



RCD/RCB combination, 20 A, 100 mA, MCB trip characteristic: B, 1p+N,
RCD trip characteristic: AC

Part no. FRBMM-B20/1N/01
Catalog No. 170660
Alternate Catalog No. FRBMM-B20/1N/01

Similar to illustration

Delivery program

| | | | |
|----------------------------------------------------|----------------|------|----------------------------------------------------------------|
| Basic function | | | Combined RCD/RCB devices |
| Number of poles | | | 1 pole+N |
| Tripping characteristic | | | B |
| Application | | | Switchgear for industrial and advanced commercial applications |
| Rated current | I_n | A | 20 |
| Rated switching capacity according to IEC/EN 61009 | | kA | 10 |
| Rated fault current | $I_{\Delta n}$ | A | 0.1 |
| Type | | | Type AC |
| Tripping | | s... | non-delayed |
| Product range | | | FRBmM |
| Sensitivity | | | AC current sensitive |
| Impulse withstand current | | | Partly surge-proof 250 A |
| Contact sequence | | | |

Technical data

Electrical

| | | | |
|-------------------------------------------|----------------|------|-----------------------|
| Protected pole | | | 1 |
| Rated voltage according to IEC/EN 60947-2 | U_n | V AC | 240 |
| Rated frequency | f | Hz | 50 |
| Rated fault current | $I_{\Delta n}$ | mA | 100 |
| Sensitivity | | | AC current sensitive |
| Rated current | I_n | A | 20 |
| Tripping characteristic | | | B |
| Standards | | | EN 45545-2; IEC 61373 |

Design verification as per IEC/EN 61439

| | | | |
|----------------------------------------------------------|------------|----|--------------------------------------------|
| Technical data for design verification | | | |
| Rated operational current for specified heat dissipation | I_n | A | 20 |
| Heat dissipation per pole, current-dependent | P_{vid} | W | 0 |
| Equipment heat dissipation, current-dependent | P_{vid} | W | 5.4 |
| 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 | 40 |
| | | | 0 |
| 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) / Earth leakage circuit breaker (EC000905)

Electric engineering, automation, process control engineering / Electrical installation, device / Residual current protection system / MCB/RCCB combination (ecl@ss10.0.1-27-14-22-07 [AFZ810015])

| | | |
|----------------------------------------------------------------|----|----------|
| Number of poles (total) | | 2 |
| Number of protected poles | | 1 |
| Rated voltage | V | 240 |
| Rated insulation voltage U_i | V | 500 |
| Rated impulse withstand voltage U_{imp} | kV | 4 |
| Rated current | A | 20 |
| Rated fault current | A | 0.1 |
| Leakage current type | | AC |
| Current limiting class | | 3 |
| Rated short-circuit breaking capacity acc. EN 61009 | kA | 10 |
| Rated short-circuit breaking capacity IEC 60947-2 | kA | 15 |
| Rated short-circuit breaking capacity I_{cn} acc. EN 61009-1 | kA | 10 |
| Disconnection characteristic | | |
| Surge current capacity | kA | 0.25 |
| Voltage type | | AC |
| Frequency | | 50 Hz |
| Release characteristic | | B |
| Concurrently switching N-neutral | | Yes |
| With interlocking device | | No |
| Over voltage category | | 3 |
| Pollution degree | | 2 |
| Ambient temperature during operating | °C | -25 - 40 |
| Width in number of modular spacings | | 2 |
| Built-in depth | mm | 75.5 |
| Suitable for flush-mounted installation | | No |
| Anti-nuisance tripping version | | No |
| Degree of protection (IP) | | IP20 |

Connectable conductor cross section solid-core

mm² 1 - 25

Connectable conductor cross section multi-wired

mm² 1 - 25

Dimensions

