


# NB7
# Miniature Circuit Breaker

## 1. General

The NB7 series miniature circuit breaker is applicable to the circuit with an alternating current of 50Hz/60Hz, rated voltage of 240/415V, and rated current up to 63A for overload protection and short circuit protection, and also for not-frequent operational transformation in the circuit under normal condition.

This product can be applied to various places such as industrial, commercial, and tall buildings, and residential houses.

The product meets the standards of IEC60898-1.

CE Intertek RoHS

## 2. Type designation

N B 7

- 7 — Design number
- B — Miniature circuit breaker
- N — Company code

## 3. Technical data

3.1 Main specifications

3.1.1 Graded according to the rated current In: 1A, 2A, 3A, 4A, 6A, 10A, 16A, 20A, 25A, 32A, 40A, 50A, 63A;

3.1.2 Classified as follows according to the type of instantaneous release: type B (3-5)In, type C (5-10)In, type D ((10-16)In;

3.1.3 Categorized as follows according to the number of poles:

a. Single pole
b. Two poles
c. Three poles
d. Four poles

3.1.4 Weight(kg) : 0.11/per pole.

3.2 Technical parameters

3.2.1 For the rated short circuit breaking capacity, see Table 1

Table 1

| Rated current In (A) | Number of poles | Rated voltage Ue (V) | Rated short circuit capacity Icn (A) |
|---|---|---|---|
| B, C type: 1~40 | 1 | 240/415 | 6000 |
| | 2, 3, 4 | 415 | |
| B, C type: 50 63 | 1 | 240/415 | 4500 |
| | 2, 3, 4 | 415 | |
| D type: 1~63 | 1 | 240/415 | |
| | 2, 3, 4 | 415 | |

3.2.2 Mechanical/electrical Life

a. Electrical life: not less than 4,000 times
b. Mechanical life: not less than 10,000 times

3.2.3 For the over current protection characteristics, see Table 2

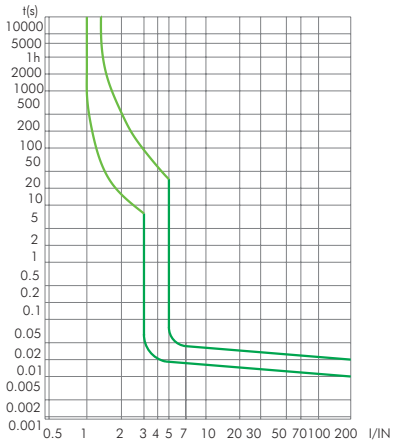
Table 2

| Test | Type | Test current | Initial state | Time limit for tripping or not tripping | Expected result | Test environment temperature | Remarks |
|---|---|---|---|---|---|---|---|
| a | B, C, D | 1.13 In | Cold state | t≤1h | Not tripping | 30℃ ~35℃ | The current is rising within 5s |
| b | B, C, D | 1.45 In | Right after test number 1 | t < 1h | Tripping | | |
| c | B, C, D | 2.55 In | Cold state | 1s < t < 60s (In≤32A)<br>1s < t < 120s (In > 32A) | Tripping | | |
| d | B | 3In | Cold state | t≤0.1s | Not tripping | | The power supply is turned on by closing the auxiliary switch |
| | C | 5In | | | | | |
| | D | 10In | | | | | |
| e | B | 5In | Cold state | t < 0.1s | Tripping | | The power supply is turned on by closing the auxiliary switch |
| | C | 10In | | | | | |
| | D | 16In | | | | | |

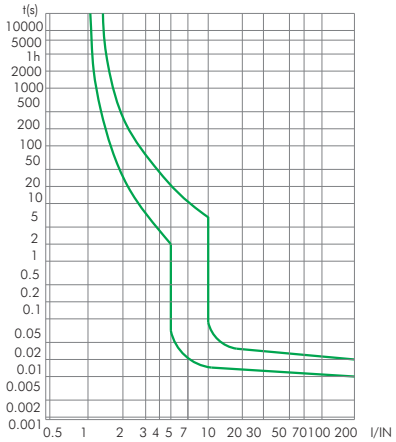
Note: The terminology "Cold state" means that the test is performed at the base calibration temperature with no load prior to the test.

