

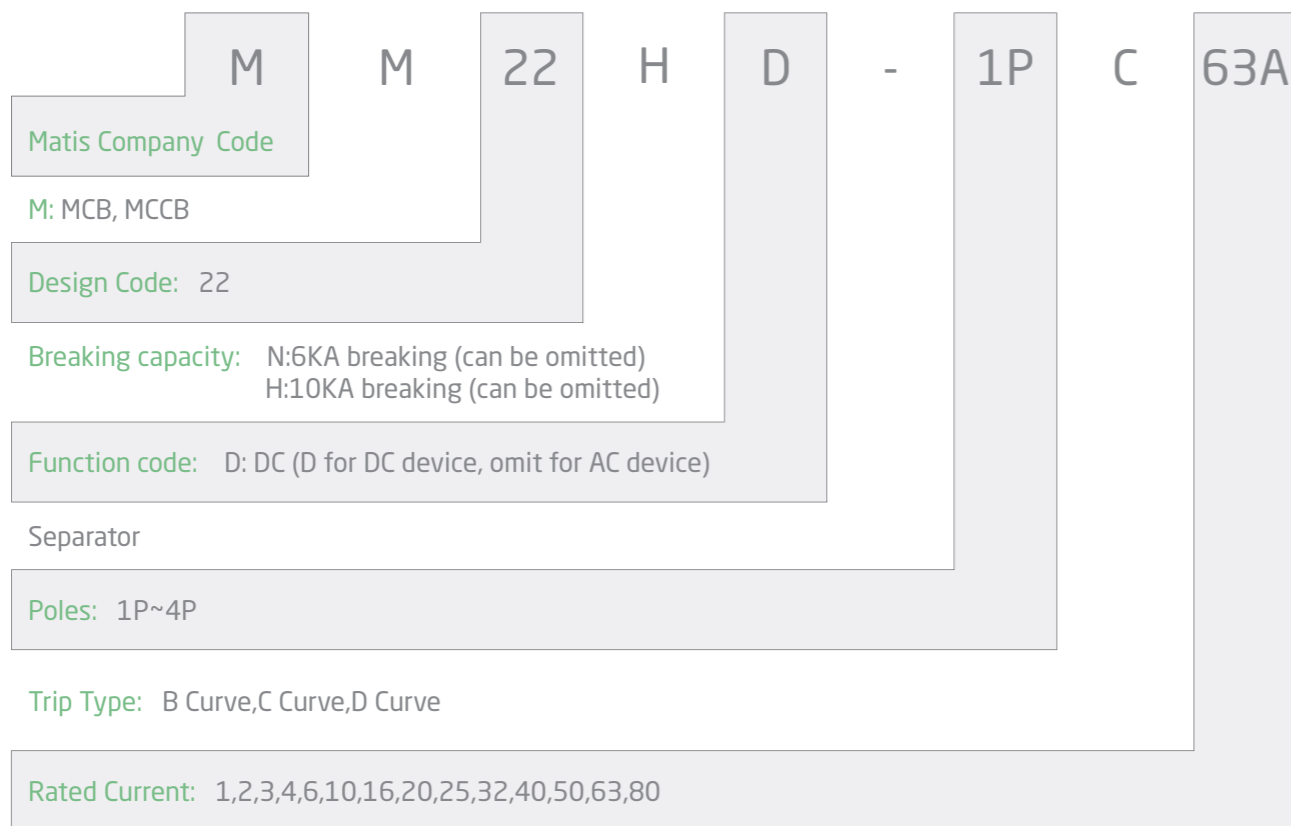


# 01 Miniature Circuit Breaker

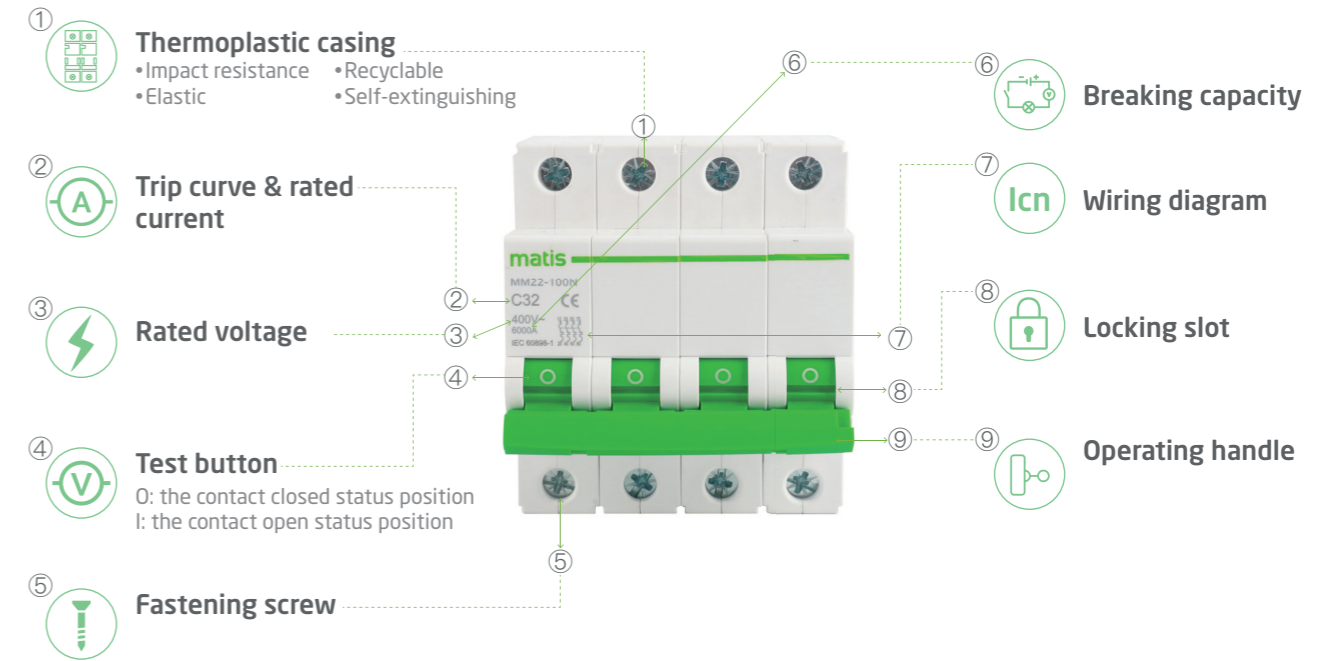
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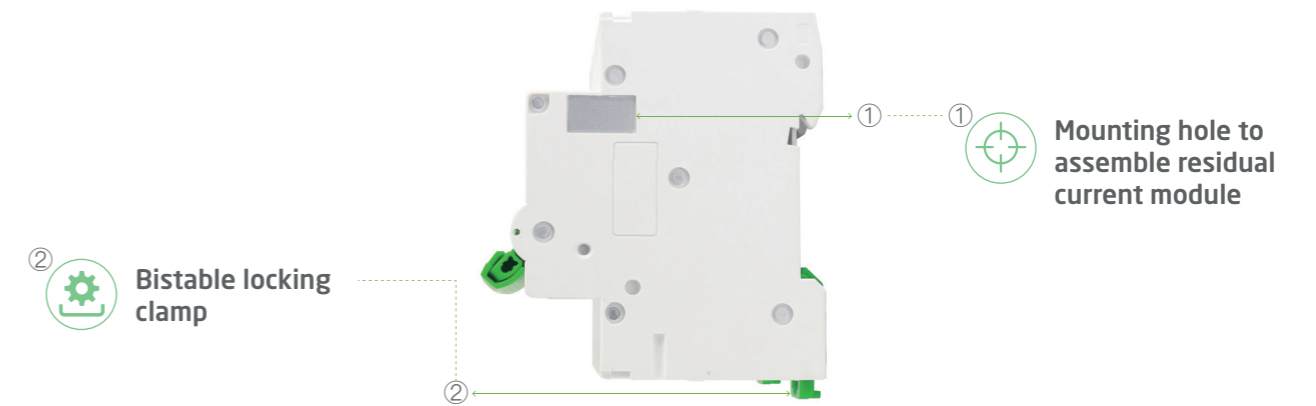
## Instruction of Type Code for MM22



