

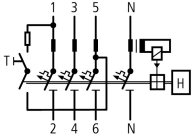


## RCD/MCB combination switch, 16A, 100mA, D-LS-Char, 3N pole, FI-Char: A

**Part no.** mRB6-16/3N/D/01-A  
**Article no.** 120676

Similar to illustration

### Delivery program

|                                                    |                |    |                                                                                     |
|----------------------------------------------------|----------------|----|-------------------------------------------------------------------------------------|
| Basic function                                     |                |    | Combined RCD/MCB devices                                                            |
| Number of poles                                    |                |    | 3 pole+N                                                                            |
| Tripping characteristic                            |                |    | D                                                                                   |
| Application                                        |                |    | Switchgear for residential and commercial applications                              |
| Rated current                                      | $I_n$          | A  | 16                                                                                  |
| Rated switching capacity acc. to IEC/EN 60947-2    |                | kA | 6                                                                                   |
| Rated switching capacity according to IEC/EN 61009 |                | kA | 6                                                                                   |
| Rated fault current                                | $I_{\Delta N}$ | A  | 0.1                                                                                 |
| Type                                               |                |    | Type A                                                                              |
| Tripping                                           |                | A  | non-delayed                                                                         |
| Product range                                      |                |    | mRB6                                                                                |
| Sensitivity                                        |                |    | Pulse-current sensitive                                                             |
| Impulse withstand current                          |                |    | Partly surge-proof 250 A                                                            |
| Contact sequence                                   |                |    |  |

### Technical data

#### Electrical

|                                                 |                 |      |                           |
|-------------------------------------------------|-----------------|------|---------------------------|
| Standards                                       |                 |      | IEC/EN 61009              |
| Tripping                                        |                 | A    | non-delayed               |
| Rated operating voltage                         | $U_e$           | V AC | 230/400                   |
| Rated frequency                                 | f               | Hz   | 50                        |
| Rated fault currents                            | $I_{\Delta n}$  | mA   | 30, 100, 300              |
| Rated non-tripping current                      | $I_{\Delta no}$ |      | $0.5 \times I_{\Delta n}$ |
| Sensitivity                                     |                 |      | DC and pulsed current     |
| Rated switching capacity                        | $I_{cn}$        | kA   | 6                         |
| Rated current                                   | $I_e$           | A    | 6 - 25                    |
| Rated impulse withstand voltage                 | $U_{imp}$       | kV   | 4 (1.2/50 $\mu$ s)        |
| Characteristic                                  |                 |      | B, C, D                   |
| Maximum max. as short-circuit protective device |                 | A gL | 100                       |
| Selectivity Class                               |                 |      | 3                         |
| Lifespan                                        |                 | S    |                           |
| Electrical                                      |                 |      | Operations > 4000         |
| Mechanical                                      |                 |      | Operations > 20000        |

#### Mechanical

|                          |  |    |                                                                  |
|--------------------------|--|----|------------------------------------------------------------------|
| Standard front dimension |  | mm | 45                                                               |
| Enclosure height         |  | mm | 80                                                               |
| Terminal protection      |  |    | Busbar tag shroud to VBG4                                        |
| Mounting width           |  | mm | 70 (4 SU)                                                        |
| Mounting                 |  |    | Tristable slide catch enables removal from existing combination. |
| Degree of protection     |  |    |                                                                  |
| Switch                   |  |    | IP20                                                             |

|                                      |  |                 |                                                        |
|--------------------------------------|--|-----------------|--------------------------------------------------------|
| Integrated                           |  |                 | IP40                                                   |
| Terminals top and bottom             |  |                 | Twin-purpose terminals                                 |
| Terminal capacities                  |  | mm <sup>2</sup> |                                                        |
| Solid                                |  | mm <sup>2</sup> | 1 - 25                                                 |
| Thickness of busbar material         |  | mm              | 0.8 ... 2                                              |
| Admissible ambient temperature range |  | °C              | -25 ... +40                                            |
| Climatic proofing                    |  |                 | according to IEC 68-2 (25 - 55 °C, 90 - 95 % Humidity) |

