### DATASHEET - FBSMV-63/2/003-A

Part no. Catalog No.

No.



Residual-current circuit breaker trip block for FAZ, 63A, 2p, 30mA, type A

FBSMV-63/2/003-A 170208 Alternate Catalog FBSMV-63/2/003-A



Similar to illustration

#### **Delivery program**

| Basic function               |                 |    | Add-on residual current protection unit                        |
|------------------------------|-----------------|----|--|
| Number of poles              |                 |    | 2 pole   |
| Application                  |                 |    | Switchgear for industrial and advanced commercial applications |
| Rated current                | I <sub>n</sub>  | А  | 63   |
| Rated short-circuit strength | I <sub>cn</sub> | kA | same as connected FAZ up to max. 10                            |
| Rated fault current          | $I_{\Delta N}$  | А  | 0.03   |
| Туре                         |                 |    | Туре А   |
| Tripping                     |                 | s  | non-delayed  |
| Product range                |                 |    | FBSmV  |
| Sensitivity                  |                 |    | Pulse-current sensitive  |
| Impulse withstand current    |                 |    | Partly surge-proof 250 A                                       |
| Contact sequence             |                 |    |  |

#### **Technical data**

| Electrical                                     |                |    |   |
|--|----------------|----|---|
| Rated frequency                                | f              | Hz | 50  |
| Sensitivity                                    |                |    | Pulse-current sensitive                                   |
| Rated current                                  | I <sub>n</sub> | А  | 63  |
| Mechanical                                     |                |    |   |
| Standard front dimension                       |                | mm | 45  |
| Device height                                  |                | mm | 90  |
| Built-in width                                 |                | mm | 70 (2TE)  |
| Mounting                                       |                |    | Permanent screw connection with FAZ                       |
| Degree of Protection                           |                |    | IP20, IP40 with suitable enclosure                        |
| Terminals top and bottom                       |                |    | Lift terminals  |
| Terminal protection                            |                |    | DGUV VS3, EN 50274  |
| Thickness of busbar material                   |                | mm | 0.8 - 2   |
| Admissible ambient temperature range           |                | °C | -25 - +40   |
| Permissible storage and transport temperatures |                | °C | -35 - +60   |
| Climatic proofing                              |                |    | 25-55°C/90-95% relative humidity according to IEC 60068-2 |

# **Design verification as per IEC/EN 61439**

| Technical data for design verification                   |                   |    |   |
|--|-------------------|----|---|
| Rated operational current for specified heat dissipation | In                | А  | 63  |
| Heat dissipation per pole, current-dependent             | P <sub>vid</sub>  | W  | 0   |
| Equipment heat dissipation, current-dependent            | P <sub>vid</sub>  | W  | 17  |
| 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  |
|  |                   |    | Starting at 40 °C, the max. permissible continuous current decreases by 3% for every 1 °C |

| C/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 observed.                                      |
| 10.12 Electromagnetic compatibility  | Is the panel builder's responsibility. The specifications for the switchgear must 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) / Residual current circuit breaker (RCCB) (EC000003)

