



## Miniature circuit breaker (MCB), 50A, 3 p, type C characteristic



**Part no.** PL6-C50/3  
**Catalog No.** 286606

Similar to illustration

## Delivery program

|                                                      |          |    |                                                        |
|------------------------------------------------------|----------|----|--------------------------------------------------------|
| Basic function                                       |          |    | Miniature circuit-breakers                             |
| Number of poles                                      |          |    | 3 pole                                                 |
| Tripping characteristic                              |          |    | C                                                      |
| Application                                          |          |    | Switchgear for residential and commercial applications |
| Rated current                                        | $I_n$    | A  | 50                                                     |
| Rated switching capacity according to IEC/EN 60898-1 | $I_{cn}$ | kA | 6                                                      |
| Product range                                        |          |    | PL6                                                    |

## Technical data

### Electrical

|                                                      |          |    |   |
|------------------------------------------------------|----------|----|---|
| Rated switching capacity according to IEC/EN 60898-1 | $I_{cn}$ | kA | 6 |
|------------------------------------------------------|----------|----|---|

## Design verification as per IEC/EN 61439

|                                                                                                                        |            |    |                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------|------------|----|----------------------------------------------------------------------------------------------------------------------------------|
| Technical data for design verification                                                                                 |            |    |                                                                                                                                  |
| Rated operational current for specified heat dissipation                                                               | $I_n$      | A  | 50                                                                                                                               |
| Heat dissipation per pole, current-dependent                                                                           | $P_{vid}$  | W  | 0                                                                                                                                |
| Equipment heat dissipation, current-dependent                                                                          | $P_{vid}$  | W  | 14.9                                                                                                                             |
| 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 | 75                                                                                                                               |
|                                                                                                                        |            |    | linear, per +1 °C, results in a 0.5% reduction of current carrying capacity                                                      |
| 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) / Miniature circuit breaker (MCB) (EC000042)                                                                                                                                |  |                 |          |
| Electric engineering, automation, process control engineering / Electrical installation, device / Miniature circuit breaker system (MCB) / Miniature circuit breaker (MCB) (ecI@ss10.0.1-27-14-19-01 [AAB905014]) |  |                 |          |
| Release characteristic                                                                                                                                                                                            |  |                 | C        |
| Number of poles (total)                                                                                                                                                                                           |  |                 | 3        |
| Number of protected poles                                                                                                                                                                                         |  |                 | 3        |
| Rated current                                                                                                                                                                                                     |  | A               | 50       |
| Rated voltage                                                                                                                                                                                                     |  | V               | 400      |
| Rated insulation voltage Ui                                                                                                                                                                                       |  | V               | 440      |
| Rated impulse withstand voltage Uimp                                                                                                                                                                              |  | kV              | 4        |
| Rated short-circuit breaking capacity Icn EN 60898 at 230 V                                                                                                                                                       |  | kA              | 6        |
| Rated short-circuit breaking capacity Icn EN 60898 at 400 V                                                                                                                                                       |  | kA              | 6        |
| Rated short-circuit breaking capacity Icu IEC 60947-2 at 230 V                                                                                                                                                    |  | kA              | 0        |
| Rated short-circuit breaking capacity Icu IEC 60947-2 at 400 V                                                                                                                                                    |  | kA              | 0        |
| Voltage type                                                                                                                                                                                                      |  |                 | AC       |
| Frequency                                                                                                                                                                                                         |  | Hz              | 50 - 60  |
| Current limiting class                                                                                                                                                                                            |  |                 | 3        |
| Suitable for flush-mounted installation                                                                                                                                                                           |  |                 | No       |
| Concurrently switching N-neutral                                                                                                                                                                                  |  |                 | No       |
| Over voltage category                                                                                                                                                                                             |  |                 | 3        |
| Pollution degree                                                                                                                                                                                                  |  |                 | 2        |
| Additional equipment possible                                                                                                                                                                                     |  |                 | Yes      |
| Width in number of modular spacings                                                                                                                                                                               |  |                 | 3        |
| Built-in depth                                                                                                                                                                                                    |  | mm              | 70.5     |
| Degree of protection (IP)                                                                                                                                                                                         |  |                 | IP20     |
| Ambient temperature during operating                                                                                                                                                                              |  | °C              | -25 - 55 |
| Connectable conductor cross section multi-wired                                                                                                                                                                   |  | mm <sup>2</sup> | 1 - 25   |
| Connectable conductor cross section solid-core                                                                                                                                                                    |  | mm <sup>2</sup> | 1 - 25   |