



**RCD/RCB combination, 4 A, 300 mA, MCB trip characteristic: C, 1p+N,  
RCD trip characteristic: AC**

**Part no. FRBMM-C4/1N/03**  
**Catalog No. 170562**  
**Alternate Catalog No. FRBMM-C4/1N/03**

Similar to illustration

## Delivery program

|  |                |      |  |
|--|----------------|------|--|
| Basic function                                     |                |      | Combined RCD/RCB devices                                       |
| Number of poles                                    |                |      | 1 pole+N   |
| Tripping characteristic                            |                |      | C  |
| Application  |                |      | Switchgear for industrial and advanced commercial applications |
| Rated current                                      | $I_n$          | A    | 4  |
| Rated switching capacity according to IEC/EN 61009 |                | kA   | 10   |
| Rated fault current                                | $I_{\Delta n}$ | A    | 0.3  |
| 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   | 300                   |
| Sensitivity                               |                |      | AC current sensitive  |
| Rated current                             | $I_n$          | A    | 4                     |
| Tripping characteristic                   |                |      | C                     |
| 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  | 4  |
| 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 | 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  |  | 4        |
| Rated fault current  | A  |  | 0.3      |
| 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   |    |  | C        |
| 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

mm<sup>2</sup> 1 - 25

Connectable conductor cross section multi-wired

mm<sup>2</sup> 1 - 25

## Dimensions

