



NBH8 Miniature Circuit Breaker

1. General

1.1 Function

protection of circuits against short-circuit currents, protection of circuits against overload currents, switch, isolation.

1.2 Selection

Technical data of the network at the point considered: the earthing systems (TNS, TNC), short-circuit current at the circuit-breaker installation point, which must always be less than the breaking capacity of this device,

Network normal voltage.

Tripping curves:

B curve (3-5I_n)

protection for people and big length cables in TN and IT systems.

C curve (5-10I_n)

protection for resistive and inductive loads with low inrush current.

1.3 Approvals and certificates

Detailed information, please refer to Certificates Table on the last page.



RCC

SAA

2. Ordering information

Icn=4500A

★ NBH8, 1P+N



Icn=6000A

★ NBH8, 1P+N

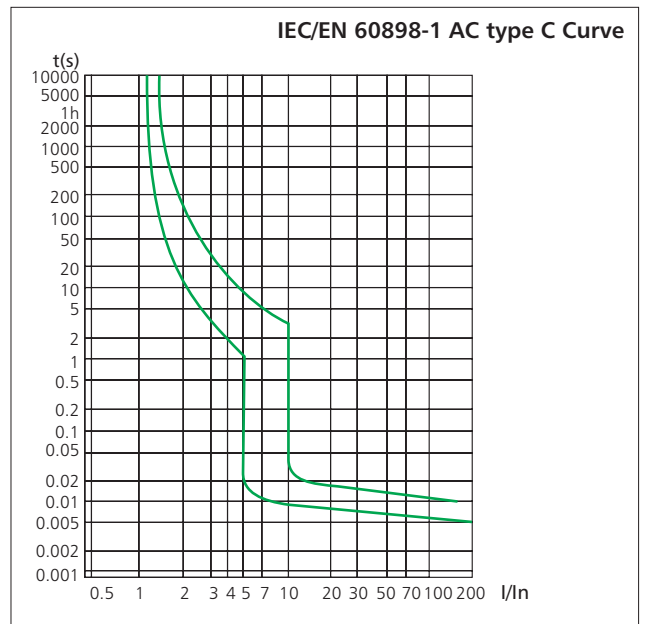
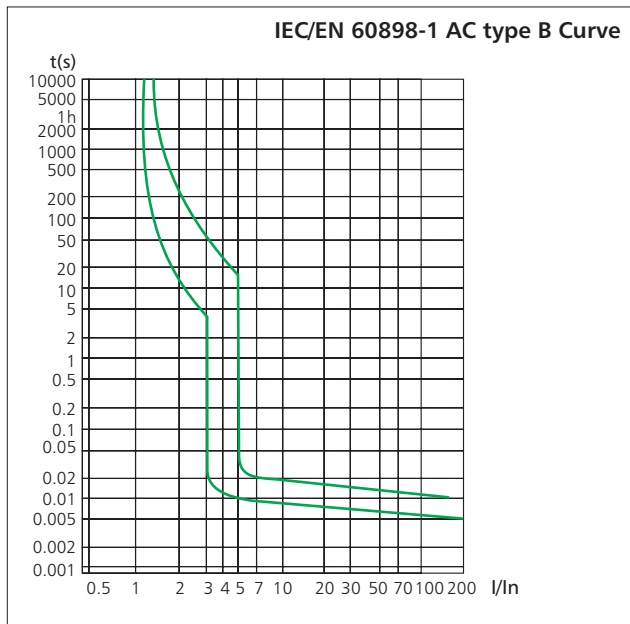


| In (A) | CTN | Order Code | | | |
|--------|-----|------------|--------|----------|--------|
| | | Curve B | | Curve C | |
| | | Standard | RoHS | Standard | RoHS |
| 1 | 180 | 132100 | 972143 | 132111 | 972154 |
| 2 | 180 | 132101 | 972144 | 132112 | 972155 |
| 3 | 180 | 132102 | 972145 | 132113 | 972156 |
| 4 | 180 | 132103 | 972146 | 132114 | 972157 |
| 6 | 180 | 132104 | 972147 | 132115 | 972158 |
| 10 | 180 | 132105 | 972148 | 132116 | 972159 |
| 16 | 180 | 132106 | 972149 | 132117 | 972160 |
| 20 | 180 | 132107 | 972150 | 132118 | 972161 |
| 25 | 180 | 132108 | 972151 | 132119 | 972162 |
| 32 | 180 | 132109 | 972152 | 132120 | 972163 |
| 40 | 180 | 132110 | 972153 | 132121 | 972164 |