| lectRest10.01-27-14-22-01 (AABS90014)       Image: Status St   |  |     |           |
|--|--|-----|-----------|
| Ander oving and  | Electric engineering, automation, process control engineering / Electrical installation, device / Residual current protection system / Residual current circuit breaker (RCCB)<br>(ecl@ss10.0.1-27-14-22-01 [AAB906014]) |     |           |
| Rated current       A       A         Rated functurent       MA       3         Rated functurent       MA       3         Rated insulation voltage Uinp       40       40         Rated insulation voltage Uinp       IN rail       IN rail         Mounting method       M       No       No         Selective protection       MO       No       No         Short-tircuit breaking capacity (lew)       MA       0       No         Surg current capacity (lew)       MA       0       No         Additional equipment possible       MA       0       No         Vith interlocking device       MA       0       No         Degree of protection (IP)       MA       MA       No         Multi in number of modular spacings       MA       No       No         Built-in depth       MA       MA       MA       No         Anbient temperature during operating       MA       MA       MA         No beint ettemperature during operating </td <td>Number of poles</td> <td></td> <td>2</td>   | Number of poles  |     | 2         |
| Rated fault current       mA       0         Rated fault current       MA       0         Rated fault current       40       0         Rated fault current voltage Uimp       V       40         Mounting method       IN rail       IN rail         Leakage current type       No       No         Selective protection       K       No         Short-tircuit breaking capacity (low)       KA       0         Surge current capacity       KA       0         Frequency       KA       0         Additional equipment possible       KA       0         With interfocking device       KA       0         Buil-ti depth       To       Selective protection (IP)         With in number of modular spacings       Min       120         Buil-ti depth       To       120         Anbient temperature during operating       To       120         Pollution degree       To       120       120         Pollution degree       To       120       120         Roment and meter during operating       To       120       120         Roment and temperature during operating       To       120       120         Roment and temperature   | Rated voltage  | V   | 240       |
| Rated insulation voltage Uimp       V       40         Rated insulation voltage Uimp       V       40         Mounting method       V       40         Leakage current type       IN rail       IN rail         Selective protection       No       No         Short-tire delayed tripping       No       No         Stort-circuit breaking capacity (Icov)       KA       0         Surge current capacity       KA       0         Kittional equipment possible       KA       0         With interlocking device       V       KA       0         Built-in dept       Mo       V       V       V         Motint temperature during operating       Mo       V       V       V       V       V         Aubient temperature during operating       Mo       Mo       V  | Rated current  | А   | 63        |
| Rate dimpulse withstand voltage Uimp       KV       4         Mounting method       DIN rail         Leakage current type       A         Selective protection       KV       No         Short-time delayed tripping       KA       No         Short-time delayed tripping       KA       O         Surge current capacity (low)       KA       O         Surge current capacity       KA       O         Yeequency       KA       O         Additional equipment possible       KA       So         With interlocking device       Yee       So         Dagree of protection (IP)       Tm       Yee         Muith intemperature during operating       Tm       To         Anbient temperature during operating       Tm       To         Pollution degree       Tm       To   | Rated fault current  | mA  | 30        |
| Mounting method         Mounting method         Din rail           Leakage current type         A         A           Selective protection         Monting method         No           Short-time delayed tripping         Monting method         No           Short-time delayed tripping         Monting method         No           Stort-time delayed tripping         Monting method         Monting method           Store current capacity         Ma         0           Frequency         Monting method         Monting method           Additional equipment possible         Monting method         Yes           Built-interporter for Modular spacings         Monting method         Monting method           Built-in depth         Monting method         Monting method         Store Monting method           Pollution degree         Monting method         Monting method         Store Monting method   | Rated insulation voltage Ui  | V   | 440       |
| Leakage current type Leakage current type Leakage current type Selective protection Short-circuit breaking capacity (lcw) Short-circuit breaking capacity (lcw) Short-circuit breaking capacity (lcw) Surge current capacity (lcw) Surge current capacity Su | Rated impulse withstand voltage Uimp   | kV  | 4         |
| Selective protection     Mode       Selective protection     No       Short-time delayed tripping     No       Surge current capacity (lcw)     KA     0       Surge current capacity     KA     0       Frequency     KA     0       Additional equipment possible     So     So       With interlocking device     So     So       Degree of protection (IP)     So     Yo       With in number of modular spacings     So     Yo       Bult-in depth     mm     10       Ambient temperature during operating     So     Yo       Pollution degree     So     So     25       Pollution degree     mm     10       Runde conductor cross section multi-wired     mm     20   | Mounting method  |     | DIN rail  |
| Short-time delayed tripping       Image: state of the st   | Leakage current type   |     | Α         |
| Short-circuit breaking capacity (lcw)       kA       0         Surge current capacity       kA       0.25         Frequency       50 Hz       50 Hz         Additional equipment possible       Yes       100 Hz         With interlocking device       100 Hz       100 Hz         Degree of protection (IP)       100 Hz       100 Hz         With in number of modular spacings       100 Hz       100 Hz         Built-in depth       Mm       70 Hz         Anbient temperature during operating       100 Hz       100 Hz         Pollution degree       100 Hz       100 Hz        100 Hz       100 Hz         Pollution degree       100 Hz       100 Hz  | Selective protection   |     | No        |
| Surge current capacity       KA       0.25         Frequency       50 Hz         Additional equipment possible       Yes         With interlocking device       Yes         Degree of protection (IP)       Image: Section (IP)         With in number of modular spacings       Image: Section (IP)         Anbient temperature during operating       Image: Section (IP)         Pollution degree       Image: Section (IP)         Pollution (IP)       Image: Se  | Short-time delayed tripping  |     | No        |
| Frequency       50 Hz         Additional equipment possible       Yes         With interlocking device       Yes         Degree of protection (IP)       IP0         With in number of modular spacings       Imm         Built-in depth       mm         Ambient temperature during operating       Imm         Pollution degree       Imm <sup>2</sup> Imm <sup>2</sup> N5 - S3  | Short-circuit breaking capacity (Icw)  | kA  | 0         |
| Additional equipment possible       Yes         With interlocking device       Yes         Degree of protection (IP)       IP20         With in number of modular spacings       Imm         Built-in depth       mm         Ambient temperature during operating       Imm         Pollution degree       Imm         Image: Pollution degree       Imm         Image: Pollution degree       Imm         Image: Pollution degree       Imm         Image: Pollution degree       Imm <sup>2</sup>  | Surge current capacity   | kA  | 0.25      |
| With interlocking deviceYesDegree of protection (IP)IP20Width in number of modular spacingsImmBuilt-in depthImmAmbient temperature during operatingCPollution degreeImmConnectable conductor cross section multi-wiredImmImmN5 - 35  | Frequency  |     | 50 Hz     |
| Degree of protection (IP)     IP20       Width in number of modular spacings     IP20       Built-in depth     Imm       Ambient temperature during operating     Imm       Pollution degree     Imm       Connectable conductor cross section multi-wired     Imm <sup>2</sup>  | Additional equipment possible  |     | Yes       |
| Width in number of modular spacings     mm     full       Built-in depth     mm     full       Ambient temperature during operating     °C     25 - 40       Pollution degree     Imm <sup>2</sup> 0.75 - 35   | With interlocking device   |     | Yes       |
| Built-in depth     mm     70       Ambient temperature during operating     °C     -25 - 40       Pollution degree     2     2       Connectable conductor cross section multi-wired     mm <sup>2</sup> 0.75 - 35   | Degree of protection (IP)  |     | IP20      |
| Ambient temperature during operating°C°25 - 40Pollution degree2Connectable conductor cross section multi-wiredmm²0.75 - 35   | Width in number of modular spacings  |     | 4         |
| Pollution degree     2       Connectable conductor cross section multi-wired     mm <sup>2</sup>   | Built-in depth   | mm  | 70        |
| Connectable conductor cross section multi-wired mm <sup>2</sup> 0.75 - 35  | Ambient temperature during operating   | °C  | -25 - 40  |
|  | Pollution degree   |     | 2         |
| Connectable conductor cross section solid-core mm <sup>2</sup> 0.75 - 35   | Connectable conductor cross section multi-wired  | mm² | 0.75 - 35 |
|  | Connectable conductor cross section solid-core   | mm² | 0.75 - 35 |