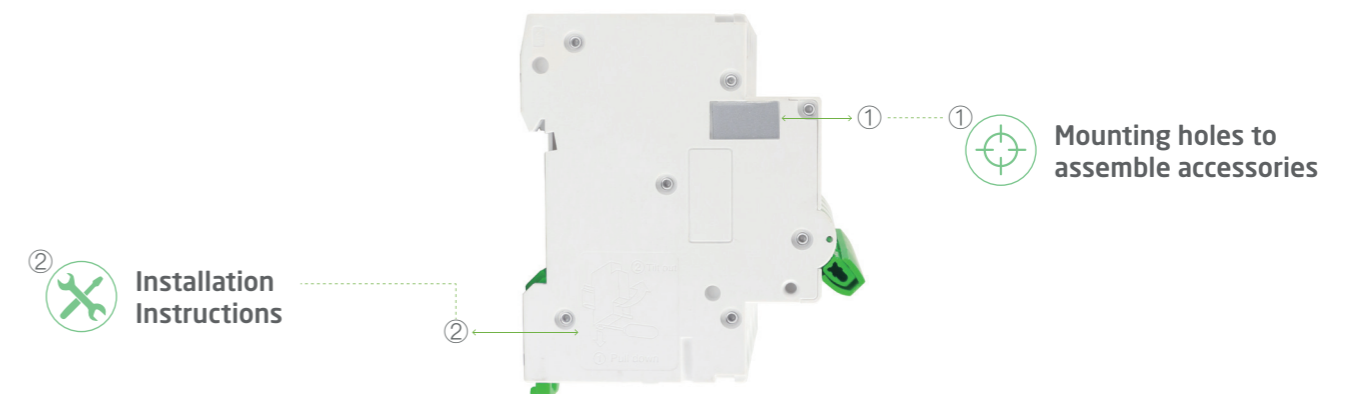
## Front View

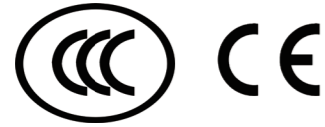


## Right View



## Left view





Certification Mark

### GB/T 10963.1/IEC/EN 60898-1

The circuit breaker have the following functions:

- > Short circuit protection
- > Overload protection
- > Isolation function
- > Control

Suitable for low-voltage terminal power distribution in industrial, civil/commercial buildings, energy and other fields



### Main Parameters

- > Rated current: 1A,2A,3A,4A,6A,10A,16A,20A,25A,32A,40A,50A,63A,80A,100
- > Rated voltage: 1P:230/400V AC;2/3/4P:400V AC
- > Rated ultimate short circuit breaking capacity:6000A(N);10000A(H)
- > Rated operating short circuit breaking capacity: 6000A(N);7500A(H)
- > Impulse withstand voltage: 6kV
- > Current limiting level:3
- > Isolation function: breaking indication on the handle
- > Quick closing: ensure reliable operation under impact loads and extend the electrical life of the circuit breaker
- > Mechanical life: 20,000 times
- > Electrical life: 10,000 times
- > Environment:
  - Working temperature -35°C ~70°C
  - Heat and moisture resistance: Class 2 (relative humidity 95% at 55°C)
- > Wiring:
  - Tunnel type terminal block
  - Wiring capability:
    - 1-32A: Suitable for wires 25mm<sup>2</sup> and below
    - 40-80A: Suitable for wires 35mm<sup>2</sup> and below
- > Installation:
  - Modular mechanism, can be easily installed on DIN standard rail
  - Rated torque: 1-32A: 2.5Nm; 40-80A: 3.0Nm

### Trip Characteristics

- > B curve:
  - Protect loads with small short-circuit current (such as power supplies, long cables)
  - Instantaneous tripping range (3~5) I<sub>n</sub>
- > C curve:
  - Protection of conventional loads and distribution cables (distribution protection)
  - Instantaneous tripping range (5~10) I<sub>n</sub>
- > D curve(There is no D curve type for circuit breakers with a rated current of 80A.):
  - Protect impact loads (dynamic loads) with large starting current
  - Instantaneous tripping range 10-14I<sub>n</sub>



Certification Mark

### GB/T 10963.1/IEC/EN 60898-1

The circuit breaker have the following functions:

- > Short circuit protection
- > Overload protection
- > Isolation function
- > Control

Suitable for Industrial/OEM(Original Equipment Manufacturer)






### Main Parameters

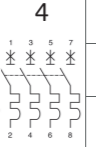
- > Rated current: 1A,2A,3A,4A,6A,10A,16A,20A,25A,32A,40A,50A,63A,80A,100A
- > Rated voltage: 1P:125V DC(N);2:250V DC(N);4P:500V DC(N);  
1P:250V DC(N);2:500V DC(N);4P:1000V DC(N)
- > Rated ultimate short circuit breaking capacity:6000A(N);10000(H)
- > Rated operating short circuit breaking capacity: 6000A(N);7500(H)
- > Impulse withstand voltage: 6kV
- > Current limiting level:3
- > Isolation function: breaking indication on the handle
- > Quick closing: ensure reliable operation under impact loads and extend the electrical life of the circuit breaker
- > Mechanical life: 20,000 times
- > Electrical life: 10,000 times
- > Environment:
  - Working temperature -25°C ~50°C
  - Heat and moisture resistance: Class 2 (relative humidity 95% at 55°C)
- > Wiring:
  - Tunnel type terminal block
  - Wiring capability:
    - 1-63A: Suitable for wires 35mm<sup>2</sup> and below
- > Installation:
  - Modular mechanism, can be easily installed on DIN standard rail
  - Rated torque: 3.0Nm

