DATASHEET - MMC6-C6/1



Miniature circuit breaker (MCB), 6 A, 1p, characteristic: C

Part no. mMC6-C6/1 Catalog No. 138836



Delivery program

| 1. 0 | | | |
|--|-----------------|----|--|
| Basic function | | | Miniature circuit-breakers |
| Number of poles | | | 1 pole |
| Tripping characteristic | | | C |
| Application | | | Switchgear for residential and commercial applications |
| Rated current | In | Α | 6 |
| Rated switching capacity according to IEC/EN 60898-1 | I _{cn} | kA | 6 |
| Product range | | | mMC6 |

Technical data

Electrical

| Rated switching capacity according to IEC/EN 60898-1 | I _{cn} | kA | 6 |
|--|------------------|----|---------|
| Rated insulation voltage | Ui | 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 | In | Α | 6 |
| Heat dissipation per pole, current-dependent | P _{vid} | W | 0 |
| Equipment heat dissipation, current-dependent | P _{vid} | W | 1.5 |
| 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. |

| observed. | | |
|--|--|--|
| 10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects 10.2.4 Resistance to ultra-violet (UV) radiation 10.2.5 Lifting Does not apply, since the entire switchgear needs to be evaluated. 10.2.6 Mechanical impact 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. 10.6 Incorporation of switching devices and components Does not apply, since the entire switchgear needs to be evaluated. 10.7 Internal electric alcircuits and connections Is the panel builder's responsibility. 10.8 Connections for external conductors Is the panel builder's responsibility. 10.9.1 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's responsibility. The specifications for the switchgear must be observed. 10.11 Short-circuit rating 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 | 10.2.3.1 Verification of thermal stability of enclosures | Meets the product standard's requirements. |
| and fire due to internal electric effects 10.2.4 Resistance to ultra-violet (UV) radiation 10.2.5 Lifting 10.2.6 Mechanical impact 10.2.7 Inscriptions 10.2.7 Inscriptions 10.2.8 Mechanical impact 10.2.7 Inscriptions 10.3 Degree of protection of ASSEMBLIES 10.4 Clearances and creepage distances 10.5 Protection against electric shock 10.5 Protection against electric shock 10.6 Incorporation of switching devices and components 10.7 Internal electrical circuits and connections 10.8 Connections for external conductors 10.9 Power-frequency electric strength 10.9.2 Power-frequency electric strength 10.9.3 Impulse withstand voltage 10.9.4 Testing of enclosures made of insulating material 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function 10.13 Mechanical function Meets the product standard's requirements. 10.6 Does not apply, since the entire switchgear needs to be evaluated. 10.7 Internal electrical circuits and connections 10.8 List the panel builder's responsibility. 10.9 Insulation properties 10.9.1 Temperature rise 10.9.2 Power-frequency electric strength 10.9.4 Testing of enclosures made of insulating material 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function 10.13 Mechanical function 10.14 Meets the product standard's requirements. 10.15 Meets the product standard's requirements. 10.16 Meets the product standard's requirements. 10.17 Internal electrical circuits and connections 10.18 List the panel builder's responsibility. 10.19 List the panel builder's responsibility. 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function | 10.2.3.2 Verification of resistance of insulating materials to normal heat | Meets the product standard's requirements. |
| 10.2.5 Lifting 10.2.6 Mechanical impact 10.2.6 Mechanical impact 10.2.7 Inscriptions 10.3 Degree of protection of ASSEMBLIES 10.3 Degree of protection of ASSEMBLIES 10.4 Clearances and creepage distances 10.5 Protection against electric shock 10.6 Incorporation of switching devices and components 10.7 Internal electrical circuits and connections 10.8 Connections for external conductors 10.9 Power-frequency electric strength 10.9.1 Sullation properties 10.9.2 Power-frequency electric strength 10.9.3 Impulse withstand voltage 10.9.4 Testing of enclosures made of insulating material 10.10 Temperature rise 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function 10.13 Mechanical function 10.14 Mechanical function 10.15 Mechanical function 10.16 meets the entire switchgear needs to be evaluated. 10.10 Temperature rise possibility. 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function 10.14 Mechanical function 10.15 Mechanical function 10.16 meets the entire switchgear needs to be evaluated. 10.17 Internal electric strength against electric strength and the entire switchgear needs to be evaluated. 10.18 Mechanical function 10.19 Insulation properties 10.10 Temperature rise 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function 10.14 Mechanical function 10.15 Mechanical function 10.16 Mechanical function 10.17 Mechanical function 10.18 Mechanical function 10.19 Mechanical function 10.19 Mechanical function 10.10 Temperature rise entire switchgear must be observed. 10.11 Mechanical function 10.11 Mechanical function 10.12 Electromagnetic compatibility 10.13 Mechanical function | | Meets the product standard's requirements. |
| 10.2.6 Mechanical impact 10.2.7 Inscriptions Meets the product standard's requirements. 10.3 Degree of protection of ASSEMBLIES 10.4 Clearances and creepage distances Meets the product standard's requirements. 10.5 Protection against electric shock 10.6 Incorporation of switching devices and components 10.7 Internal electrical circuits and connections 10.8 Connections for external conductors 10.9 Insulation properties 10.9.2 Power-frequency electric strength 10.9.3 Impulse withstand voltage 10.9.4 Testing of enclosures made of insulating material 10.10 Temperature rise 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function The device meets the requirements, provided the information in the instruction | 10.2.4 Resistance to ultra-violet (UV) radiation | Meets the product standard's requirements. |
| 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. 10.9.1 Insulation properties 10.9.2 Power-frequency electric strength 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's responsibility. The specifications for the switchgear must be observed. 10.12 Electromagnetic compatibility 10.13 Mechanical function The device meets the requirements, provided the information in the instruction | 10.2.5 Lifting | Does not apply, since the entire switchgear needs to be evaluated. |
| 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 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 responsibility. The specifications for the switchgear must be observed. 10.12 Electromagnetic compatibility 10.13 Mechanical function The device meets the requirements, provided the information in the instruction | 10.2.6 Mechanical impact | Does not apply, since the entire switchgear needs to be evaluated. |
