# DATASHEET - FRBDM-B13/2/001-G/A

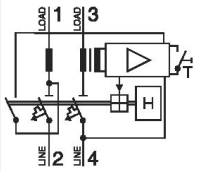



Similar to illustration

**Electronic RCD/MCB combination, 13 A, 10 mA, MCB trip characteristic: B, 2p, RCD trip characteristic: A**

**Part no.** FRBDM-B13/2/001-G/A
**Catalog No.** 168295

## Delivery program

| | | | |
|---|---|---|---|
| Basic function | | | Combined RCD/MCB devices |
| Number of poles | | | 2 pole |
| Tripping characteristic | | | B |
| Application | | | Switchgear for industrial and advanced commercial applications |
| Rated current | $I_n$ | A | 13 |
| Rated switching capacity according to IEC/EN 61009 | | kA | 10 |
| Rated fault current | $I_{\Delta N}$ | A | 0.01 |
| Type | | | Type G/A (ÖVE E 8601) |
| Tripping | | s… | Short time-delayed |
| Product range | | | FRBdM |
| Sensitivity | | | Pulse-current sensitive |
| Impulse withstand current | | | Surge-proof, 3 kA |
| Contact sequence | | |  |



## Technical data

### Electrical

| | | | |
|---|---|---|---|
| Protected pole | | | 2 |
| 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 | 10 |
| Sensitivity | | | Pulse-current sensitive |
| Rated current | $I_n$ | A | 13 |
| Tripping characteristic | | | B |

## Design verification as per IEC/EN 61439

| | | | |
|---|---|---|---|
| Technical data for design verification | | | |
| Rated operational current for specified heat dissipation | $I_n$ | A | 13 |
| Heat dissipation per pole, current-dependent | $P_{vid}$ | W | 0 |
| Equipment heat dissipation, current-dependent | $P_{vid}$ | W | 4.9 |
| 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. |

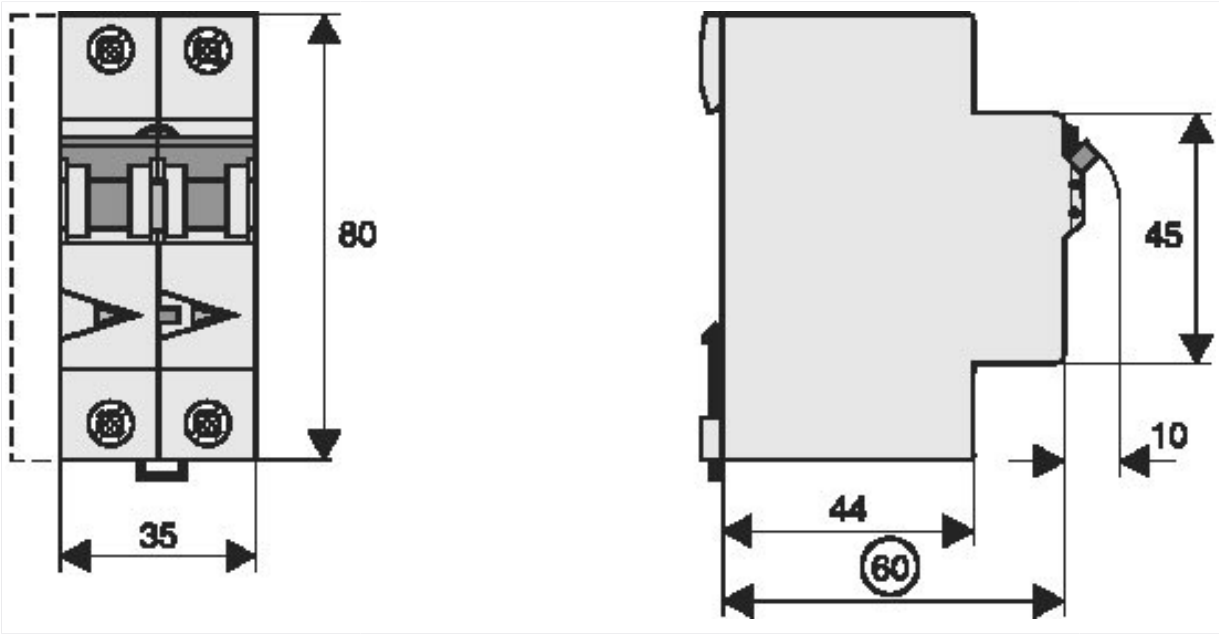
## Technical data ETIM 7.0

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 | | 2 |
| Rated voltage | V | 240 |
| Rated insulation voltage Ui | V | 250 |
| Rated impulse withstand voltage Uimp | kV | 4 |
| Rated current | A | 13 |
| Rated fault current | A | 0.01 |
| Leakage current type | | A |
| Current limiting class | | 3 |
| Rated short-circuit breaking capacity acc. EN 61009 | kA | 10 |
| Rated short-circuit breaking capacity IEC 60947-2 | kA | 0 |
| Rated short-circuit breaking capacity Icn acc. EN 61009-1 | kA | 10 |
| Disconnection characteristic | | Short-time delayed |
| Surge current capacity | kA | 3 |
| Voltage type | | AC |
| Frequency | | 50 Hz |
| Release characteristic | | B |
| Concurrently switching N-neutral | | No |
| 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 | 70 |
| Suitable for flush-mounted installation | | No |
| Anti-nuisance tripping version | | Yes |
| Degree of protection (IP) | | IP20 |
| Connectable conductor cross section solid-core | $mm^2$ | 1 - 25 |
| Connectable conductor cross section multi-wired | $mm^2$ | 1 - 25 |

## Dimensions




## Additional product information (links)

| | |
|---|---|
| Product overview (Web) | http://www.eaton.eu/Europe/Electrical/ProductsServices/CircuitProtection/DigitalCircuitBreakers/index.htm |


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