normal circumstances.

1.2 Selection

RCD Type

Type A - Tripping is ensured for sinusoidal, alternating residual currents as well as for pulsed DC residual currents, whether they be quickly applied or slowly increase.

Tripping curve

B curve (3-5 I_n) protection and control of the circuits against overloads and short-circuits; protection for people and big length cables in TN and IT systems.

C curve (5-10 I_n) protection and control of the circuits against overloads and short-circuits; protection for resistive and inductive loads with low inrush current.

1.3 On-off indication

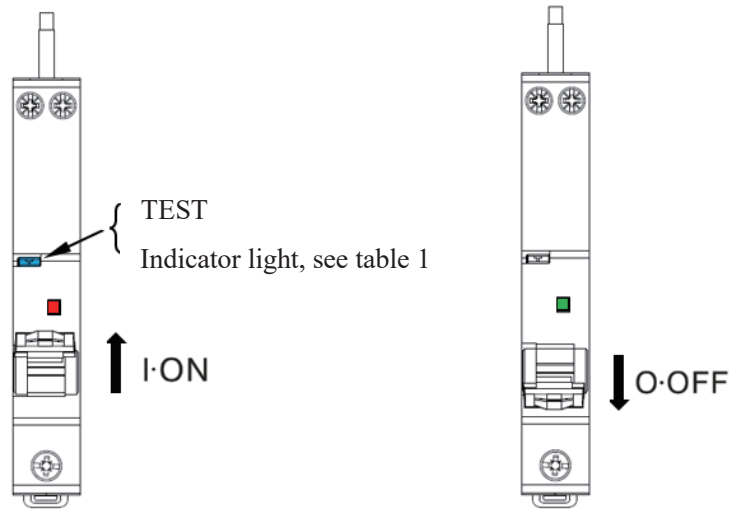


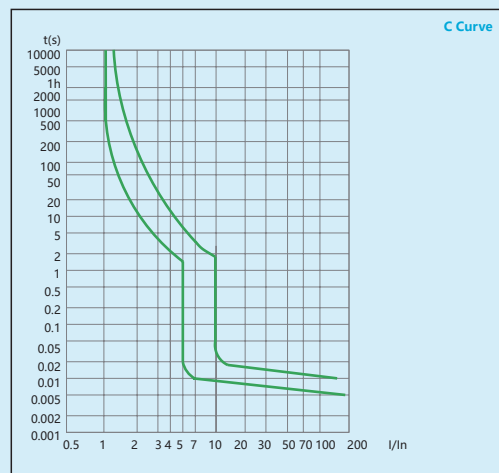
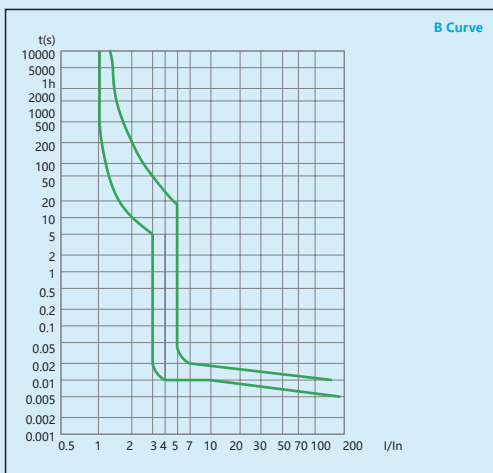
Table 1 Indicator light status display

| Circuit-breaker status | Indicator light color | Instruction |
|------------------------|---|--------------------|
| In close position | The blue light is on | Working normally |
| Reclose after tripped | Red and blue lights alternate continuously flashing | Series arc fault |
| | Red light for 2 times, blue light for 2 times, continuously | Parallel arc fault |
| | Red light flashes continuously | Leakage fault |
| | Blue light flashes continuously | Overtoltage |
| | The red light is always on | Self-test fails |

1.4 Certificates
CE, CB, UKCA

2. Technical data

2.1 Curve



2.2

| | Standard | BS-EN 61009-1,BS-EN 62606 |
|---------------------|---|-------------------------------|
| Electrical features | Type (wave form of the earth leakage sensed) | A |
| | Thermo-magnetic release characteristic | B, C |
| | Rated current I _n | A 6A,10A,13A,16A,20A,25A,32A |
| | Poles | 1P+N |
| | Rated voltage U _e | V 230/240 |
| | Rated sensitivity I _{Δn} | A 0.01,0.03 |
| | Rated residual making and breaking capacity I _{Δm} | A 6,000 |
| | Rated short-circuit capacity I _{cn} | A 6,000 |
| | Break time under I _{Δn} | s ≤0.1 |
| | Rated frequency | Hz 50 |
| | Rated impulse withstand voltage (1.2/50)U _{imp} | V 4,000 |
| | Dielectric TEST voltage at ind. Freq. for 1 min | kV 2 |
| | Insulation voltage U _i | V 500 |
| | Pollution degree | 2 |
| Mechanical features | Electrical life | 4,000 |
| | Mechanical life | 10,000 |
| | Fault indicator light | Yes |
| | Protection degree | IP20 |
| | Ambient temperature (with daily average ≤35°C) | °C -25...+40 |
| | Storage temperature | °C -25...+70 |
| Installation | Terminal connection type | Cable/ U-type/Pin-type busbar |
| | Terminal size top/bottom for cable | mm ² 16 |
| | | AWG 18-5 |
| | Terminal size top/bottom for busbar | mm ² 6 |
| | | AWG 18-10 |
| | Tightening torque | N·m 2 for bottom,1.2 for top |
| | | In-lbs. 18 |
| Mounting | On DIN rail EN 60715 (35mm) by means of fast clip device | |
| Connection | Bottom electrical feeding | |

