

# **NB8-125 Series MCCB**

#### 1. General

NB8-125 Moulded Case Circuit Breaker is mainly applicable to the general section distribution lines of commercial office buildings, residential buildings and general industrial uses with AC 50/60Hz, rated voltage up to 415V and rated current up to 125A.

Suitable for application:110VDC/Pole

Function: overload, short circuit, isolation.

Standards: GB/T14048.2, IEC60947-2

Certificates: CCC, CE, CB, RoHS



## Type designation







## 2.Technical data

| Rated current (A)   80A, 100A, 125A  | Product model   |                                 | NB8-125                                     |
|--|---|---------------------------------|---|
| Rated voltage (V −)         AC230V/415V, DC110V/Pole           Rated insulation voltage Ui         630V           Rated frequency (Hz)         50           Number of poles         1P, 2P, 3P, 4P           Mechanical life (cycles)         20000           Electrical life (cycles)         6000(80A,100A), 5000(125A)           Rated breaking capacity (A)         10000           Service breaking capacity (A)         7500           Rated impulse withstand voltage (1.2 / 50)(kV) @ 2000 Mtr         6           Anti Vibration (IEC/EN60068-2-6)         Places without obvious vibration and Impact           Terminals         Terminal connection type         Cable/Pin-Type busbar           Minimum Terminal size (mm²)         25           Maximum Terminal size (mm²)         50           Tighten torque (N·m)         3.5 N·m           Strip length (mm)         14           Reference temperature for setting of thermal element (°C)         30/40/50           Ambient temperature (°C)         -35-+85           Applicable altitude (m)         ≤ 2000           Working principle         Thermal magnetic           Curves         C(6.4iln~9.6in)         •           D(9.6in~14.4in)         •           Flame retardant grade of shell         V-0 </td <td colspan="2">Compliant standards</td> <td>IEC60947-3</td> | Compliant standards                                       |                                 | IEC60947-3                                  |
| Rated insulation voltage Ui         630V           Rated frequency (Hz)         50           Number of poles         1P, 2P, 3P, 4P           Mechanical life (cycles)         20000           Electrical life (cycles)         6000(80A,100A), 5000(125A)           Rated breaking capacity (A)         10000           Service breaking capacity (A)         7500           Rated impulse withstand voltage (1.2 / 50)(kV) @ 2000 Mtr         6           Anti Vibration (IEC/EN60068-2-6)         Places without obvious vibration and Impact           Terminals         Terminal connection type         Cable/Pin-Type busbar           Minimum Terminal size (mm²)         25           Maximum Terminal size (mm²)         50           Tighten torque (N·m)         3.5 N·m           Strip length (mm)         14           Reference temperature for setting of thermal element (°C)         30/40/50           Ambient temperature         (°C)         -35-+45           Applicable altitude (m)         ≤ 2000           Working principle         Thermal magnetic           Curves         C(6.4iln~9.6in)         •           Curves         C(6.4iln~9.6in)         •           Diese entry         Top or bottom entry           Mounted in the distribution box <td colspan="2">Rated current (A)</td> <td>80A, 100A, 125A</td>    | Rated current (A)   |                                 | 80A, 100A, 125A                             |
| Rated frequency (Hz)         50           Number of poles         1P, 2P, 3P, 4P           Mechanical life (cycles)         20000           Electrical life (cycles)         6000(80A,100A), 5000(125A)           Rated breaking capacity (A)         10000           Service breaking capacity (A)         7500           Rated impulse withstand voltage (1.2 / 50)(kV) @ 2000 Mtr         6           Anti Vibration (IEC/EN60068-2-6)         Places without obvious vibration and Impact           Terminals         Terminal connection type         Cable/Pin-Type busbar           Minimum Terminal size (mm²)         25           Maximum Terminal size (mm²)         50           Tighten torque (N·m)         3.5 N·m           Strip length (mm)         14           Reference temperature for setting of thermal element (°C)         30/40/50           Ambient temperature         (°C)         -35-+70           Ambient storage temperature         (°C)         -35-+85           Applicable altitude (m)         ≤ 2000           Working principle         Thermal magnetic           Curves         C(6.4iln-9.6ln)         •           D(9.6ln-14.4ln)         •           Flame retardant grade of shell         V-0           Cable entry         Thermal magnet   | Rated voltage (V ~)                                       |                                 | AC230V/415V, DC110V/Pole                    |
