



## Residual current circuit breaker (RCCB), 25A, 2p, 30mA, type A

**Part no.** PFIM-25/2/003-A-MW  
**Catalog No.** 235424

**EL-Nummer (Norway)** 1609311

Similar to illustration

## Delivery program

|                              |                |      |                                                                              |
|------------------------------|----------------|------|------------------------------------------------------------------------------|
| Basic function               |                |      | Residual current circuit-breakers                                            |
| Number of poles              |                |      | 2 pole                                                                       |
| Application                  |                |      | Residual current circuit-breaker for residential and commercial applications |
| Rated current                | $I_n$          | A    | 25                                                                           |
| Rated short-circuit strength | $I_{cn}$       | kA   | 10                                                                           |
| Rated fault current          | $I_{\Delta N}$ | A    | 0.03                                                                         |
| Type                         |                |      | Type A                                                                       |
| Tripping                     |                | s... | non-delayed                                                                  |
| Product range                |                |      | PFIM                                                                         |
| Sensitivity                  |                |      | Pulse-current sensitive                                                      |
| Impulse withstand current    |                |      | Partly surge-proof 250 A                                                     |

## Technical data

## Electrical

|                                                                                  |                      |         |                         |
|----------------------------------------------------------------------------------|----------------------|---------|-------------------------|
| Types conform to                                                                 |                      |         | IEC/EN 61008            |
| Standards                                                                        |                      |         | IEC/EN 61008            |
| Rated operational voltage                                                        | $U_e$                | V       |                         |
|                                                                                  | $U_e$                | V AC    |                         |
| Rated operating voltage                                                          | $U_e$                | V AC    | 230                     |
| Rated frequency                                                                  | f                    | Hz      | 50                      |
| Limit values of the operating voltage                                            |                      |         |                         |
| Test circuit                                                                     |                      | V AC    | 196 - 264               |
| Sensitivity                                                                      |                      |         | Pulse-current sensitive |
| Rated insulation voltage                                                         | $U_i$                | V       | 440                     |
| Rated impulse withstand voltage                                                  | $U_{imp}$            | kV      | 4                       |
| Rated short-circuit strength                                                     | $I_{cn}$             | kA      | 10                      |
| Max. admissible back-up fuse                                                     |                      |         |                         |
| Short-circuit                                                                    | gG/gL                | A       | 63                      |
| Overload                                                                         | gG/gL                | A       | 25                      |
| Rated making and breaking capacity / Rated residual making and breaking capacity | $I_m / I_{\Delta m}$ | A       | 500                     |
| Max. back-up fuse                                                                |                      | A gL/gG | 25                      |
| Maximum max. as short-circuit protective device                                  |                      | A gL    |                         |
| Back-up fuse                                                                     |                      | A gL    | 63                      |
| lifespan                                                                         |                      |         |                         |
| Electrical                                                                       | Operations           |         | ≥ 4000                  |
| Mechanical                                                                       | Operations           |         | ≥ 20000                 |

## References

|                                                     |  |  |                    |
|-----------------------------------------------------|--|--|--------------------|
| Auxiliary switch for subsequent installation        |  |  | Z-HK 248432        |
| Tripping signal contact for subsequent installation |  |  | Z-NHK 248434       |
| Remote control and automatic switching device       |  |  | Z-FW/LP 248296     |
| Compact enclosure                                   |  |  | KLV-TC-2 276240    |
| Sealing cover set                                   |  |  | Z-RC/AK-2MU 285385 |

## Mechanical

|                          |  |    |    |
|--------------------------|--|----|----|
| Standard front dimension |  | mm | 45 |
|--------------------------|--|----|----|

|                                                |                 |                                                                   |
|------------------------------------------------|-----------------|-------------------------------------------------------------------|
| Device height                                  | mm              | 80                                                                |
| Built-in width                                 | mm              | 35 (2TE)                                                          |
| Mounting                                       |                 | Quick attachment with 2 latch positions for DIN-rail IEC/EN 60715 |
| Degree of Protection                           |                 | IP20, IP40 with suitable enclosure                                |
| Terminals top and bottom                       |                 | Open mouthed/lift terminals                                       |
| Terminal protection                            |                 | finger and hand touch safe, DGUV VS3, EN 50274                    |
| Terminal cross-section                         |                 |                                                                   |
| Solid                                          | mm <sup>2</sup> | 1.5 - 35                                                          |
| Stranded                                       | mm <sup>2</sup> | 2 x 16                                                            |
| 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         |
| Thickness of busbar material                   | mm              |                                                                   |
| Material thickness                             | mm              | 0.8 - 2                                                           |

## Design verification as per IEC/EN 61439

|                                                                                                                        |                   |    |                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------|-------------------|----|----------------------------------------------------------------------------------------------------------------------------------|
| Technical data for design verification                                                                                 |                   |    |                                                                                                                                  |
| Rated operational current for specified heat dissipation                                                               | I <sub>n</sub>    | A  | 25                                                                                                                               |
| Heat dissipation per pole, current-dependent                                                                           | P <sub>vid</sub>  | W  | 0                                                                                                                                |
| Equipment heat dissipation, current-dependent                                                                          | P <sub>vid</sub>  | W  | 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 | 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 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               | 25       |
| Rated fault current                             | mA              | 30       |
| 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              | 10       |
| 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             |                 | 2        |
| Built-in depth                                  | mm              | 70.5     |
| Ambient temperature during operating            | °C              | -25 - 55 |
| Pollution degree                                |                 | 2        |
| Connectable conductor cross section multi-wired | mm <sup>2</sup> | 1.5 - 16 |
| Connectable conductor cross section solid-core  | mm <sup>2</sup> | 1.5 - 35 |