



Miniature circuit breaker (MCB), 15 A, 1p+N, characteristic: B

Part no. **mMCM-B15/1N**
Catalog No. **170048**

Delivery program

| | | | |
|--|----------|----|--|
| Basic function | | | Miniature circuit-breakers |
| Number of poles | | | 1 pole+N |
| Tripping characteristic | | | B |
| Application | | | Switchgear for residential and commercial applications |
| Rated current | I_n | A | 15 |
| Rated switching capacity according to IEC/EN 60898-1 | I_{cn} | kA | 10 |
| Product range | | | mMCM |

Technical data

Electrical

| | | | |
|--|------------|----|---------|
| Rated switching capacity according to IEC/EN 60898-1 | I_{cn} | kA | 10 |
| Rated insulation voltage | U_i | V | 440 |
| Rated impulse withstand voltage | U_{imp} | kV | 4 |
| lifespan | | | |
| Electrical | Operations | | ≥ 10000 |
| Mechanical | Operations | | ≥ 20000 |

References

| | | | |
|---|--|--|---------------------|
| Auxiliary switch for subsequent installation | | | ZP-IHK 286052 |
| Tripping signal contact for subsequent installation | | | ZP-NHK 248437 |
| Remote control and automatic switching device | | | Z-FW/LP 248296 |
| Switching interlock | | | Z-IS/SPE-1TE 274418 |

Mechanical

| | | | |
|------------------------------|--|----|---|
| Standard front dimension | | mm | 45 |
| Device height | | mm | 80 |
| Mounting | | | Quick attachment with 3 latch positions for top-hat rail IEC/EN 60715 |
| Degree of Protection | | | IP20 |
| Terminals top and bottom | | | Open mouthed/lift terminals |
| Terminal protection | | | BGV A3, ÖVE-EN 6 |
| Thickness of busbar material | | mm | 0.8 - 2 |

Design verification as per IEC/EN 61439

| | | | |
|--|------------|----|---|
| Technical data for design verification | | | |
| Rated operational current for specified heat dissipation | I_n | A | 15 |
| Heat dissipation per pole, current-dependent | P_{vid} | W | 0 |
| Equipment heat dissipation, current-dependent | P_{vid} | W | 2.4 |
| Static heat dissipation, non-current-dependent | P_{vs} | W | 0 |
| Heat dissipation capacity | P_{diss} | W | 0 |
| Operating ambient temperature min. | | °C | -25 |
| Operating ambient temperature max. | | °C | 75 |
| | | | linear, per +1 °C, results in a 0.5% reduction of current carrying capacity |
| IEC/EN 61439 design verification | | | |
| 10.2 Strength of materials and parts | | | |
| 10.2.2 Corrosion resistance | | | |
| Meets the product standard's requirements. | | | |
| 10.2.3.1 Verification of thermal stability of enclosures | | | |
| Meets the product standard's requirements. | | | |
| 10.2.3.2 Verification of resistance of insulating materials to normal heat | | | |
| Meets the product standard's requirements. | | | |

| | | |
|--|--|--|
| 10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects | | Meets the product standard's requirements. |
| 10.2.4 Resistance to ultra-violet (UV) radiation | | Meets the product standard's requirements. |
| 10.2.5 Lifting | | Does not apply, since the entire switchgear needs to be evaluated. |
| 10.2.6 Mechanical impact | | Does not apply, since the entire switchgear needs to be evaluated. |
| 10.2.7 Inscriptions | | Meets the product standard's requirements. |
| 10.3 Degree of protection of ASSEMBLIES | | Does not apply, since the entire switchgear needs to be evaluated. |
| 10.4 Clearances and creepage distances | | Meets the product standard's requirements. |
| 10.5 Protection against electric shock | | Does not apply, since the entire switchgear needs to be evaluated. |
| 10.6 Incorporation of switching devices and components | | Does not apply, since the entire switchgear needs to be evaluated. |
| 10.7 Internal electrical circuits and connections | | Is the panel builder's responsibility. |
| 10.8 Connections for external conductors | | Is the panel builder's responsibility. |
| 10.9 Insulation properties | | |
| 10.9.2 Power-frequency electric strength | | Is the panel builder's responsibility. |
| 10.9.3 Impulse withstand voltage | | Is the panel builder's responsibility. |
| 10.9.4 Testing of enclosures made of insulating material | | Is the panel builder's responsibility. |
| 10.10 Temperature rise | | The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices. |
| 10.11 Short-circuit rating | | Is the panel builder's responsibility. The specifications for the switchgear must be observed. |
| 10.12 Electromagnetic compatibility | | Is the panel builder's responsibility. The specifications for the switchgear must be observed. |
| 10.13 Mechanical function | | The device meets the requirements, provided the information in the instruction leaflet (IL) is observed. |

Technical data ETIM 7.0

Circuit breakers and fuses (EG000020) / Miniature circuit breaker (MCB) (EC000042)

Electric engineering, automation, process control engineering / Electrical installation, device / Miniature circuit breaker system (MCB) / Miniature circuit breaker (MCB) (ecl@ss10.0.1-27-14-19-01 [AAB905014])

| | | |
|---|-----------------|----------|
| Release characteristic | | B |
| Number of poles (total) | | 2 |
| Number of protected poles | | 1 |
| Rated current | A | 15 |
| Rated voltage | V | 230 |
| Rated insulation voltage U_i | V | 440 |
| Rated impulse withstand voltage U_{imp} | kV | 4 |
| Rated short-circuit breaking capacity I_{cn} EN 60898 at 230 V | kA | 10 |
| Rated short-circuit breaking capacity I_{cn} EN 60898 at 400 V | kA | 10 |
| Rated short-circuit breaking capacity I_{cu} IEC 60947-2 at 230 V | kA | 15 |
| Rated short-circuit breaking capacity I_{cu} IEC 60947-2 at 400 V | kA | 15 |
| Voltage type | | AC |
| Frequency | Hz | 50 - 60 |
| Current limiting class | | 3 |
| Suitable for flush-mounted installation | | No |
| Concurrently switching N-neutral | | Yes |
| Over voltage category | | 3 |
| Pollution degree | | 2 |
| Additional equipment possible | | Yes |
| Width in number of modular spacings | | 2 |
| Built-in depth | mm | 70.5 |
| Degree of protection (IP) | | IP20 |
| Ambient temperature during operating | °C | -25 - 75 |
| Connectable conductor cross section multi-wired | mm ² | 1 - 25 |
| Connectable conductor cross section solid-core | mm ² | 1 - 25 |