| Number of poles         1P, 2P, 3P, 4P           Mechanical life (cycles)         20000           Electrical life (cycles)         6000(80A,100A), 5000(125A)           Rated breaking capacity (A)         10000           Service breaking capacity (A)         7500           Rated impulse withstand voltage (1.2 / 50)(kV) @ 2000 Mtr         6           Anti Vibration (IEC/EN60068-2-6)         Places without obvious vibration and Impact           Terminals         Terminal connection type Minimum Terminal size (mm²)         25           Maximum Terminal size (mm²)         50           Tighten torque (N·m)         3.5 N·m           Strip length (mm)         14           Reference temperature for setting of thermal element (°C)         30/40/50           Ambient temperature         (°C)         -35~+70           Ambient storage temperature         (°C)         -35~+85           Applicable altitude (m)         ≤ 2000           Working principle         Thermal magnetic           Curves         C(6.4iln~9.6ln)         •           D(9.6ln~14.4ln)         •           Flame retardant grade of shell         V-0           Cable entry         They of bottom entry           Mounting         They of bottom entry           They of bottom  | Rated insulation voltage Ui                               |                                 | 630V  |
| Mechanical life (cycles)   20000   | Rated frequency (Hz)                                      |                                 | 50  |
| Electrical life (cycles)   | Number of poles   |                                 | 1P, 2P, 3P, 4P                              |
| Rated breaking capacity (A)         10000           Service breaking capacity (A)         7500           Rated impulse withstand voltage (1.2 / 50)(kV) @ 2000 Mtr         6           Anti Vibration (IEC/EN60068-2-6)         Places without obvious vibration and Impact           Terminals         Terminal connection type         Cable/Pin-Type busbar           Minimum Terminal size (mm²)         25           Maximum Terminal size (mm²)         50           Tighten torque (N·m)         3.5 N·m           Strip length (mm)         14           Reference temperature for setting of thermal element (°C)         30/40/50           Ambient temperature (°C)         -35~+70           Ambient storage temperature (°C)         -35~+85           Applicable altitude (m)         ≤ 2000           Working principle         Thermal magnetic           Curves         C(6.4iln~9.6ln)         •           D(9.6ln~14.4ln)         •           Flame retardant grade of shell         V-0           Cable entry         Top or bottom entry           Mounting         TH35-7.5-rail mounting           Pollution degree         3           Direct mounting         IP20B           Mounted in the distribution box         IP40B   | Mechanical life (cycles)                                  |                                 | 20000                                       |
| Service breaking capacity (A)         7500           Rated impulse withstand voltage (1.2 / 50)(kV) @ 2000 Mtr         6           Anti Vibration (IEC/EN60068-2-6)         Places without obvious vibration and Impact           Terminals         Terminal connection type         Cable/Pin-Type busbar           Minimum Terminal size (mm²)         25           Maximum Terminal size (mm²)         50           Tighten torque (N·m)         3.5 N·m           Strip length (mm)         14           Reference temperature for setting of thermal element (°C)         30/40/50           Ambient temperature (°C)         -35-+70           Ambient storage temperature (°C)         -35-+85           Applicable altitude (m)         ≤ 2000           Working principle         Thermal magnetic           Curves         C(6.4iln~9.6in)         •           Curves         C(6.4iln~9.6in)         •           D(9.6in~14.4ln)         •           Flame retardant grade of shell         V-0           Cable entry         Top or bottom entry           Mounting         TH35-7.5-rail mounting           Protection degree         3           Direct mounting         IP20B           Mounted in the distribution box         IP40B   | Electrical life (cycles)                                  |                                 | 6000(80A,100A), 5000(125A)                  |