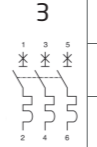
### Trip Characteristics

- > B curve:
  - Protect loads with small short-circuit current (such as power supplies, long cables)
  - Instantaneous tripping range (4~6.6) I<sub>n</sub>
- > C curve:
  - Protection of conventional loads and distribution cables (distribution protection)
  - Instantaneous tripping range (6.8~10.2) I<sub>n</sub>

| Item Code:  | MM22N/H  | MM22N/HD   |              |
|---|--|--|--------------|
| Compliant Standards                                     | IEC/EN 60898-1,GB/T 10963.1  | IEC/EN 60947-2,GB/T 14048.2                                      |              |
| Product Certification                                   | CCC,CE,CB(Products with rated current of 80A do not have product certification.) | CCC,CE,CB  |              |
| Electrical Characteristics                              |  |  |              |
| Poles   | 1P,2P,3P,4P,1P+N,3P+N  | 1P,2P,4P   |              |
| Rated Current(A)  | 1,2,3,4,6,10,16,20,25,32,40,50,63,80,100   | 1,2,3,4,6,10,16,20,25,32,40,50,63,80,100                         |              |
| Rated Voltage(V)  | 230/400  | -  |              |
| Rated Insulation Voltage(V)                             | 500  | -  |              |
| Rated Frequency(Hz)                                     | 50/60  | -  |              |
| Max. Working Voltage (Ue)                               | -  | 【6KA】 1P:125V,2P:250V,4P:500V<br>【10KA】 1P:250V,2P:500V,4P:1000V |              |
| Rated Impulse withstand Voltage, Uimp(KV)               | 6  | 6  |              |
| Rated Ultimate Short-circuit Breaking Capacity, Icn(A)  | 6000(N)/10000(H)   | 6000(N)/10000(H)   |              |
| Rated Operating Short Circuit Breaking Capacity, Ics(A) | 6000(N)/7500(H)  | 6000(N)/7500(N)  |              |
| Overvoltage Category                                    | IV   | IV   |              |
| Pollution Degree  | 3  | 3  |              |
| Instantaneous Tripping Characteristics                  | B  | 3In~5In  | 4.4In~6.6In  |
|   | C  | 5In~10In   | 6.8In~10.2In |
|   | D  | 10In~14In  | -            |
| Electric Shock Protection Class                         | II   | II   |              |
| Mechanical Characteristic                               |  |  |              |
| Mechanical Life   | 20000  | 20000  |              |
| Electrical Life   | 10000  | 15000  |              |
| Protection Grade  | Circuit breaker  | IP20   | IP20         |
|   | Installed in distribution box  | IP40   | IP40         |
| Reference Stable Temperature                            | 30°C   | 40°C   |              |
| Working Temperature                                     | -35°C to+70°C  | -30°C to+70°C  |              |
| Storage Temperature                                     | -40°C to+85°C  | -40°C to+85°C  |              |
| Installation Characteristics                            |  |  |              |
| Wiring Torque(N.m)                                      | 1A-32A   | 3.5/3.0  | 3.0          |
|   | 40A-80A  | 3.0  | 3.0          |
| Max. Wiring Capacity(mm <sup>2</sup> )                  | 1A-32A   | 25   | 1~35         |
|   | 40A-80A  | 35   | 1~35         |
| Incoming Mode   | Either up or down  | According to the signs   |              |



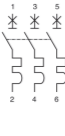

| Power supply | Breaking Capacity | Curve | Poles   | Rated current In(A) | Type code    | Weight(g) | Order code |
|--------------|-------------------|-------|---|---------------------|--------------|-----------|------------|
| AC           | N:6000A           | B     | 1    | 6                   | MM22N-1PB6N  |           |            |
|              |                   |       |   | 10                  | MM22N-1PB10N |           |            |
|              |                   |       |   | 16                  | MM22N-1PB16N |           |            |
|              |                   |       |   | 20                  | MM22N-1PB20N |           |            |
|              |                   |       |   | 25                  | MM22N-1PB25N |           |            |
|              |                   |       |   | 32                  | MM22N-1PB32N |           |            |
|              |                   |       |   | 40                  | MM22N-1PB40N |           |            |
|              |                   |       |   | 50                  | MM22N-1PB50N |           |            |
|              |                   |       |   | 63                  | MM22N-1PB63N |           |            |
|              |                   |       |   | 80                  | MM22N-1PB80N |           |            |
|              |                   |       | 100   | MM22N-1PB100N       |              |           |            |
|              |                   |       | 2  | 6                   | MM22N-2PB6N  |           |            |
|              |                   |       |   | 10                  | MM22N-2PB10N |           |            |
|              |                   |       |   | 16                  | MM22N-2PB16N |           |            |
|              |                   |       |   | 20                  | MM22N-2PB20N |           |            |
|              |                   |       |   | 25                  | MM22N-2PB25N |           |            |
|              |                   |       |   | 32                  | MM22N-2PB32N |           |            |
|              |                   |       |   | 40                  | MM22N-2PB40N |           |            |
|              |                   |       |   | 50                  | MM22N-2PB50N |           |            |
|              |                   |       |   | 63                  | MM22N-2PB63N |           |            |
|              |                   |       |   | 80                  | MM22N-2PB80N |           |            |
|              |                   |       | 100   | MM22N-2PB100N       |              |           |            |
|              |                   |       | 3  | 6                   | MM22N-3PB6N  |           |            |
|              |                   |       |   | 10                  | MM22N-3PB10N |           |            |
|              |                   |       |   | 16                  | MM22N-3PB16N |           |            |
|              |                   |       |   | 20                  | MM22N-3PB20N |           |            |
|              |                   |       |   | 25                  | MM22N-3PB25N |           |            |
|              |                   |       |   | 32                  | MM22N-3PB32N |           |            |
|              |                   |       |   | 40                  | MM22N-3PB40N |           |            |
|              |                   |       |   | 50                  | MM22N-3PB50N |           |            |
| 63           | MM22N-3PB63N      |       |   |                     |              |           |            |
| 80           | MM22N-3PB80N      |       |   |                     |              |           |            |
| 100          | MM22N-3PB100N     |       |   |                     |              |           |            |

