



## Residual current circuit-breaker, 100A, 4p, 03A, A-Char

**Part no.** FI-100/4/003-A/-  
**Article no.** 102936  
**Catalog No.** FI-100-4-003-A--

Similar to illustration

### Delivery program

|                              |                |    |                                       |
|------------------------------|----------------|----|---------------------------------------|
| Basic function               |                |    | Residual current circuit breakers     |
| Number of poles              |                |    | 4 pole                                |
| Rated current                | $I_n$          | A  | 100                                   |
| Rated short-circuit strength | $I_{cn}$       | kA | 10                                    |
| Rated fault current          | $I_{\Delta N}$ | A  | 0.03                                  |
| Type                         |                |    | Type A                                |
| Tripping                     |                | A  | non-delayed                           |
| Product range                |                |    | FI                                    |
| Sensitivity                  |                |    | AC and pulsating DC current sensitive |
| Impulse withstand current    |                |    | Partly surge-proof 250 A              |

### Technical data

#### Electrical

|   |                 |            |  |
|---|-----------------|------------|--|
| Standards                                       |                 |            | IEC/EN 61008   |
| Tripping  |                 | A          | non-delayed  |
| Rated operating voltage                         | $U_e$           | V AC       | 230/400  |
| Limit values of the operating voltage           |                 | V AC       | 184 ... 440  |
| Rated frequency                                 | f               | Hz         | 50   |
| Rated fault currents                            | $I_{\Delta n}$  | mA         | 30, 100, 300, 500  |
| Rated non-tripping current                      | $I_{\Delta no}$ |            | $0.5 \times I_{\Delta n}$  |
| Rated fault switching capacity                  |                 |            |  |
| Rated fault switching capacity                  | $I_{\Delta m}$  | A          | $I_n = 40 \text{ A: } 500$<br>$I_n = 63 \text{ A: } 630$<br>$I_n = 80 \text{ A: } 800$<br>$I_n = 100 \text{ A: } 1000$<br>$I_n = 125 \text{ A: } 1250$ |
| Sensitivity                                     |                 |            | Pulsed current and AC/DC   |
| Rated switching capacity                        | $I_{cn}$        | kA         | 10   |
| Rated current                                   | $I_e$           | A          | 100  |
| Rated impulse withstand voltage                 | $U_{imp}$       | kV         | 6  |
| Maximum max. as short-circuit protective device |                 | A gL       | $I_n = 125 \text{ A: } 125$<br>for Type B:<br>$I_n \leq 80: 100$<br>$I_n = 125: 125$   |
| Lifespan  |                 | S          |  |
| Electrical                                      |                 | Operations | 2000   |
| Mechanical                                      |                 | Operations | 5000   |

#### Mechanical

|                          |  |                 |  |
|--------------------------|--|-----------------|--|
| Standard front dimension |  | mm              | 45   |
| Enclosure height         |  | mm              | 85   |
| Terminal protection      |  |                 | Protection against electric shock to IEC 536 |
| Mounting width           |  | mm              | 70 (4 space unit)                            |
| Mounting                 |  |                 | Top-hat rail IEC/EN 60715                    |
| Degree of protection     |  |                 |  |
| Integrated               |  |                 | IP40   |
| Terminals top and bottom |  |                 | Twin-purpose terminals                       |
| Terminal capacities      |  | mm <sup>2</sup> |  |

|                                      |                 |                |
|--------------------------------------|-----------------|----------------|
| Solid                                | mm <sup>2</sup> | 1.5 ... 50     |
| flexible                             | mm <sup>2</sup> | 2 x (1.5 - 16) |
| Thickness of busbar material         | mm              | 0.8 ... 2      |
| Admissible ambient temperature range | °C              | -25 ... +40    |
| Climatic proofing                    |                 | IEC/EN 61008   |