3.2.4 For the tripping performance diagram, see Fig 1

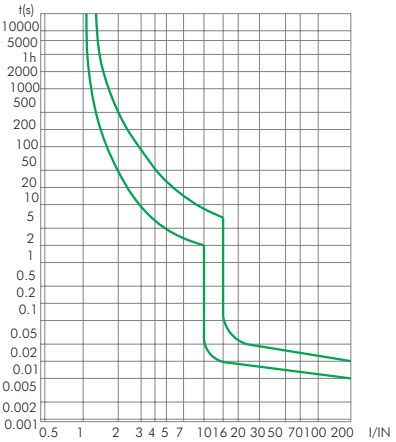
B Type




C Type



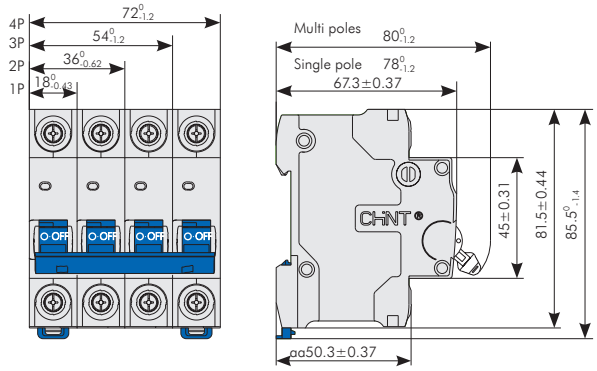

D Type




3.2.5 Wiring: good for connection of leads of less than 25mm² (see Table 3); wiring method: screw hold-down with a toque of 2N·m

| Rated current In (A) | Nominal cross-sectional area of the copper conductor (mm²) |
|---|---|
| 1~6 | 1 |
| 10 | 1.5 |
| 16,20 | 2.5 |
| 25 | 4 |
| 32 | 6 |
| 40,50 | 10 |
| 63 | 16 |

## 4. Overall and mounting dimensions (mm)




## 5. Ordering information

5.1 When ordering the goods, the user shall indicate the following items:

5.1.1 Types and names of products, for example, NB7 miniature circuit breaker;

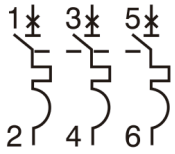
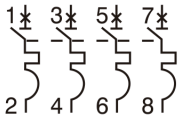
5.1.2 Instantaneous tripping type and rated current, for example, C25;

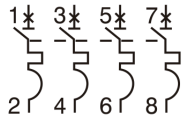
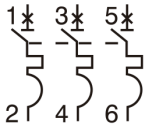
5.1.3 Number of poles: for example, 2P;

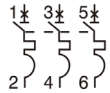
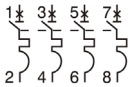
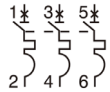
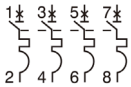
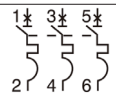
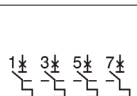
5.1.4 Amount on order, for example, 50 units;

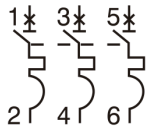
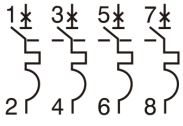
5.2 Example for ordering: 50 units of the NB7 series miniature circuit breakers, 2P, C25.

| NB7 | 1P | B | 1 |
|---|---|---|---|
| ↓ | ↓ | ↓ | ↓ |
| **Frame** | **Poles** | **Curve** | **Current(In)** |
| NB7 | 1P<br>2P<br>3P<br>4P | B<br>C<br>D | 1A~63A |