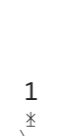



| Power supply | Breaking Capacity | Curve | Poles   | Rated current In(A) | Type code     | Weight(g) | Order code  |
|--------------|-------------------|-------|---|---------------------|---------------|-----------|-------------|
| AC           | N:6000A           | B     |  | 6                   | MM22N-4PB6N   |           |             |
|              |                   |       |   | 10                  | MM22N-4PB10N  |           |             |
|              |                   |       |   | 16                  | MM22N-4PB16N  |           |             |
|              |                   |       |   | 20                  | MM22N-4PB20N  |           |             |
|              |                   |       |   | 25                  | MM22N-4PB25N  |           |             |
|              |                   |       |   | 32                  | MM22N-4PB32N  |           |             |
|              |                   |       |   | 40                  | MM22N-4PB40N  |           |             |
|              |                   |       |   | 50                  | MM22N-4PB50N  |           |             |
|              |                   |       |   | 63                  | MM22N-4PB63N  |           |             |
|              |                   |       |   | 80                  | MM22N-4PB80N  |           |             |
|              |                   |       |   | 100                 | MM22N-4PB100N |           |             |
|              |                   |       |   | C                   | 1             | 6         | MM22N-1PC6N |
|              |                   | 10    | MM22N-1PC10N  |                     |               |           |             |
|              |                   | 16    | MM22N-1PC16N  |                     |               |           |             |
|              |                   | 20    | MM22N-1PC20N  |                     |               |           |             |
|              |                   | 25    | MM22N-1PC25N  |                     |               |           |             |
|              |                   | 32    | MM22N-1PC32N  |                     |               |           |             |
|              |                   | 2     | 40  |                     | MM22N-1PC40N  |           |             |
|              |                   |       | 50  |                     | MM22N-1PC50N  |           |             |
|              |                   |       | 63  |                     | MM22N-1PC63N  |           |             |
|              |                   |       | 80  |                     | MM22N-1PC80N  |           |             |
|              |                   |       | 100   |                     | MM22N-1PC100N |           |             |
|              |                   |       | 6   |                     | MM22N-2PC6N   |           |             |
|              |                   | 10    | MM22N-2PC10N  |                     |               |           |             |
| 16           | MM22N-2PC16N      |       |   |                     |               |           |             |
| 20           | MM22N-2PC20N      |       |   |                     |               |           |             |
| 25           | MM22N-2PC25N      |       |   |                     |               |           |             |
| 32           | MM22N-2PC32N      |       |   |                     |               |           |             |
| 40           | MM22N-2PC40N      |       |   |                     |               |           |             |
| 50           | MM22N-2PC50N      |       |   |                     |               |           |             |
| 63           | MM22N-2PC63N      |       |   |                     |               |           |             |
| 80           | MM22N-2PC80N      |       |   |                     |               |           |             |
| 100          | MM22N-2PC100N     |       |   |                     |               |           |             |

| Power supply | Breaking Capacity | Curve        | Poles   | Rated current In(A) | Type code     | Weight(g)   | Order code  |
|--------------|-------------------|--------------|---|---------------------|---------------|-------------|-------------|
| AC           | N:6000A           | C            |  | 6                   | MM22N-3PC6N   |             |             |
|              |                   |              |   | 10                  | MM22N-3PC10N  |             |             |
|              |                   |              |   | 16                  | MM22N-3PC16N  |             |             |
|              |                   |              |   | 20                  | MM22N-3PC20N  |             |             |
|              |                   |              |   | 25                  | MM22N-3PC25N  |             |             |
|              |                   |              |   | 32                  | MM22N-3PC32N  |             |             |
|              |                   |              |   | 40                  | MM22N-3PC40N  |             |             |
|              |                   |              |   | 50                  | MM22N-3PC50N  |             |             |
|              |                   |              |   | 63                  | MM22N-3PC63N  |             |             |
|              |                   |              |   | 80                  | MM22N-3PC80N  |             |             |
|              |                   |              |   | 100                 | MM22N-3PC100N |             |             |
|              |                   |              |   | D                   | 4             | 6           | MM22N-4PC6N |
|              |                   | 10           | MM22N-4PC10N  |                     |               |             |             |
|              |                   | 16           | MM22N-4PC16N  |                     |               |             |             |
|              |                   | 20           | MM22N-4PC20N  |                     |               |             |             |
|              |                   | 25           | MM22N-4PC25N  |                     |               |             |             |
|              |                   | 32           | MM22N-4PC32N  |                     |               |             |             |
|              |                   | 1            | 40  |                     | MM22N-4PC40N  |             |             |
|              |                   |              | 50  |                     | MM22N-4PC50N  |             |             |
|              |                   |              | 63  |                     | MM22N-4PC63N  |             |             |
|              |                   |              | 80  |                     | MM22N-4PC80N  |             |             |
|              |                   |              | 100   |                     | MM22N-4PC100N |             |             |
|              |                   |              | 2   |                     | 6             | MM22N-1PB6N |             |
|              |                   | 10           |   | MM22N-1PB10N        |               |             |             |
| 16           | MM22N-1PB16N      |              |   |                     |               |             |             |
| 20           | MM22N-1PB20N      |              |   |                     |               |             |             |
| 25           | MM22N-1PB25N      |              |   |                     |               |             |             |
| 32           | MM22N-1PB32N      |              |   |                     |               |             |             |
| 2            | 40                | MM22N-1PB40N |   |                     |               |             |             |
|              | 50                | MM22N-1PB50N |   |                     |               |             |             |
| 63           | MM22N-1PB63N      |              |   |                     |               |             |             |
| 6            | MM22N-2PB6N       |              |   |                     |               |             |             |
| 10           | MM22N-2PB10N      |              |   |                     |               |             |             |

| Power supply | Breaking Capacity | Curve    | Poles        | Rated current In(A) | Type code    | Weight(g)    | Order code |  |
|--------------|-------------------|----------|--------------|---------------------|--------------|--------------|------------|--|
| AC           | N:6000A           | D        | 2            | 16                  | MM22N-2PB16N |              |            |  |
|              |                   |          |              | 20                  | MM22N-2PB20N |              |            |  |
|              |                   |          |              | 25                  | MM22N-2PB25N |              |            |  |
|              |                   |          |              | 32                  | MM22N-2PB32N |              |            |  |
|              |                   |          |              | 40                  | MM22N-2PB40N |              |            |  |
|              |                   |          |              | 50                  | MM22N-2PB50N |              |            |  |
|              |                   |          | 3            | 6                   | MM22N-3PB6N  |              |            |  |
|              |                   |          |              | 10                  | MM22N-3PB10N |              |            |  |
|              |                   |          |              | 16                  | MM22N-3PB16N |              |            |  |
|              |                   |          |              | 20                  | MM22N-3PB20N |              |            |  |
|              |                   |          |              | 25                  | MM22N-3PB25N |              |            |  |
|              |                   |          |              | 32                  | MM22N-3PB32N |              |            |  |
|              |                   | 4        | 6            | MM22N-4PB6N         |              |              |            |  |
|              |                   |          | 10           | MM22N-4PB10N        |              |              |            |  |
|              |                   |          | 16           | MM22N-4PB16N        |              |              |            |  |
|              |                   |          | 20           | MM22N-4PB20N        |              |              |            |  |
|              |                   |          | 25           | MM22N-4PB25N        |              |              |            |  |
|              |                   |          | 32           | MM22N-4PB32N        |              |              |            |  |
|              |                   | H:10000A | B            | 1                   | 6            | MM22H-1PB6N  |            |  |
|              |                   |          |              |                     | 10           | MM22H-1PB10N |            |  |
|              |                   |          |              |                     | 16           | MM22H-1PB16N |            |  |
|              |                   |          |              |                     | 20           | MM22H-1PB20N |            |  |
|              |                   |          |              |                     | 25           | MM22H-1PB25N |            |  |
|              |                   |          |              |                     | 32           | MM22H-1PB32N |            |  |
|              | 40                |          |              |                     | MM22H-1PB40N |              |            |  |
|              | 50                |          | MM22H-1PB50N |                     |              |              |            |  |