| Meets the product standard's requirements. 10.5 Protection against electric shock 10.6 Incorporation of switching devices and components 10.7 Internal electrical circuits and connections 10.8 Connections for external conductors 10.9 Insulation properties 10.9.2 Power-frequency electric strength 10.9.3 Impulse withstand voltage 10.9.4 Testing of enclosures made of insulating material 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function Meets the product standard's requirements. Does not apply, since the entire switchgear needs to be evaluated. Is the panel builder's responsibility. In provide heat dissipation data for the temperature rise calculation. Eaton will provide heat dissipation for the temperature rise observed. In the panel builder's responsibility. The specifications for the switchgear must be observed. In the device meets the requirements, provided the information in the instruction. | 10.2.7 Inscriptions | Meets the product standard's requirements. |
| 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. 10.9.1 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 10.10 Temperature rise 10.11 Short-circuit rating Is the panel builder is responsibility. The specifications for the switchgear must be observed. 10.12 Electromagnetic compatibility 10.13 Mechanical function The device meets the requirements, provided the information in the instruction | 10.3 Degree of protection of ASSEMBLIES | Does not apply, since the entire switchgear needs to be evaluated. |
| 10.6 Incorporation of switching devices and components 10.7 Internal electrical circuits and connections 10.8 Connections for external conductors 10.9 Insulation properties 10.9.2 Power-frequency electric strength 10.9.3 Impulse withstand voltage 10.9.4 Testing of enclosures made of insulating material 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function Does not apply, since the entire switchgear needs to be evaluated. Is the panel builder's responsibility. Is the panel builder's responsibility. Is the panel builder's responsibility. The panel builder is responsibility. Is the panel builder is responsibility. The specifications for the switchgear must be observed. Is the panel builder's responsibility. The specifications for the switchgear must be observed. Is the panel builder's responsibility. The specifications for the switchgear must be observed. The device meets the requirements, provided the information in the instruction | 10.4 Clearances and creepage distances | Meets the product standard's requirements. |
| 10.7 Internal electrical circuits and connections 10.8 Connections for external conductors 10.9 Insulation properties 10.9.2 Power-frequency electric strength 10.9.3 Impulse withstand voltage 10.9.4 Testing of enclosures made of insulating material 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function Is the panel builder's responsibility. Is the panel builder's responsibility. Is the panel builder is responsibility. The specifications for the switchgear must be observed. In the panel builder's responsibility. The specifications for the switchgear must be observed. In the device meets the requirements, provided the information in the instruction | 10.5 Protection against electric shock | Does not apply, since the entire switchgear needs to be evaluated. |
| 10.8 Connections for external conductors 10.9 Insulation properties 10.9.2 Power-frequency electric strength 10.9.3 Impulse withstand voltage 10.9.4 Testing of enclosures made of insulating material 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function 1 Is the panel builder's responsibility. The specifications for the switchgear must be observed. 10.13 Mechanical function 1 Is the panel builder's responsibility. The specifications for the switchgear must be observed. 10.15 Mechanical function 1 Is the panel builder's responsibility. The specifications for the switchgear must be observed. 1 Is the panel builder's responsibility. The specifications for the switchgear must be observed. | 10.6 Incorporation of switching devices and components | Does not apply, since the entire switchgear needs to be evaluated. |
| 10.92 Power-frequency electric strength 10.9.3 Impulse withstand voltage 10.9.4 Testing of enclosures made of insulating material 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function 10.13 Mechanical function Is the panel builder's responsibility. Is the panel builder is responsibility. The panel builder is responsibility at the temperature rise calculation. Eaton will provide heat dissipation data for the devices. Is the panel builder's responsibility. The specifications for the switchgear must be observed. The device meets the requirements, provided the information in the instruction | 10.7 Internal electrical circuits and connections | Is the panel builder's responsibility. |
| 10.9.2 Power-frequency electric strength 10.9.3 Impulse withstand voltage 10.9.4 Testing of enclosures made of insulating material 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function 10.13 Mechanical function 10.14 Is the panel builder's responsibility. 15 the panel builder's responsibility. 16 the panel builder's responsibility. The specifications for the switchgear must be observed. 17 the panel builder's responsibility. The specifications for the switchgear must be observed. 18 the panel builder's responsibility. The specifications for the switchgear must be observed. 19 the panel builder's responsibility. The specifications for the switchgear must be observed. 10 the device meets the requirements, provided the information in the instruction | 10.8 Connections for external conductors | Is the panel builder's responsibility. |
| 10.9.3 Impulse withstand voltage 10.9.4 Testing of enclosures made of insulating material 10.10 Temperature rise 10.11 Short-circuit rating 10.12 Electromagnetic compatibility 10.13 Mechanical function 10.13 Mechanical function 10.14 Is the panel builder's responsibility. The specifications for the switchgear must be observed. 10.15 Is the panel builder's responsibility. The specifications for the switchgear must be observed. 10.15 Is the panel builder's responsibility. The specifications for the switchgear must be observed. 10.16 Is the panel builder's responsibility. The specifications for the switchgear must be observed. | 10.9 Insulation properties | |
| 10.9.4 Testing of enclosures made of insulating material 10.10 Temperature rise The panel builder is responsibility. 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 | 10.9.2 Power-frequency electric strength | 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 | 10.9.3 Impulse withstand voltage | Is the panel builder's responsibility. |
| 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 | 10.9.4 Testing of enclosures made of insulating material | Is the panel builder's responsibility. |
| 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 | 10.10 Temperature rise | |
| observed. 10.13 Mechanical function The device meets the requirements, provided the information in the instruction | 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 | |