| Diagram | Curve | Poles | In(A) | Icu(kA) | Ue(V) | Description | Code |
|---|---|---|---|---|---|---|---|
|  | B | 1P | 1 | 6 | AC240/415 | NB7 1P B1 | 192160 |
| | B | 1P | 2 | 6 | AC240/415 | NB7 1P B2 | 192161 |
| | B | 1P | 3 | 6 | AC240/415 | NB7 1P B3 | 192162 |
| | B | 1P | 4 | 6 | AC240/415 | NB7 1P B4 | 192163 |
| | B | 1P | 6 | 6 | AC240/415 | NB7 1P B6 | 192164 |
| | B | 1P | 10 | 6 | AC240/415 | NB7 1P B10 | 192165 |
| | B | 1P | 16 | 6 | AC240/415 | NB7 1P B16 | 192166 |
| | B | 1P | 20 | 6 | AC240/415 | NB7 1P B20 | 192167 |
| | B | 1P | 25 | 6 | AC240/415 | NB7 1P B25 | 192168 |
| | B | 1P | 32 | 6 | AC240/415 | NB7 1P B32 | 192169 |
| | B | 1P | 40 | 6 | AC240/415 | NB7 1P B40 | 192170 |
|  | B | 2P | 1 | 6 | AC415 | NB7 2P B1 | 192199 |
| | B | 2P | 2 | 6 | AC415 | NB7 2P B2 | 192200 |
| | B | 2P | 3 | 6 | AC415 | NB7 2P B3 | 192201 |
| | B | 2P | 4 | 6 | AC415 | NB7 2P B4 | 192202 |
| | B | 2P | 6 | 6 | AC415 | NB7 2P B6 | 192203 |
| | B | 2P | 10 | 6 | AC415 | NB7 2P B10 | 192204 |
| | B | 2P | 16 | 6 | AC415 | NB7 2P B16 | 192205 |
| | B | 2P | 20 | 6 | AC415 | NB7 2P B20 | 192206 |
| | B | 2P | 25 | 6 | AC415 | NB7 2P B25 | 192207 |
| | B | 2P | 32 | 6 | AC415 | NB7 2P B32 | 192208 |
| | B | 2P | 40 | 6 | AC415 | NB7 2P B40 | 192209 |
|  | B | 3P | 1 | 6 | AC415 | NB7 3P B1 | 192238 |
| | B | 3P | 2 | 6 | AC415 | NB7 3P B2 | 192239 |
| | B | 3P | 3 | 6 | AC415 | NB7 3P B3 | 192240 |
| | B | 3P | 4 | 6 | AC415 | NB7 3P B4 | 192241 |
| | B | 3P | 6 | 6 | AC415 | NB7 3P B6 | 192242 |
| | B | 3P | 10 | 6 | AC415 | NB7 3P B10 | 192243 |
| | B | 3P | 16 | 6 | AC415 | NB7 3P B16 | 192244 |
| | B | 3P | 20 | 6 | AC415 | NB7 3P B20 | 192245 |
| | B | 3P | 25 | 6 | AC415 | NB7 3P B25 | 192246 |
| | B | 3P | 32 | 6 | AC415 | NB7 3P B32 | 192247 |
| | B | 3P | 40 | 6 | AC415 | NB7 3P B40 | 192248 |
|  | B | 4P | 1 | 6 | AC415 | NB7 4P B1 | 192277 |
| | B | 4P | 2 | 6 | AC415 | NB7 4P B2 | 192278 |
| | B | 4P | 3 | 6 | AC415 | NB7 4P B3 | 192279 |