| Power supply | Breaking Capacity | Curve | Poles        | Rated current In(A) | Type code    | Weight(g)    | Order code |  |
|--------------|-------------------|-------|--------------|---------------------|--------------|--------------|------------|--|
| AC           | H:10000A          | B     | 1            | 63                  | MM22H-1PB63N |              |            |  |
|              |                   |       |              | 6                   | MM22H-2PB6N  |              |            |  |
|              |                   |       |              | 10                  | MM22H-2PB10N |              |            |  |
|              |                   |       |              | 16                  | MM22H-2PB16N |              |            |  |
|              |                   |       |              | 20                  | MM22H-2PB20N |              |            |  |
|              |                   |       |              | 25                  | MM22H-2PB25N |              |            |  |
|              |                   |       | 2            | 32                  | MM22H-2PB32N |              |            |  |
|              |                   |       |              | 40                  | MM22H-2PB40N |              |            |  |
|              |                   |       |              | 50                  | MM22H-2PB50N |              |            |  |
|              |                   |       |              | 63                  | MM22H-2PB63N |              |            |  |
|              |                   |       |              | 3                   | 6            | MM22H-3PB6N  |            |  |
|              |                   |       |              |                     | 10           | MM22H-3PB10N |            |  |
|              |                   | 16    | MM22H-3PB16N |                     |              |              |            |  |
|              |                   | 20    | MM22H-3PB20N |                     |              |              |            |  |
|              |                   | 25    | MM22H-3PB25N |                     |              |              |            |  |
|              |                   | 32    | MM22H-3PB32N |                     |              |              |            |  |
|              |                   | 4     | 6            | MM22H-4PB6N         |              |              |            |  |
|              |                   |       | 10           | MM22H-4PB10N        |              |              |            |  |
|              |                   |       | 16           | MM22H-4PB16N        |              |              |            |  |
|              |                   |       | 20           | MM22H-4PB20N        |              |              |            |  |
|              |                   |       | 25           | MM22H-4PB25N        |              |              |            |  |
|              |                   |       | 32           | MM22H-4PB32N        |              |              |            |  |
|              |                   | C     | 1            | 1                   | 6            | MM22H-1PC6N  |            |  |
|              |                   |       |              |                     | 10           | MM22H-1PC10N |            |  |
|              | 16                |       |              |                     | MM22H-1PC16N |              |            |  |
|              | 20                |       |              |                     | MM22H-1PC20N |              |            |  |
|              | 25                |       |              |                     | MM22H-1PC25N |              |            |  |

| Power supply | Breaking Capacity | Curve  | Poles  | Rated current In(A) | Type code    | Weight(g) | Order code |
|--------------|-------------------|--|--|---------------------|--------------|-----------|------------|
| AC           | H:10000A          | C  | <br>1   | 32                  | MM22H-1PC32N |           |            |
|              |                   |  |  | 40                  | MM22H-1PC40N |           |            |
|              |                   |  |  | 50                  | MM22H-1PC50N |           |            |
|              |                   |  |  | 63                  | MM22H-1PC63N |           |            |
|              |                   |  | <br>2   | 6                   | MM22H-2PC6N  |           |            |
|              |                   |  |  | 10                  | MM22H-2PC10N |           |            |
|              |                   |  |  | 16                  | MM22H-2PC16N |           |            |
|              |                   |  |  | 20                  | MM22H-2PC20N |           |            |
|              |                   |  |  | 25                  | MM22H-2PC25N |           |            |
|              |                   |  |  | 32                  | MM22H-2PC32N |           |            |
|              |                   |  |  | 40                  | MM22H-2PC40N |           |            |
|              |                   |  |  | 50                  | MM22H-2PC50N |           |            |
|              |                   |  | <br>3 | 6                   | MM22N-3PC6N  |           |            |
|              |                   |  |  | 10                  | MM22N-3PC10N |           |            |
|              |                   |  |  | 16                  | MM22N-3PC16N |           |            |
|              |                   |  |  | 20                  | MM22N-3PC20N |           |            |
|              |                   | 25   |  | MM22N-3PC25N        |              |           |            |
|              |                   | 32   |  | MM22N-3PC32N        |              |           |            |
|              |                   | 40   |  | MM22N-3PC40N        |              |           |            |
|              |                   | 50   |  | MM22N-3PC50N        |              |           |            |
|              |                   | <br>4 | 6  | MM22H-4PC6N         |              |           |            |
|              |                   |  | 10   | MM22H-4PC10N        |              |           |            |
|              |                   |  | 16   | MM22H-4PC16N        |              |           |            |
|              |                   |  | 20   | MM22H-4PC20N        |              |           |            |
|              |                   |  | 25   | MM22H-4PC25N        |              |           |            |
|              |                   |  | 32   | MM22H-4PC32N        |              |           |            |
|              |                   |  | 40   | MM22H-4PC40N        |              |           |            |
|              |                   |  | 50   | MM22H-4PC50N        |              |           |            |
|              |                   | D  | 1  | 6                   | MM22H-1PD6N  |           |            |
|              |                   |  |  | 10                  | MM22H-1PD10N |           |            |

| Power supply | Breaking Capacity | Curve  | Poles  | Rated current In(A)  | Type code    | Weight(g)   | Order code |
|--------------|-------------------|--|--|--|--------------|-------------|------------|
| AC           | H:10000A          | D  | <br>1   | 16   | MM22H-1PD16N |             |            |
|              |                   |  |  | 20   | MM22H-1PD20N |             |            |
|              |                   |  |  | 25   | MM22H-1PD25N |             |            |
|              |                   |  |  | 32   | MM22H-1PD32N |             |            |
|              |                   |  |  | 40   | MM22H-1PD40N |             |            |
|              |                   |  |  | 50   | MM22H-1PD50N |             |            |
|              |                   |  |  | 63   | MM22H-1PD63N |             |            |
|              |                   |  |  | <br>2 | 6            | MM22H-2PD6N |            |
|              |                   |  | 10   |  | MM22H-2PD10N |             |            |
|              |                   |  | 16   |  | MM22H-2PD16N |             |            |
|              |                   |  | 20   |  | MM22H-2PD20N |             |            |
|              |                   |  | 25   |  | MM22H-2PD25N |             |            |
|              |                   |  | 32   |  | MM22H-2PD32N |             |            |
|              |                   |  | 40   |  | MM22H-2PD40N |             |            |
|              |                   |  | 50   |  | MM22H-2PD50N |             |            |
|              |                   |  | <br>3 | 6  | MM22H-3PD6N  |             |            |
|              |                   | 10   |  | MM22H-3PD10N   |              |             |            |
|              |                   | 16   |  | MM22H-3PD16N   |              |             |            |
|              |                   | 20   |  | MM22H-3PD20N   |              |             |            |
|              |                   | 25   |  | MM22H-3PD25N   |              |             |            |
|              |                   | 32   |  | MM22H-3PD32N   |              |             |            |
|              |                   | 40   |  | MM22H-3PD40N   |              |             |            |
|              |                   | 50   |  | MM22H-3PD50N   |              |             |            |
|              |                   | <br>4 | 6  | MM22H-4PD6N  |              |             |            |
|              |                   |  | 10   | MM22H-4PD10N   |              |             |            |
|              |                   |  | 16   | MM22H-4PD16N   |              |             |            |
|              |                   |  | 20   | MM22H-4PD20N   |              |             |            |
|              |                   |  | 25   | MM22H-4PD25N   |              |             |            |
|              |                   |  | 32   | MM22H-4PD32N   |              |             |            |
|              |                   |  | 40   | MM22H-4PD40N   |              |             |            |
|              |                   |  | 50   | MM22H-4PD50N   |              |             |            |