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])

| (CCI@3310.0.1-27-14-13-01 [AAD303014]) | | |
|--|-----|----------|
| Release characteristic | | C |
| Number of poles (total) | | 1 |
| Number of protected poles | | 1 |
| Rated current | Α | 6 |
| Rated voltage | V | 230 |
| Rated insulation voltage Ui | V | 440 |
| Rated impulse withstand voltage Uimp | kV | 4 |
| Rated short-circuit breaking capacity Icn EN 60898 at 230 V | kA | 6 |
| Rated short-circuit breaking capacity Icn EN 60898 at 400 V | kA | 6 |
| Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V | kA | 10 |
| Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V | kA | 10 |
| Voltage type | | AC |
| Frequency | Hz | 50 - 60 |
| Current limiting class | | 3 |
| Suitable for flush-mounted installation | | No |
| Concurrently switching N-neutral | | No |
| Over voltage category | | 3 |
| Pollution degree | | 2 |
| Additional equipment possible | | Yes |
| Width in number of modular spacings | | 1 |
| Built-in depth | mm | 70.5 |
| Degree of protection (IP) | | IP20 |
| Ambient temperature during operating | °C | -25 - 75 |
| Connectable conductor cross section multi-wired | mm² | 1 - 25 |
| Connectable conductor cross section solid-core | mm² | 1 - 25 |
| | | |