| Diagram | Busbar | Curve | Poles | In(A) | Icu(kA) | Description | Code |
|---|---|---|---|---|---|---|---|
|  | B | 4P | 4 | 6 | AC415 | NB7 4P B4 | 192280 |
| | B | 4P | 6 | 6 | AC415 | NB7 4P B6 | 192281 |
| | B | 4P | 10 | 6 | AC415 | NB7 4P B10 | 192282 |
| | B | 4P | 16 | 6 | AC415 | NB7 4P B16 | 192283 |
| | B | 4P | 20 | 6 | AC415 | NB7 4P B20 | 192284 |
| | B | 4P | 25 | 6 | AC415 | NB7 4P B25 | 192285 |
| | B | 4P | 32 | 6 | AC415 | NB7 4P B32 | 192286 |
| | B | 4P | 40 | 6 | AC415 | NB7 4P B40 | 192287 |
|  | C | 1P | 1 | 6 | AC240/415 | NB7 1P C1 | 192173 |
| | C | 1P | 2 | 6 | AC240/415 | NB7 1P C2 | 192174 |
| | C | 1P | 3 | 6 | AC240/415 | NB7 1P C3 | 192175 |
| | C | 1P | 4 | 6 | AC240/415 | NB7 1P C4 | 192176 |
| | C | 1P | 6 | 6 | AC240/415 | NB7 1P C6 | 192177 |
| | C | 1P | 10 | 6 | AC240/415 | NB7 1P C10 | 192178 |
| | C | 1P | 16 | 6 | AC240/415 | NB7 1P C16 | 192179 |
| | C | 1P | 20 | 6 | AC240/415 | NB7 1P C20 | 192180 |
| | C | 1P | 25 | 6 | AC240/415 | NB7 1P C25 | 192181 |
| | C | 1P | 32 | 6 | AC240/415 | NB7 1P C32 | 192182 |
| | C | 1P | 40 | 6 | AC240/415 | NB7 1P C40 | 192183 |
|  | C | 2P | 1 | 6 | AC415 | NB7 2P C1 | 192212 |
| | C | 2P | 2 | 6 | AC415 | NB7 2P C2 | 192213 |
| | C | 2P | 3 | 6 | AC415 | NB7 2P C3 | 192214 |
| | C | 2P | 4 | 6 | AC415 | NB7 2P C4 | 192215 |
| | C | 2P | 6 | 6 | AC415 | NB7 2P C6 | 192216 |
| | C | 2P | 6 | 6 | AC415 | NB7 2P C6A | 192316 |
| | C | 2P | 10 | 6 | AC415 | NB7 2P C10 | 192217 |
| | C | 2P | 10 | 6 | AC415 | NB7 2P C10A | 192317 |
| | C | 2P | 16 | 6 | AC415 | NB7 2P C16 | 192218 |
| | C | 2P | 16 | 6 | AC415 | NB7 2P C16A | 192318 |
| | C | 2P | 20 | 6 | AC415 | NB7 2P C20 | 192219 |
| | C | 2P | 20 | 6 | AC415 | NB7 2P C20A | 192319 |
| | C | 2P | 25 | 6 | AC415 | NB7 2P C25 | 192220 |
| | C | 2P | 25 | 6 | AC415 | NB7 2P C25A | 192320 |
| | C | 2P | 32 | 6 | AC415 | NB7 2P C32 | 192221 |
| | C | 2P | 32 | 6 | AC415 | NB7 2P C32A | 192321 |
| | C | 2P | 40 | 6 | AC415 | NB7 2P C40 | 192222 |
| | C | 2P | 40 | 6 | AC415 | NB7 2P C40A | 192322 |
|  | C | 3P | 1 | 6 | AC415 | NB7 3P C1 | 192251 |
| | C | 3P | 2 | 6 | AC415 | NB7 3P C2 | 192252 |
| | C | 3P | 3 | 6 | AC415 | NB7 3P C3 | 192253 |
| | C | 3P | 4 | 6 | AC415 | NB7 3P C4 | 192254 |
| | C | 3P | 6 | 6 | AC415 | NB7 3P C6 | 192255 |
| | C | 3P | 10 | 6 | AC415 | NB7 3P C10 | 192256 |
| | C | 3P | 16 | 6 | AC415 | NB7 3P C16 | 192257 |
| | C | 3P | 20 | 6 | AC415 | NB7 3P C20 | 192258 |