| Power supply | Breaking Capacity | Curve         | Poles | Rated current In(A) | Type code      | Weight(g) | Order code |
|--------------|-------------------|---------------|-------|---------------------|----------------|-----------|------------|
| AC           | H:10000A          | D             | 4     | 63                  | MM22H-4PD63N   |           |            |
|              |                   |               |       | 6                   | MM22ND-1PB6N   |           |            |
|              |                   |               |       | 10                  | MM22ND-1PB10N  |           |            |
|              |                   |               |       | 16                  | MM22ND-1PB16N  |           |            |
|              |                   |               |       | 20                  | MM22ND-1PB20N  |           |            |
|              |                   |               |       | 25                  | MM22ND-1PB25N  |           |            |
|              |                   |               |       | 32                  | MM22ND-1PB32N  |           |            |
|              |                   |               |       | 40                  | MM22ND-1PB40N  |           |            |
|              |                   |               |       | 50                  | MM22ND-1PB50N  |           |            |
|              |                   |               |       | 63                  | MM22ND-1PB63N  |           |            |
|              |                   |               |       | 80                  | MM22ND-1PB80N  |           |            |
|              |                   |               |       | 100                 | MM22ND-1PB100N |           |            |
|              |                   |               |       | DC                  | H:6000A        | B         | 1          |
| 10           | MM22ND-2PB10N     |               |       |                     |                |           |            |
| 16           | MM22ND-2PB16N     |               |       |                     |                |           |            |
| 20           | MM22ND-2PB20N     |               |       |                     |                |           |            |
| 25           | MM22ND-2PB25N     |               |       |                     |                |           |            |
| 32           | MM22ND-2PB32N     |               |       |                     |                |           |            |
| 40           | MM22ND-2PB40N     |               |       |                     |                |           |            |
| 50           | MM22ND-2PB50N     |               |       |                     |                |           |            |
| 63           | MM22ND-2PB63N     |               |       |                     |                |           |            |
| 80           | MM22ND-2PB80N     |               |       |                     |                |           |            |
| 100          | MM22ND-2PB100N    |               |       |                     |                |           |            |
| 2            | 6                 | MM22ND-4PB6N  |       |                     |                |           |            |
|              | 10                | MM22ND-4PB10N |       |                     |                |           |            |
|              | 16                | MM22ND-4PB16N |       |                     |                |           |            |
|              | 20                | MM22ND-4PB20N |       |                     |                |           |            |
|              | 25                | MM22ND-4PB25N |       |                     |                |           |            |
|              | 32                | MM22ND-4PB32N |       |                     |                |           |            |
|              | 40                | MM22ND-4PB40N |       |                     |                |           |            |
|              | 50                | MM22ND-4PB50N |       |                     |                |           |            |
|              | 63                | MM22ND-4PB63N |       |                     |                |           |            |
| 80           | MM22ND-4PB80N     |               |       |                     |                |           |            |

| Power supply | Breaking Capacity | Curve | Poles          | Rated current In(A) | Type code      | Weight(g)      | Order code |   |
|--------------|-------------------|-------|----------------|---------------------|----------------|----------------|------------|---|
| DC           | N:6000A           | B     | 4              | 100                 | MM22ND-4PB100N |                |            |   |
|              |                   |       |                | 6                   | MM22ND-1PC6N   |                |            |   |
|              |                   |       |                | 10                  | MM22ND-1PC10N  |                |            |   |
|              |                   |       |                | 16                  | MM22ND-1PC16N  |                |            |   |
|              |                   |       |                | 20                  | MM22ND-1PC20N  |                |            |   |
|              |                   |       |                | 25                  | MM22ND-1PC25N  |                |            |   |
|              |                   |       |                | 32                  | MM22ND-1PC32N  |                |            |   |
|              |                   |       |                | 40                  | MM22ND-1PC40N  |                |            |   |
|              |                   |       |                | 50                  | MM22ND-1PC50N  |                |            |   |
|              |                   |       |                | 63                  | MM22ND-1PC63N  |                |            |   |
|              |                   |       |                | 80                  | MM22ND-1PC80N  |                |            |   |
|              |                   |       |                | 100                 | MM22ND-1PC100N |                |            |   |
|              |                   | C     | 2              | 4                   | 6              | MM22ND-1PC6N   |            |   |
|              |                   |       |                |                     | 10             | MM22ND-1PC10N  |            |   |
|              |                   |       |                |                     | 16             | MM22ND-1PC16N  |            |   |
|              |                   |       |                |                     | 20             | MM22ND-1PC20N  |            |   |
|              |                   |       |                |                     | 25             | MM22ND-1PC25N  |            |   |
|              |                   |       |                |                     | 32             | MM22ND-1PC32N  |            |   |
|              |                   |       |                |                     | 40             | MM22ND-1PC40N  |            |   |
|              |                   |       |                |                     | 50             | MM22ND-1PC50N  |            |   |
|              |                   |       |                |                     | 63             | MM22ND-1PC63N  |            |   |
|              |                   |       |                |                     | 80             | MM22ND-1PC80N  |            |   |
|              |                   |       |                |                     | 100            | MM22ND-1PC100N |            |   |
|              |                   |       |                |                     | C              | 4              | 4          | 6 |
|              |                   | 10    | MM22ND-4PC10N  |                     |                |                |            |   |
|              |                   | 16    | MM22ND-4PC16N  |                     |                |                |            |   |
|              |                   | 20    | MM22ND-4PC20N  |                     |                |                |            |   |
|              |                   | 25    | MM22ND-4PC25N  |                     |                |                |            |   |
|              |                   | 32    | MM22ND-4PC32N  |                     |                |                |            |   |
|              |                   | 40    | MM22ND-4PC40N  |                     |                |                |            |   |
|              |                   | 50    | MM22ND-4PC50N  |                     |                |                |            |   |
|              |                   | 63    | MM22ND-4PC63N  |                     |                |                |            |   |
|              |                   | 80    | MM22ND-4PC80N  |                     |                |                |            |   |
|              |                   | 100   | MM22ND-4PC100N |                     |                |                |            |   |