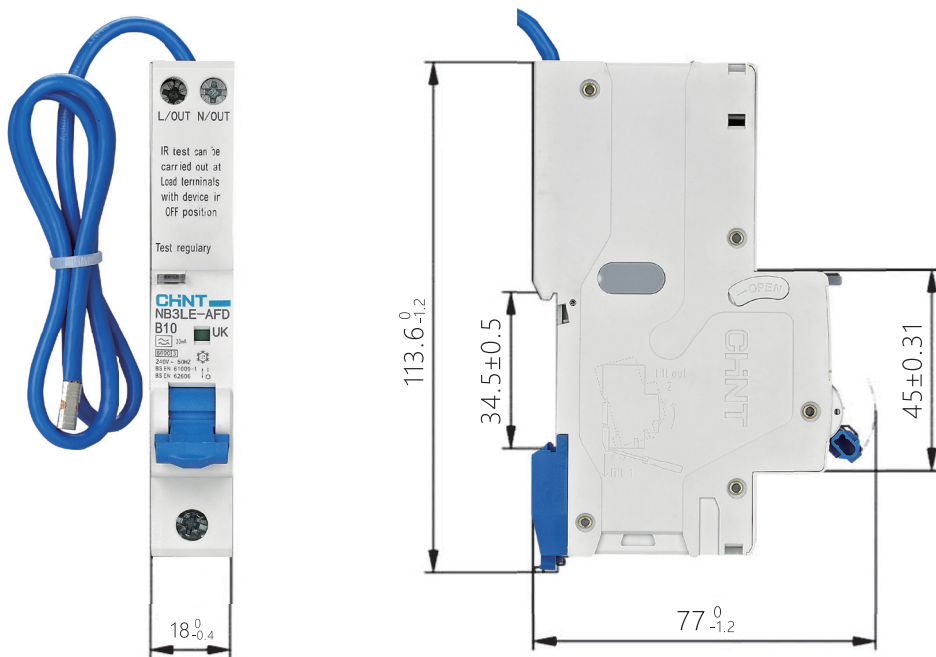
2.2 Temperature derating

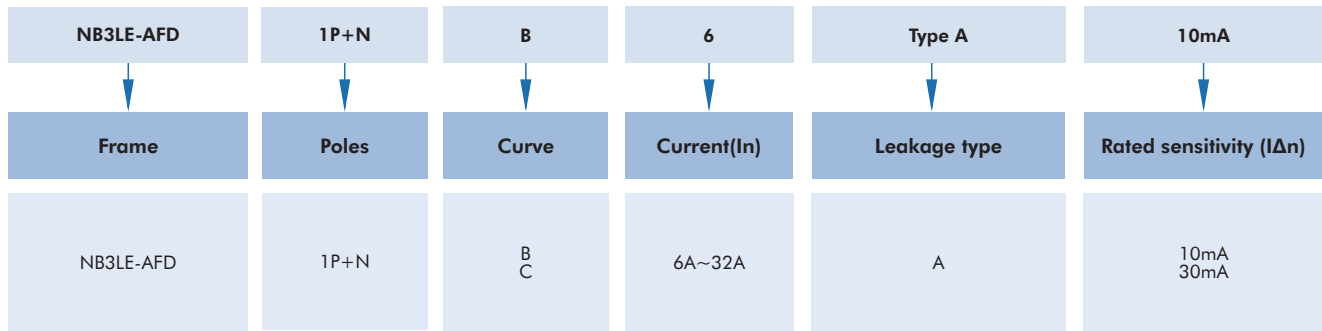
NB3LE-AFD arc fault detection circuit-breaker with residual current operated function applies to circuits with frequency of 50Hz, rated voltage AC 240V, and rated current up to 32A. It provides overload, short circuit, leakage protection and arc fault detection, and can also be used for infrequent switching of the circuit under normal circumstances.