| Diagram | Busbar | Curve | Poles | In(A) | Icu(kA) | Description | Code |
|---|---|---|---|---|---|---|---|
|  | C | 3P | 25 | 6 | AC415 | NB7 3P C25 | 192259 |
| | C | 3P | 32 | 6 | AC415 | NB7 3P C32 | 192260 |
| | C | 3P | 40 | 6 | AC415 | NB7 3P C40 | 192261 |
|  | C | 4P | 1 | 6 | AC415 | NB7 4P C1 | 192290 |
| | C | 4P | 2 | 6 | AC415 | NB7 4P C2 | 192291 |
| | C | 4P | 3 | 6 | AC415 | NB7 4P C3 | 192292 |
| | C | 4P | 4 | 6 | AC415 | NB7 4P C4 | 192293 |
| | C | 4P | 6 | 6 | AC415 | NB7 4P C6 | 192294 |
| | C | 4P | 6 | 6 | AC415 | NB7 4P C6A | 192325 |
| | C | 4P | 10 | 6 | AC415 | NB7 4P C10 | 192295 |
| | C | 4P | 10 | 6 | AC415 | NB7 4P C10A | 192326 |
| | C | 4P | 16 | 6 | AC415 | NB7 4P C16 | 192296 |
| | C | 4P | 16 | 6 | AC415 | NB7 4P C16A | 192327 |
| | C | 4P | 20 | 6 | AC415 | NB7 4P C20 | 192297 |
| | C | 4P | 20 | 6 | AC415 | NB7 4P C20A | 192328 |
| | C | 4P | 25 | 6 | AC415 | NB7 4P C25 | 192298 |
| | C | 4P | 25 | 6 | AC415 | NB7 4P C25A | 192329 |
| | C | 4P | 32 | 6 | AC415 | NB7 4P C32 | 192299 |
| | C | 4P | 32 | 6 | AC415 | NB7 4P C32A | 192330 |
| | C | 4P | 40 | 6 | AC415 | NB7 4P C40 | 192300 |
| | C | 4P | 40 | 6 | AC415 | NB7 4P C40A | 192331 |
|  | B | 1P | 50 | 4.5 | AC240/415 | NB7 1P B50 | 192171 |
| | B | 1P | 63 | 4.5 | AC240/415 | NB7 1P B63 | 192172 |
|  | B | 2P | 50 | 4.5 | AC415 | NB7 2P B50 | 192210 |
| | B | 2P | 63 | 4.5 | AC415 | NB7 2P B63 | 192211 |
|  | B | 3P | 50 | 4.5 | AC415 | NB7 3P B50 | 192249 |
| | B | 3P | 63 | 4.5 | AC415 | NB7 3P B63 | 192250 |
|  | B | 4P | 50 | 4.5 | AC415 | NB7 4P B50 | 192288 |
| | B | 4P | 62 | 4.5 | AC415 | NB7 4P B63 | 192289 |
|  | C | 1P | 50 | 4.5 | AC240/415 | NB7 1P C50 | 192184 |
| | C | 1P | 63 | 4.5 | AC240/415 | NB7 1P C63 | 192185 |
|  | C | 2P | 50 | 4.5 | AC415 | NB7 2P C50 | 192223 |
| | C | 2P | 50 | 4.5 | AC415 | NB7 2P C50A | 192323 |
| | C | 2P | 63 | 4.5 | AC415 | NB7 2P C63 | 192224 |
| | C | 2P | 63 | 4.5 | AC415 | NB7 2P C63A | 192324 |
|  | C | 3P | 50 | 4.5 | AC415 | NB7 3P C50 | 192262 |
| | C | 3P | 63 | 4.5 | AC415 | NB7 3P C63 | 192263 |
|  | C | 4P | 50 | 4.5 | AC415 | NB7 4P C50 | 192301 |
| | C | 4P | 50 | 4.5 | AC415 | NB7 4P C50A | 192332 |
| | C | 4P | 63 | 4.5 | AC415 | NB7 4P C63 | 192302 |
| | C | 4P | 63 | 4.5 | AC415 | NB7 4P C63A | 192333 |
|  | D | 1P | 1 | 4.5 | AC240/415 | NB7 1P D1 | 192186 |
| | D | 1P | 2 | 4.5 | AC240/415 | NB7 1P D2 | 192187 |
| | D | 1P | 3 | 4.5 | AC240/415 | NB7 1P D3 | 192188 |
| | D | 1P | 4 | 4.5 | AC240/415 | NB7 1P D4 | 192189 |