| Power supply | Breaking Capacity | Curve | Poles | Rated current In(A) | Type code      | Weight(g)      | Order code |   |              |
|--------------|-------------------|-------|-------|---------------------|----------------|----------------|------------|---|--------------|
| DC           | N:6000A           | C     | 4     | 100                 | MM22ND-4PC100N |                |            |   |              |
|              |                   |       |       | 6                   | MM22HD-1PB6N   |                |            |   |              |
|              |                   |       |       | 10                  | MM22HD-1PB10N  |                |            |   |              |
|              |                   |       |       | 16                  | MM22HD-1PB16N  |                |            |   |              |
|              |                   |       |       | 20                  | MM22HD-1PB20N  |                |            |   |              |
|              |                   |       |       | 25                  | MM22HD-1PB25N  |                |            |   |              |
|              |                   |       |       | 32                  | MM22HD-1PB32N  |                |            |   |              |
|              |                   |       |       | 40                  | MM22HD-1PB40N  |                |            |   |              |
|              |                   |       |       | 50                  | MM22HD-1PB50N  |                |            |   |              |
|              |                   |       |       | 63                  | MM22HD-1PB63N  |                |            |   |              |
|              |                   |       |       | 80                  | MM22HD-1PB80N  |                |            |   |              |
|              |                   |       |       | 100                 | MM22HD-1PB100N |                |            |   |              |
|              | H:10000A          | B     | 1     | 2                   | 6              | MM22HD-2PB6N   |            |   |              |
|              |                   |       |       |                     | 10             | MM22HD-2PB10N  |            |   |              |
|              |                   |       |       |                     | 16             | MM22HD-2PB16N  |            |   |              |
|              |                   |       |       |                     | 20             | MM22HD-2PB20N  |            |   |              |
|              |                   |       |       |                     | 25             | MM22HD-2PB25N  |            |   |              |
|              |                   |       |       |                     | 32             | MM22HD-2PB32N  |            |   |              |
|              |                   |       |       |                     | 40             | MM22HD-2PB40N  |            |   |              |
|              |                   |       |       |                     | 50             | MM22HD-2PB50N  |            |   |              |
|              |                   |       |       |                     | 63             | MM22HD-2PB63N  |            |   |              |
|              |                   |       |       |                     | 80             | MM22HD-2PB80N  |            |   |              |
|              |                   |       |       |                     | 100            | MM22HD-2PB100N |            |   |              |
|              |                   |       |       |                     | 4              | 2              | 4          | 6 | MM22HD-4PB6N |
|              |                   |       | 10    | MM22HD-4PB10N       |                |                |            |   |              |
|              |                   |       | 16    | MM22HD-4PB16N       |                |                |            |   |              |
|              |                   |       | 20    | MM22HD-4PB20N       |                |                |            |   |              |
|              |                   |       | 25    | MM22HD-4PB25N       |                |                |            |   |              |
|              |                   |       | 32    | MM22HD-4PB32N       |                |                |            |   |              |
|              |                   |       | 40    | MM22HD-4PB40N       |                |                |            |   |              |
|              |                   |       | 50    | MM22HD-4PB50N       |                |                |            |   |              |
|              |                   |       | 63    | MM22HD-4PB63N       |                |                |            |   |              |
|              |                   |       | 80    | MM22HD-4PB80N       |                |                |            |   |              |

| Power supply | Breaking Capacity | Curve | Poles | Rated current In(A) | Type code      | Weight(g) | Order code     |   |   |
|--------------|-------------------|-------|-------|---------------------|----------------|-----------|----------------|---|---|
| DC           | H:10000A          | B     | 4     | 100                 | MM22HD-4PB100N |           |                |   |   |
|              |                   |       |       | 6                   | MM22HD-1PC6N   |           |                |   |   |
|              |                   |       |       | 10                  | MM22HD-1PC10N  |           |                |   |   |
|              |                   |       |       | 16                  | MM22HD-1PC16N  |           |                |   |   |
|              |                   |       |       | 20                  | MM22HD-1PC20N  |           |                |   |   |
|              |                   |       |       | 25                  | MM22HD-1PC25N  |           |                |   |   |
|              |                   |       |       | 32                  | MM22HD-1PC32N  |           |                |   |   |
|              |                   |       |       | 40                  | MM22HD-1PC40N  |           |                |   |   |
|              |                   |       |       | 50                  | MM22HD-1PC50N  |           |                |   |   |
|              |                   |       |       | 63                  | MM22HD-1PC63N  |           |                |   |   |
|              |                   |       |       | 80                  | MM22HD-1PC80N  |           |                |   |   |
|              |                   |       |       | 100                 | MM22HD-1PC100N |           |                |   |   |
|              |                   | C     | 1     | 2                   | 4              | 6         | MM22HD-2PC6N   |   |   |
|              |                   |       |       |                     |                | 10        | MM22HD-2PC10N  |   |   |
|              |                   |       |       |                     |                | 16        | MM22HD-2PC16N  |   |   |
|              |                   |       |       |                     |                | 20        | MM22HD-2PC20N  |   |   |
|              |                   |       |       |                     |                | 25        | MM22HD-2PC25N  |   |   |
|              |                   |       |       |                     |                | 32        | MM22HD-2PC32N  |   |   |
|              |                   |       |       |                     |                | 40        | MM22HD-2PC40N  |   |   |
|              |                   |       |       |                     |                | 50        | MM22HD-2PC50N  |   |   |
|              |                   |       |       |                     |                | 63        | MM22HD-2PC63N  |   |   |
|              |                   |       |       |                     |                | 80        | MM22HD-2PC80N  |   |   |
|              |                   |       |       |                     |                | 100       | MM22HD-2PC100N |   |   |
|              |                   |       |       |                     |                | 4         | 2              | 4 | 6 |
|              |                   |       | 10    | MM22HD-4PC10N       |                |           |                |   |   |
|              |                   |       | 16    | MM22HD-4PC16N       |                |           |                |   |   |
|              |                   |       | 20    | MM22HD-4PC20N       |                |           |                |   |   |
|              |                   |       | 25    | MM22HD-4PC25N       |                |           |                |   |   |
|              |                   |       | 32    | MM22HD-4PC32N       |                |           |                |   |   |
|              |                   |       | 40    | MM22HD-4PC40N       |                |           |                |   |   |
|              |                   |       | 50    | MM22HD-4PC50N       |                |           |                |   |   |
|              |                   |       | 63    | MM22HD-4PC63N       |                |           |                |   |   |
|              |                   |       | 80    | MM22HD-4PC80N       |                |           |                |   |   |

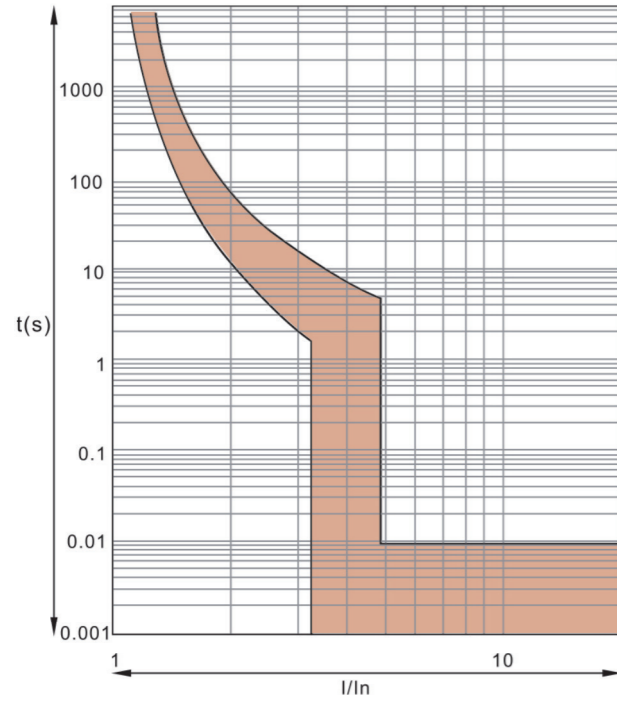
| Power supply | Breaking Capacity | Curve | Poles | Rated current In(A) | Type code      | Weight(g) | Order code |
|--------------|-------------------|-------|-------|---------------------|----------------|-----------|------------|
| DC           | H:10000A          | C     | 4     | 100                 | MM22HD-4PC100N |           |            |

The current carried by the circuit breaker is different at different ambient temperatures. The ambient temperature refers to the temperature in the distribution box or switch cabinet where the circuit breaker is installed.

