



Residual-current circuit breaker trip block for PLS. 40A, 2 p, 1000mA, type A



Part no. **PBSM-402/1-A-MW**  
 Catalog No. **262421**

## Delivery program

|                              |                |      |  |
|------------------------------|----------------|------|--|
| Basic function               |                |      | Add-on residual current protection unit                |
| Number of poles              |                |      | 2 pole   |
| Application                  |                |      | Switchgear for residential and commercial applications |
| Rated current                | $I_n$          | A    | 40   |
| Rated short-circuit strength | $I_{cn}$       | kA   | same as connected PLS up to max. 10                    |
| Rated fault current          | $I_{\Delta N}$ | A    | 1  |
| Type                         |                |      | Type A   |
| Tripping                     |                | s... | non-delayed  |
| Product range                |                |      | PBSM   |
| Sensitivity                  |                |      | Pulse-current sensitive                                |
| Impulse withstand current    |                |      | Partly surge-proof 250 A                               |

## Technical data

### Electrical

|                                 |            |    |                         |
|---------------------------------|------------|----|-------------------------|
| Rated frequency                 | f          | Hz | 50                      |
| Sensitivity                     |            |    | Pulse-current sensitive |
| Rated current                   | $I_n$      | A  | 40                      |
| Rated impulse withstand voltage | $U_{imp}$  | kV | 4                       |
| lifespan                        |            |    |                         |
| Electrical                      | Operations |    | $\geq 4000$             |
| Mechanical                      | Operations |    | $\geq 20000$            |

### Mechanical

|  |  |    |   |
|--|--|----|---|
| Standard front dimension                       |  | mm | 45  |
| Device height                                  |  | mm | 90  |
| Built-in width                                 |  | mm | 35 (2TE)  |
| Mounting                                       |  |    | fix mounted onto PLS                                      |
| Degree of Protection                           |  |    | IP40, IP54 (with moisture-proof enclosure)                |
| Terminals top and bottom                       |  |    | Lift terminals  |
| Terminal protection                            |  |    | BGV A3, ÖVE-EN 6  |
| Thickness of busbar material                   |  | mm | 0.8 - 2   |
| 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 | $I_n$      | A  | 40  |
| Heat dissipation per pole, current-dependent             | $P_{vid}$  | W  | 0   |
| Equipment heat dissipation, current-dependent            | $P_{vid}$  | W  | 13  |
| 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  |
|  |            |    | 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 7.0

|   |                 |  |           |
|---|-----------------|--|-----------|
| 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) (ecI@ss10.0.1-27-14-22-01 [AAB906014]) |                 |  |           |
| Number of poles   |                 |  | 2         |
| Rated voltage   | V               |  | 230       |
| Rated current   | A               |  | 40        |
| Rated fault current   | mA              |  | 1000      |
| Rated insulation voltage $U_i$  | V               |  | 440       |
| Rated impulse withstand voltage $U_{imp}$   | kV              |  | 4         |
| Mounting method   |                 |  | DIN rail  |
| Leakage current type  |                 |  | A         |
| Selective protection  |                 |  | No        |
| Short-time delayed tripping   |                 |  | No        |
| Short-circuit breaking capacity ( $I_{cw}$ )  | kA              |  | 0         |
| Surge current capacity  | kA              |  | 0.25      |
| Frequency   |                 |  | 50 Hz     |
| Additional equipment possible   |                 |  | Yes       |
| With interlocking device  |                 |  | Yes       |
| Degree of protection (IP)   |                 |  | IP20      |
| Width in number of modular spacings   |                 |  | 4         |
| Built-in depth  | mm              |  | 70        |
| Ambient temperature during operating  | °C              |  | -25 - 40  |
| Pollution degree  |                 |  | 2         |
| Connectable conductor cross section multi-wired   | mm <sup>2</sup> |  | 0.75 - 16 |
| Connectable conductor cross section solid-core  | mm <sup>2</sup> |  | 0.75 - 16 |