### Design verification as per IEC/EN 61439

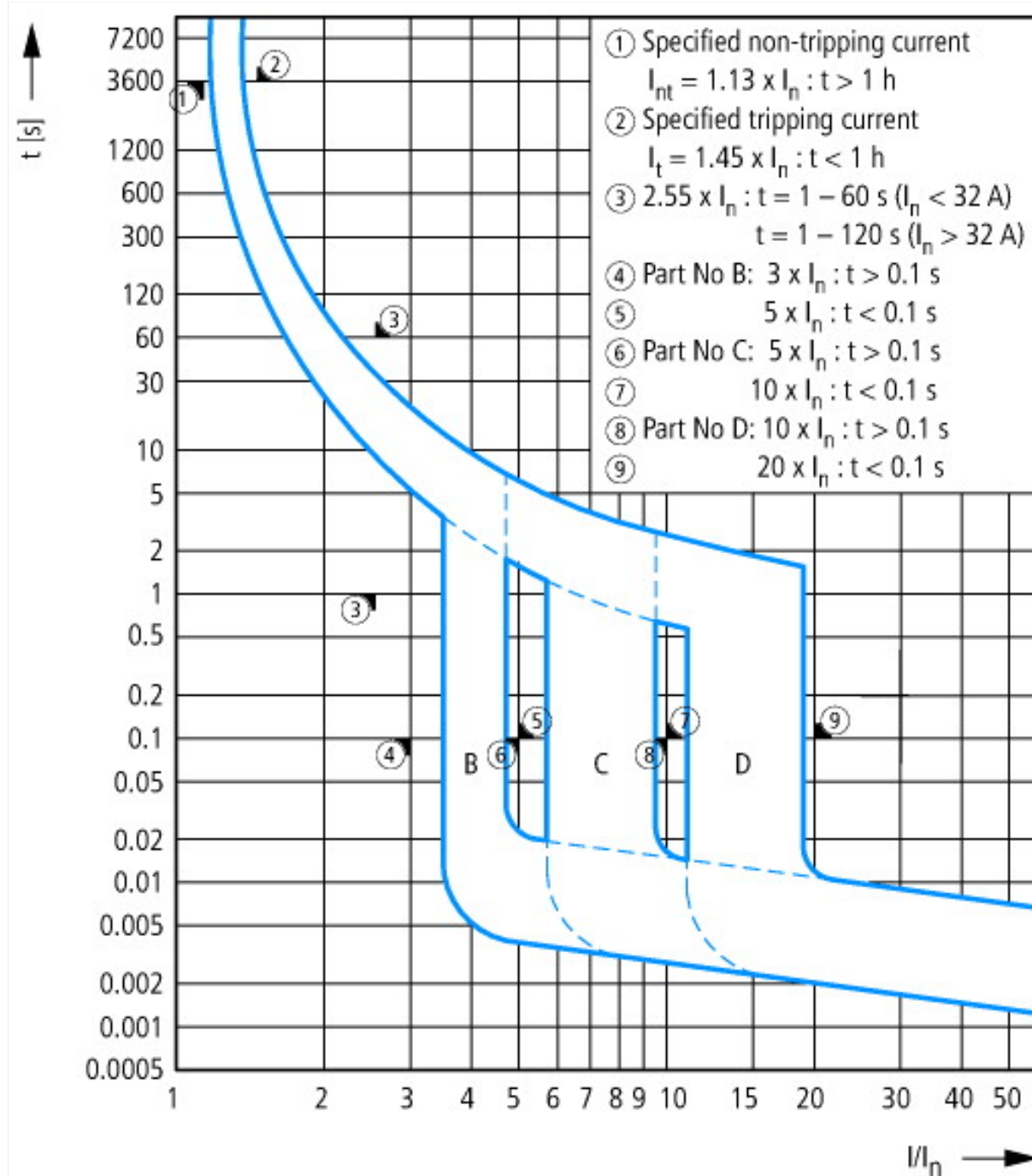
|                                                                                                                        |                   |    |                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------|-------------------|----|----------------------------------------------------------------------------------------------------------------------------------|
| Technical data for design verification                                                                                 |                   |    |                                                                                                                                  |
| Rated operational current for specified heat dissipation                                                               | I <sub>n</sub>    | A  | 16                                                                                                                               |
| Heat dissipation per pole, current-dependent                                                                           | P <sub>vid</sub>  | W  | 0                                                                                                                                |
| Equipment heat dissipation, current-dependent                                                                          | P <sub>vid</sub>  | W  | 11.2                                                                                                                             |
| 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 | 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 6.0

|                                                                                                                                                                                                 |  |   |     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---|-----|
| 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 (ecI@ss8.1-27-14-22-07 [AFZ810012]) |  |   |     |
| Number of poles (total)                                                                                                                                                                         |  |   | 4   |
| Number of protected poles                                                                                                                                                                       |  |   | 1   |
| Nominal rated voltage                                                                                                                                                                           |  | V | 400 |
| Nominal rated current                                                                                                                                                                           |  | A | 16  |
| Rated fault current                                                                                                                                                                             |  | A | 0.1 |

|                                                   |    |       |
|---------------------------------------------------|----|-------|
| Leakage current type                              |    | A     |
| Current limiting class                            |    | 3     |
| Rated short-circuit breaking capacity EN 60898    | kA | 6     |
| Rated short-circuit breaking capacity IEC 60947-2 | kA | 0     |
| Frequency                                         |    | 50 Hz |
| Release characteristic                            |    | D     |
| Concurrently switching N-neutral                  |    | Yes   |
| Over voltage category                             |    | 3     |
| Pollution degree                                  |    | 2     |
| Width in number of modular spacings               |    | 4     |
| Built-in depth                                    | mm | 70    |
| Suitable for flush-mounted installation           |    | No    |
| Degree of protection (IP)                         |    | IP20  |
| Surge current capacity                            | kA | 0.25  |
| Voltage type                                      |    | AC    |
| Antinuisance tripping version                     |    | No    |

## Characteristics



## Dimensions