| In (A) | CTN | Order Code | | | |
|--------|-----|------------|--------|----------|--------|
| | | Curve B | | Curve C | |
| | | Standard | RoHS | Standard | RoHS |
| 1 | 180 | 132122 | 983259 | 132133 | 983270 |
| 2 | 180 | 132123 | 983260 | 132134 | 983271 |
| 3 | 180 | 132124 | 983261 | 132135 | 983272 |
| 4 | 180 | 132125 | 983262 | 132136 | 983273 |
| 6 | 180 | 132126 | 983263 | 132137 | 983274 |
| 10 | 180 | 132127 | 983264 | 132138 | 983275 |
| 16 | 180 | 132128 | 983265 | 132139 | 983276 |
| 20 | 180 | 132129 | 983266 | 132140 | 983277 |
| 25 | 180 | 132130 | 983267 | 132141 | 983278 |
| 32 | 180 | 132131 | 983268 | 132142 | 983279 |
| 40 | 180 | 132132 | 983269 | 132143 | 983280 |

3. Technical data

3.1 Curves



3.2

| | Standard | | IEC/EN 60898-1 |
|------------------------------|--|--|---|
| Electrical features | Rated current In | A | 1, 2, 3, 4, 6, 10, 16, 20, 25, 32, 40 |
| | Poles | | 1P+N |
| | Rated voltage Ue | V | 230/240 |
| | Insulation voltage Ui | V | 500 |
| | Rated frequency | Hz | 50/60 |
| | Rated breaking capacity | A | 4500/6000 |
| | Rated impulse withstand voltage(1.2/50) Uimp | V | 4000 |
| | Dielectric test voltage at ind. Freq. for 1 min | kV | 2 |
| Mechanical features | Pollution degree | | 2 |
| | Energy limiting class | | 3 |
| | Electrical life | | 8, 000 |
| | Mechanical life | | 20, 000 |
| | Contact position indicator | | Yes |
| | Protection degree | | IP20 |
| | Reference temperature for setting of thermal element | °C | 30 |
| | Ambient temperature (with daily average ≤ 35°C) | °C | -5...+40(Special application please refer to P29 for temperature compensation correction) |
| Installation | Storage temperature | °C | -25...+70 |
| | Terminal connection type | | Cable/Pin-type busbar |
| | Terminal size top/bottom for cable | mm ² | 16 |
| | | AWG | 18-5 |
| | Terminal size top/bottom for busbar | mm ² | 10 |
| | | AWG | 18-8 |
| | Tightening torque | N*m | 2 |
| | | In-lbs. | 18 |
| Mounting | | On DIN rail EN 60715 (35mm) by means of fast clip device | |
| Connection | | From top and bottom | |
| Combination with accessories | Auxiliary contact | | Yes |
| | Shunt release | | Yes |
| | Under voltage release | | Yes |
| | Alarm contact | | Yes |

3.3 Temperature derating

The maximum permissible current in a circuit breaker depends on the ambient temperature where the circuit breaker is placed. Ambient temperature is the temperature inside the enclosure or switchboard in which the circuit breakers are installed.

The reference temperature is 30°C

| Temperature | -10°C | 0°C | 10°C | 20°C | 30°C | 40°C | 50°C | 55°C | 60°C |
|--------------------------------------|-------|------|------|------|------|------|------|-------|------|
| Temperature compensation coefficient | 1.20 | 1.15 | 1.10 | 1.05 | 1.00 | 0.95 | 0.90 | 0.875 | 0.85 |

4. Overall and mounting dimensions (mm)