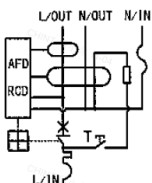
Table 1 Indicator light status display

| Temperature | -25°C | -20°C | -10°C | 0°C | 10°C | 20°C | 30°C | 40°C | 50°C | 60°C | 70°C |
|---|-------|-------|-------|------|------|------|------|------|------|------|------|
| Temperature compensation coefficient of rated current | 1.27 | 1.25 | 1.20 | 1.15 | 1.10 | 1.05 | 1.00 | 0.95 | 0.90 | 0.85 | 0.83 |

3. Overall and mounting dimensions (mm)





| Diagram | Curve | Poles | In(A) | Icu(kA) | Ue(V) | IΔn(mA) | Leakage Type | Description | Code |
|---|-------|-------|-------|---------|-----------|---------|--------------|--------------------------------|--------|
|  | B | 1P+N | 6 | 6 | AC230/240 | 10 | A | NB3LE-AFD 1P+N B6 Type A 10mA | 335313 |
| | B | 1P+N | 6 | 6 | AC230/240 | 30 | A | NB3LE-AFD 1P+N B6 Type A 30mA | 335320 |
| | B | 1P+N | 10 | 6 | AC230/240 | 10 | A | NB3LE-AFD 1P+N B10 Type A 10mA | 335314 |
| | B | 1P+N | 10 | 6 | AC230/240 | 30 | A | NB3LE-AFD 1P+N B10 Type A 30mA | 335321 |
| | B | 1P+N | 13 | 6 | AC230/240 | 10 | A | NB3LE-AFD 1P+N B13 Type A 10mA | 335315 |
| | B | 1P+N | 13 | 6 | AC230/240 | 30 | A | NB3LE-AFD 1P+N B13 Type A 30mA | 335322 |
| | B | 1P+N | 16 | 6 | AC230/240 | 10 | A | NB3LE-AFD 1P+N B16 Type A 10mA | 335316 |
| | B | 1P+N | 16 | 6 | AC230/240 | 30 | A | NB3LE-AFD 1P+N B16 Type A 30mA | 335323 |
| | B | 1P+N | 20 | 6 | AC230/240 | 10 | A | NB3LE-AFD 1P+N B20 Type A 10mA | 335317 |
| | B | 1P+N | 20 | 6 | AC230/240 | 30 | A | NB3LE-AFD 1P+N B20 Type A 30mA | 335325 |
| | B | 1P+N | 25 | 6 | AC230/240 | 10 | A | NB3LE-AFD 1P+N B25 Type A 10mA | 335318 |
| | B | 1P+N | 25 | 6 | AC230/240 | 30 | A | NB3LE-AFD 1P+N B25 Type A 30mA | 335324 |
| | B | 1P+N | 32 | 6 | AC230/240 | 10 | A | NB3LE-AFD 1P+N B32 Type A 10mA | 335319 |
| | B | 1P+N | 32 | 6 | AC230/240 | 30 | A | NB3LE-AFD 1P+N B32 Type A 30mA | 335326 |
| | C | 1P+N | 6 | 6 | AC230/240 | 10 | A | NB3LE-AFD 1P+N C6 Type A 10mA | 335327 |
| | C | 1P+N | 6 | 6 | AC230/240 | 30 | A | NB3LE-AFD 1P+N C6 Type A 30mA | 335334 |
| | C | 1P+N | 10 | 6 | AC230/240 | 10 | A | NB3LE-AFD 1P+N C10 Type A 10mA | 335328 |
| | C | 1P+N | 10 | 6 | AC230/240 | 30 | A | NB3LE-AFD 1P+N C10 Type A 30mA | 335335 |
| | C | 1P+N | 13 | 6 | AC230/240 | 10 | A | NB3LE-AFD 1P+N C13 Type A 10mA | 335329 |
| | C | 1P+N | 13 | 6 | AC230/240 | 30 | A | NB3LE-AFD 1P+N C13 Type A 30mA | 335336 |
| | C | 1P+N | 16 | 6 | AC230/240 | 10 | A | NB3LE-AFD 1P+N C16 Type A 10mA | 335330 |
| | C | 1P+N | 16 | 6 | AC230/240 | 30 | A | NB3LE-AFD 1P+N C16 Type A 30mA | 335337 |
| | C | 1P+N | 20 | 6 | AC230/240 | 10 | A | NB3LE-AFD 1P+N C20 Type A 10mA | 335331 |
| | C | 1P+N | 20 | 6 | AC230/240 | 30 | A | NB3LE-AFD 1P+N C20 Type A 30mA | 335338 |
| | C | 1P+N | 25 | 6 | AC230/240 | 10 | A | NB3LE-AFD 1P+N C25 Type A 10mA | 335332 |
| | C | 1P+N | 25 | 6 | AC230/240 | 30 | A | NB3LE-AFD 1P+N C25 Type A 30mA | 335339 |
| | C | 1P+N | 32 | 6 | AC230/240 | 10 | A | NB3LE-AFD 1P+N C32 Type A 10mA | 335333 |
| | C | 1P+N | 32 | 6 | AC230/240 | 30 | A | NB3LE-AFD 1P+N C32 Type A 30mA | 335340 |