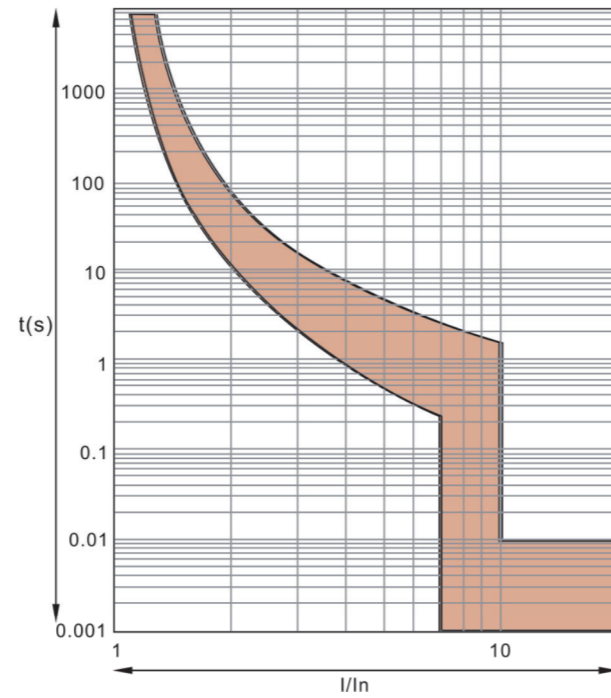
The reference ambient temperature of HKB5 and HKB5N is 30°C .

| Rated Current (A)In | Ambient Temperature(°C ) |       |       |       |       |       |       |    |       |       |       |       |
|---------------------|--------------------------|-------|-------|-------|-------|-------|-------|----|-------|-------|-------|-------|
|                     | -40                      | -30   | -20   | -10   | 0     | 10    | 20    | 30 | 40    | 50    | 60    | 70    |
| 6                   | 7.73                     | 7.50  | 7.27  | 7.04  | 6.79  | 6.54  | 6.28  | 6  | 5.71  | 5.41  | 5.08  | 4.74  |
| 10                  | 12.85                    | 12.48 | 12.10 | 11.71 | 11.31 | 10.89 | 10.45 | 10 | 9.52  | 9.02  | 8.49  | 7.92  |
| 16                  | 20.01                    | 19.49 | 18.95 | 18.40 | 17.83 | 17.24 | 16.63 | 16 | 15.34 | 14.65 | 13.93 | 13.17 |
| 20                  | 24.76                    | 24.14 | 23.50 | 22.85 | 22.17 | 21.47 | 20.75 | 20 | 19.22 | 18.41 | 17.56 | 16.67 |
| 25                  | 31.15                    | 30.35 | 29.52 | 28.67 | 27.80 | 26.90 | 25.97 | 25 | 23.99 | 22.94 | 21.84 | 20.68 |
| 32                  | 39.35                    | 38.39 | 37.40 | 36.93 | 35.34 | 34.26 | 33.15 | 32 | 30.80 | 29.56 | 28.26 | 26.89 |
| 40                  | 49.38                    | 48.15 | 46.89 | 45.60 | 44.27 | 42.89 | 41.47 | 40 | 38.47 | 36.88 | 35.21 | 33.47 |
| 50                  | 62.19                    | 60.60 | 58.97 | 57.29 | 55.56 | 53.77 | 51.92 | 50 | 48.00 | 45.92 | 43.73 | 41.42 |
| 63                  | 78.06                    | 76.09 | 74.07 | 71.99 | 69.85 | 67.65 | 65.36 | 63 | 60.54 | 57.98 | 55.30 | 52.48 |

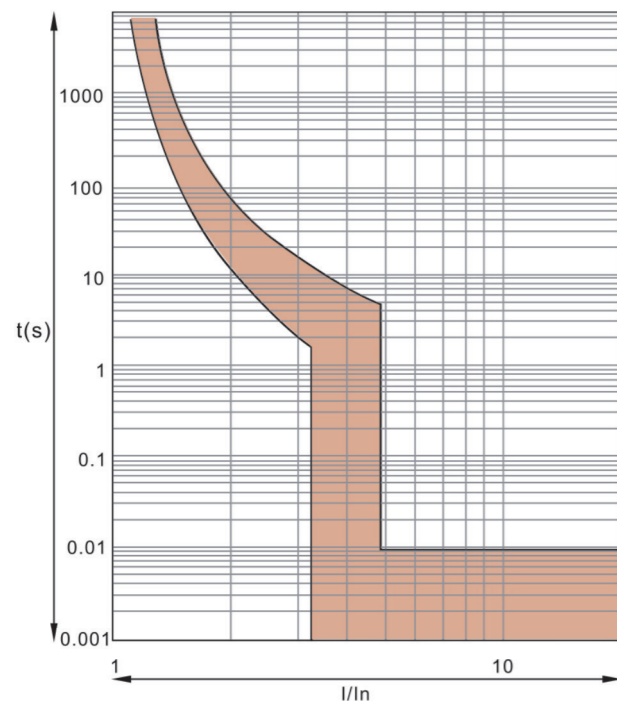
MM22  
Curve B



MM22  
Curve C



MM22  
Curve D



According to the IEC60898-1 and EC60947-2 product standards, when the altitude is lower than 2000 meters, the performance of the circuit breaker will not be significantly affected.

When the altitude is higher than 2,000 meters, due to changes in air density, dielectric constant, cooling capacity, air pressure and other conditions, the overall performance of the circuit breaker will also change and must be downgraded. The following table gives the correction factors for important parameters above 2000 meters:

| Altitude(m)                 | 2000 | 3000 | 4000 | 5000 |
|-----------------------------|------|------|------|------|
| Dielectric Strength         | 1    | 0.88 | 0.78 | 0.68 |
| Max. Working Voltage (400V) | 1    | 0.88 | 0.78 | 0.68 |
| Rated Current In            | 1    | 0.96 | 0.93 | 0.9  |

When the altitude is greater than 2000m, the rated breaking capacity is affected. It is recommended to use LiTEK5-63H (Icn=10000A) series instead of LiTEK5-63N (Icn=6000A) series.

## MM22