| Rated impulse withstand voltage (1.2 / 50)(kV) @ 2000 Mtr         6           Anti Vibration (IEC/EN60068-2-6)         Places without obvious vibration and Impact           Terminals         Terminal connection type         Cable/Pin-Type busbar           Minimum Terminal size (mm²)         25           Maximum Terminal size (mm²)         50           Tighten torque (N·m)         3.5 N·m           Strip length (mm)         14           Reference temperature for setting of thermal element (°C)         30/40/50           Ambient temperature         (°C)         -35~+70           Ambient storage temperature         (°C)         -35~+85           Applicable altitude (m)         ≤ 2000           Working principle         Thermal magnetic           Curves         C(6.4iln~9.6ln)         •           Curves         C(6.4iln~9.6ln)         •           Flame retardant grade of shell         V-0           Cable entry         Top or bottom entry           Mounting         TH35-7.5-rail mounting           Pollution degree         3           Protection degree         Direct mounting           Mounted in the distribution box         IP40B   | Rated breaking capacity (A)                               |                                 | 10000                                       |
| Anti Vibration (IEC/EN60068-2-6)         Places without obvious vibration and Impact           Terminals         Terminal connection type         Cable/Pin-Type busbar           Minimum Terminal size (mm²)         25           Maximum Terminal size (mm²)         50           Tighten torque (N·m)         3.5 N·m           Strip length (mm)         14           Reference temperature for setting of thermal element (°C)         30/40/50           Ambient temperature         (°C)         -35~+70           Ambient storage temperature         (°C)         -35~+85           Applicable altitude (m)         ≤ 2000           Working principle         Thermal magnetic           Curves         C(6.4iln~9.6ln)         •           D(9.6ln~14.4ln)         •         •           Cable entry         Top or bottom entry           Mounting         TH35-7.5-rail mounting           Pollution degree         3           Protection degree         Direct mounting         IP20B           Mounted in the distribution box         IP40B   | Service breaking capacity (A)                             |                                 | 7500  |
| Terminal connection type   | Rated impulse withstand voltage (1.2 / 50)(kV) @ 2000 Mtr |                                 | 6   |
| Minimum Terminal size (mm²)   25   | Anti Vibration (IEC/EN60068-2-6)                          |                                 | Places without obvious vibration and Impact |
| Terminals         Maximum Terminal size (mm²)         50           Tighten torque (N·m)         3.5 N·m           Strip length (mm)         14           Reference temperature for setting of thermal element (°C)         30/40/50           Ambient temperature         (°C)         -35~+70           Ambient storage temperature         (°C)         -35~+85           Applicable altitude (m)         ≤ 2000           Working principle         Thermal magnetic           Curves         C(6.4iln~9.6ln)         •           D(9.6ln~14.4ln)         •           Flame retardant grade of shell         V-0           Cable entry         Top or bottom entry           Mounting         TH35-7.5-rail mounting           Pollution degree         3           Protection degree         Direct mounting         IP20B           Mounted in the distribution box         IP40B   | Terminals   | Terminal connection type        | Cable/Pin-Type busbar                       |
| Tighten torque (N·m)   3.5 N·m     Strip length (mm)   14     Reference temperature for setting of thermal element (°C)   30/40/50     Ambient temperature (°C)   -35~+70     Ambient storage temperature (°C)   -35~+85     Applicable altitude (m)   ≤ 2000     Working principle   Thermal magnetic     Curves   C(6.4iln~9.6ln)   •     Curves   D(9.6ln~14.4ln)   •     Flame retardant grade of shell   V-0     Cable entry   Top or bottom entry     Mounting   TH35-7.5-rail mounting     Pollution degree   3     Protection degree   Direct mounting     Mounted in the distribution box   IP40B   |   | Minimum Terminal size (mm²)     | 25  |
| Strip length (mm)   14   |   | Maximum Terminal size (mm²)     | 50  |
| Reference temperature for setting of thermal element (°C)  Ambient temperature  (°C)  Ambient storage temperature  (°C)  Ambient storage temperature  (°C)  Ambient storage temperature  (°C)  Ambient storage temperature  (°C)  -35~+85  Applicable altitude (m)  Solution  Curves  C(6.4iln~9.6ln)  D(9.6ln~14.4ln)  Flame retardant grade of shell  V-0  Cable entry  Top or bottom entry  Mounting  Pollution degree  3  Protection degree  Direct mounting  Mounted in the distribution box  IP40B   |   | Tighten torque (N⋅m)            | 3.5 N⋅m                                     |