| Diagram | Busbar | Curve | Poles | In(A) | Icu(kA) | Description | Code |
|---|---|---|---|---|---|---|---|
|  | D | 1P | 6 | 4.5 | AC240/415 | NB7 1P D6 | 192190 |
| | D | 1P | 6 | 4.5 | AC240/415 | NB7 1P D63 | 192198 |
| | D | 1P | 10 | 4.5 | AC240/415 | NB7 1P D10 | 192191 |
| | D | 1P | 16 | 4.5 | AC240/415 | NB7 1P D16 | 192192 |
| | D | 1P | 20 | 4.5 | AC240/415 | NB7 1P D20 | 192193 |
| | D | 1P | 25 | 4.5 | AC240/415 | NB7 1P D25 | 192194 |
| | D | 1P | 32 | 4.5 | AC240/415 | NB7 1P D32 | 192195 |
| | D | 1P | 40 | 4.5 | AC240/415 | NB7 1P D40 | 192196 |
| | D | 1P | 50 | 4.5 | AC240/415 | NB7 1P D50 | 192197 |
|  | D | 2P | 1 | 4.5 | AC415 | NB7 2P D1 | 192225 |
| | D | 2P | 2 | 4.5 | AC415 | NB7 2P D2 | 192226 |
| | D | 2P | 3 | 4.5 | AC415 | NB7 2P D3 | 192227 |
| | D | 2P | 4 | 4.5 | AC415 | NB7 2P D4 | 192228 |
| | D | 2P | 6 | 4.5 | AC415 | NB7 2P D6 | 192229 |
| | D | 2P | 10 | 4.5 | AC415 | NB7 2P D10 | 192230 |
| | D | 2P | 16 | 4.5 | AC415 | NB7 2P D16 | 192231 |
| | D | 2P | 20 | 4.5 | AC415 | NB7 2P D20 | 192232 |
| | D | 2P | 25 | 4.5 | AC415 | NB7 2P D25 | 192233 |
| | D | 2P | 32 | 4.5 | AC415 | NB7 2P D32 | 192234 |
| | D | 2P | 40 | 4.5 | AC415 | NB7 2P D40 | 192235 |
| | D | 2P | 50 | 4.5 | AC415 | NB7 2P D50 | 192236 |
| | D | 2P | 63 | 4.5 | AC415 | NB7 2P D63 | 192237 |
|  | D | 3P | 1 | 4.5 | AC415 | NB7 3P D1 | 192264 |
| | D | 3P | 2 | 4.5 | AC415 | NB7 3P D2 | 192265 |
| | D | 3P | 3 | 4.5 | AC415 | NB7 3P D3 | 192266 |
| | D | 3P | 4 | 4.5 | AC415 | NB7 3P D4 | 192267 |
| | D | 3P | 6 | 4.5 | AC415 | NB7 3P D6 | 192268 |
| | D | 3P | 10 | 4.5 | AC415 | NB7 3P D10 | 192269 |
| | D | 3P | 16 | 4.5 | AC415 | NB7 3P D16 | 192270 |
| | D | 3P | 20 | 4.5 | AC415 | NB7 3P D20 | 192271 |
| | D | 3P | 25 | 4.5 | AC415 | NB7 3P D25 | 192272 |
| | D | 3P | 32 | 4.5 | AC415 | NB7 3P D32 | 192273 |
| | D | 3P | 40 | 4.5 | AC415 | NB7 3P D40 | 192274 |
| | D | 3P | 50 | 4.5 | AC415 | NB7 3P D50 | 192275 |
| | D | 3P | 62 | 4.5 | AC415 | NB7 3P D63 | 192276 |
|  | D | 4P | 1 | 4.5 | AC415 | NB7 4P D1 | 192303 |
| | D | 4P | 2 | 4.5 | AC415 | NB7 4P D2 | 192304 |
| | D | 4P | 3 | 4.5 | AC415 | NB7 4P D3 | 192305 |
| | D | 4P | 4 | 4.5 | AC415 | NB7 4P D4 | 192306 |
| | D | 4P | 6 | 4.5 | AC415 | NB7 4P D6 | 192307 |
| | D | 4P | 10 | 4.5 | AC415 | NB7 4P D10 | 192308 |
| | D | 4P | 16 | 4.5 | AC415 | NB7 4P D16 | 192309 |
| | D | 4P | 20 | 4.5 | AC415 | NB7 4P D20 | 192310 |
| | D | 4P | 25 | 4.5 | AC415 | NB7 4P D25 | 192311 |
| | D | 4P | 32 | 4.5 | AC415 | NB7 4P D32 | 192312 |
| | D | 4P | 40 | 4.5 | AC415 | NB7 4P D40 | 192313 |
| | D | 4P | 50 | 4.5 | AC415 | NB7 4P D50 | 192314 |
| | D | 4P | 63 | 4.5 | AC415 | NB7 4P D63 | 192315 |