## Design verification as per IEC/EN 61439

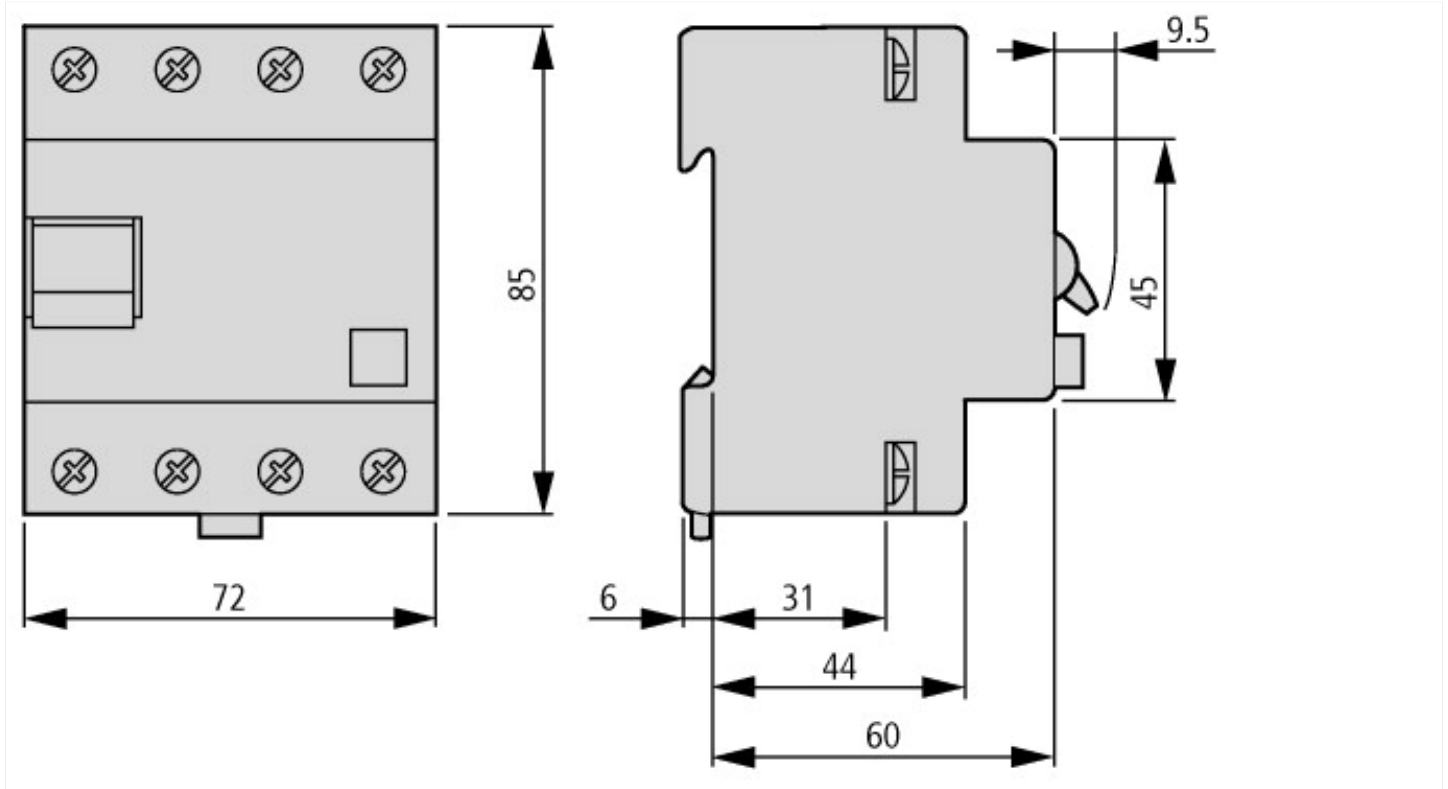
| Technical data for design verification   |                   |    |  |
|--|-------------------|----|--|
| Rated operational current for specified heat dissipation   | I <sub>n</sub>    | A  | 100  |
| Heat dissipation per pole, current-dependent   | P <sub>vid</sub>  | W  | 0  |
| Equipment heat dissipation, current-dependent  | P <sub>vid</sub>  | W  | 18.8   |
| Static heat dissipation, non-current-dependent   | P <sub>vs</sub>   | W  | 0  |
| Heat dissipation capacity  | P <sub>diss</sub> | W  | 0  |
| Operating ambient temperature min.   |                   | °C | -25  |
| Operating ambient temperature max.   |                   | °C | 55   |
|  |                   |    | Starting at 40 °C, the max. permissible continuous current decreases by 3% for every 1 °C  |
| 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 6.0

| Circuit breakers and fuses (EG000020) / Residual current circuit breaker (RCCB) (EC000003)   |  |   |          |
|--|--|---|----------|
| Electric engineering, automation, process control engineering / Electrical installation, device / Residual current protection system / Residual current circuit breaker (RCCB) (ec1@ss8.1-27-14-22-01 [AAB906011]) |  |   |          |
| Number of poles  |  |   | 4        |
| Nominal rated voltage  |  | V | 400      |
| Nominal rated current  |  | A | 100      |
| Rated fault current  |  | A | 0.03     |
| Mounting method  |  |   | DIN rail |
| Leakage current type   |  |   | A        |

|  |    |       |
|--|----|-------|
| Selective protection                               |    | No    |
| Short-circuit breaking capacity (I <sub>cw</sub> ) | kA | 10    |
| Surge current capacity                             | kA | 0.25  |
| Frequency  |    | 50 Hz |
| Additional equipment possible                      |    | Yes   |
| Degree of protection (IP)                          |    | IP20  |
| Construction size (in accordance with DIN 43880)   |    | 1     |
| Width in number of modular spacings                |    | 4     |
| Built-in depth                                     | mm | 69.5  |
| Short-time delayed tripping                        |    | No    |

## Dimensions



## Additional product information (links)

### AWA1290-1756 Residual-current-circuit-breaker

AWA1290-1756 Residual-current-circuit-breaker

[ftp://ftp.moeller.net/DOCUMENTATION/AWA\\_INSTRUCTIONS/17560403.pdf](ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/17560403.pdf)