



**RCD/MCB combination, 16 A, 30 mA, MCB trip characteristic: B, 1p+N,  
RCD trip characteristic: AC**

**Part no. PFL6-16/1N/B/003**  
**Catalog No. 286431**

## Delivery program

|                                                    |                |      |                                                        |
|----------------------------------------------------|----------------|------|--------------------------------------------------------|
| Basic function                                     |                |      | Combined RCD/MCB devices                               |
| Number of poles                                    |                |      | 1 pole+N                                               |
| Tripping characteristic                            |                |      | B                                                      |
| Application                                        |                |      | Switchgear for residential and commercial applications |
| Rated current                                      | $I_n$          | A    | 16                                                     |
| Rated switching capacity according to IEC/EN 61009 |                | kA   | 6                                                      |
| Rated fault current                                | $I_{\Delta N}$ | A    | 0.03                                                   |
| Type                                               |                |      | Type AC                                                |
| Tripping                                           |                | s... | non-delayed                                            |
| Product range                                      |                |      | PFL6                                                   |
| Sensitivity                                        |                |      | AC current sensitive                                   |
| Impulse withstand current                          |                |      | Partly surge-proof 250 A                               |

## Technical data

### Electrical

|             |  |  |                      |
|-------------|--|--|----------------------|
| Sensitivity |  |  | AC current sensitive |
|-------------|--|--|----------------------|

## Design verification as per IEC/EN 61439

|                                                                                                                        |            |    |                                                                    |
|------------------------------------------------------------------------------------------------------------------------|------------|----|--------------------------------------------------------------------|
| Technical data for design verification                                                                                 |            |    |                                                                    |
| Rated operational current for specified heat dissipation                                                               | $I_n$      | A  | 16                                                                 |
| Heat dissipation per pole, current-dependent                                                                           | $P_{vid}$  | W  | 0                                                                  |
| Equipment heat dissipation, current-dependent                                                                          | $P_{vid}$  | W  | 3.2                                                                |
| 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                                                                 |
|                                                                                                                        |            |    | 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 8.0

|                                                                                                                                                                                                    |  |                 |           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------|-----------|
| 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 (ecl@ss10.0.1-27-14-22-07 [AFZ810015]) |  |                 |           |
| Number of poles (total)                                                                                                                                                                            |  |                 | 2         |
| Number of protected poles                                                                                                                                                                          |  |                 | 1         |
| Rated voltage                                                                                                                                                                                      |  | V               | 230       |
| Rated insulation voltage Ui                                                                                                                                                                        |  | V               | 440       |
| Rated impulse withstand voltage Uimp                                                                                                                                                               |  | kV              | 4         |
| Rated current                                                                                                                                                                                      |  | A               | 16        |
| Rated fault current                                                                                                                                                                                |  | A               | 0.03      |
| Leakage current type                                                                                                                                                                               |  |                 | AC        |
| Current limiting class                                                                                                                                                                             |  |                 | 3         |
| Rated short-circuit breaking capacity according to EN 61009                                                                                                                                        |  | kA              | 6         |
| Rated short-circuit breaking capacity according to IEC 60947-2                                                                                                                                     |  | kA              | 0         |
| Rated short-circuit breaking capacity Icn according to EN 61009-1                                                                                                                                  |  | kA              | 6         |
| Disconnection characteristic                                                                                                                                                                       |  |                 | Undelayed |
| Surge current capacity                                                                                                                                                                             |  | kA              | 0.25      |
| Voltage type                                                                                                                                                                                       |  |                 | AC        |
| Frequency                                                                                                                                                                                          |  |                 | 50 Hz     |
| Release characteristic                                                                                                                                                                             |  |                 | B         |
| Concurrently switching neutral conductor                                                                                                                                                           |  |                 | Yes       |
| With interlocking device                                                                                                                                                                           |  |                 | No        |
| Over voltage category                                                                                                                                                                              |  |                 | 3         |
| Pollution degree                                                                                                                                                                                   |  |                 | 2         |
| Ambient temperature during operating                                                                                                                                                               |  | °C              | -25 - 40  |
| Width in number of modular spacings                                                                                                                                                                |  |                 | 2         |
| Built-in depth                                                                                                                                                                                     |  | mm              | 69.5      |
| Flush-mounted installation                                                                                                                                                                         |  |                 | No        |
| Anti- nuisance tripping version                                                                                                                                                                    |  |                 | No        |
| Degree of protection (IP)                                                                                                                                                                          |  |                 | IP20      |
| Connectable conductor cross section solid-core                                                                                                                                                     |  | mm <sup>2</sup> | 1 - 25    |
| Connectable conductor cross section multi-wired                                                                                                                                                    |  | mm <sup>2</sup> | 1 - 25    |