| Ambient temperature (°C) -35~+70  Ambient storage temperature (°C) -35~+85  Applicable altitude (m) ≤ 2000  Working principle Thermal magnetic  Curves Curves C(6.4iln~9.6ln) •  Flame retardant grade of shell V-0  Cable entry Top or bottom entry  Mounting TH35-7.5-rail mounting  Pollution degree 3  Protection degree Direct mounting IP20B  Mounted in the distribution box IP40B  |   | Strip length (mm)               | 14  |
| Ambient storage temperature (°C)  Applicable altitude (m)  Working principle  Curves  Curves  C(6.4iln~9.6ln)  D(9.6ln~14.4ln)  Flame retardant grade of shell  V-0  Cable entry  Mounting  Pollution degree  Protection degree  Direct mounting  Mounted in the distribution box  D≤2000  Thermal magnetic  Thermal magnetic  Thermal magnetic  Top or bottom entry  Top or bottom entry  TH35-7.5-rail mounting  IP20B  IP40B  | Reference temperature for setting of thermal element (°C) |                                 | 30/40/50                                    |
| Applicable altitude (m) ≤ 2000  Working principle Thermal magnetic  Curves C(6.4iIn~9.6In) D(9.6In~14.4In)  Flame retardant grade of shell V-0  Cable entry Top or bottom entry  Mounting TH35-7.5-rail mounting  Pollution degree 3  Protection degree Direct mounting IP20B  Mounted in the distribution box IP40B   | Ambient temperature (°C)                                  |                                 | -35~+70                                     |
| Working principle  Curves  C(6.4iln~9.6ln)  D(9.6ln~14.4ln)  Flame retardant grade of shell  Cable entry  Mounting  Pollution degree  Direct mounting  Direct mounting  Mounted in the distribution box  Thermal magnetic  Topor bottom  Trop or bottom entry  TH35-7.5-rail mounting  IP20B  IP40B  | Ambient storage temperature (°C)                          |                                 | -35~+85                                     |
| Curves         C(6.4iIn~9.6In)         •           D(9.6In~14.4In)         •           Flame retardant grade of shell         V-0           Cable entry         Top or bottom entry           Mounting         TH35-7.5-rail mounting           Pollution degree         3           Protection degree         Direct mounting         IP20B           Mounted in the distribution box         IP40B   | Applicable altitude (m)                                   |                                 | ≤ 2000                                      |
| Curves  D(9.6In~14.4In)  Flame retardant grade of shell  V-0  Cable entry  Mounting  Pollution degree  Protection degree  D(9.6In~14.4In)  Top or bottom entry  TH35-7.5-rail mounting  Birect mounting  IP20B  Mounted in the distribution box  IP40B   | Working principle   |                                 | Thermal magnetic                            |
| Flame retardant grade of shell  Cable entry  Mounting  Pollution degree  Protection degree  D(9.6In~14.4In)  V-0  Top or bottom entry  TH35-7.5-rail mounting  Plame retardant grade of shell  V-0  Top or bottom entry  TH35-7.5-rail mounting  IP20B  Mounted in the distribution box  IP40B   | Curves  | C(6.4iln~9.6ln)                 | •   |
| Cable entry         Top or bottom entry           Mounting         TH35-7.5-rail mounting           Pollution degree         3           Protection degree         IP20B           Mounted in the distribution box         IP40B   |   | D(9.6ln~14.4ln)                 | •   |
| Mounting TH35-7.5-rail mounting  Pollution degree 3  Protection degree IP20B  Mounted in the distribution box IP40B  | Flame retardant grade of shell                            |                                 | V-0   |
| Pollution degree 3  Protection degree Direct mounting IP20B  Mounted in the distribution box IP40B   | Cable entry   |                                 | Top or bottom entry                         |
| Protection degree Direct mounting IP20B  Mounted in the distribution box IP40B   | Mounting  |                                 | TH35-7.5-rail mounting                      |
| Protection degree Mounted in the distribution box IP40B  | Pollution degree  |                                 | 3   |
| Mounted in the distribution box IP40B  | Protection degree   | Direct mounting                 | IP20B                                       |
| Accessories S9. V9. XF9. XF9J. OVT-1. OUVT-1   |   | Mounted in the distribution box | IP40B                                       |
|  | Accessories   |                                 | S9, V9, XF9, XF9J, OVT-1, OUVT-1            |



### 3. Dimensions and installation sizes

