# DATASHEET - PLHT-C80

**Miniature circuit breaker (MCB), 80A, 1p, C-Char, AC**

| | |
|---|---|
| **Part no.** | **PLHT-C80** |
| | **247987** |
| **EL Number (Norway)** | **1609506** |

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## General specifications

| | |
|---|---|
| Product name | Eaton Moeller series xPole - PLHT/-V MCB |
| Part no. | PLHT-C80 |
| EAN | 4015082479879 |
| Product Length/Depth | 90 millimetre |
| Product height | 75 millimetre |
| Product width | 27 millimetre |
| Product weight | 0.224 kilogram |
| Compliances | RoHS conform |
| Product Tradename | xPole - PLHT/-V |
| Product Type | MCB |
| Product Sub Type | None |

## Delivery program

| | |
|---|---|
| Application | Switchgear for industrial and advanced commercial applications |
| Number of poles | Single-pole |
| Number of poles (total) | 1 |
| Number of poles (protected) | 1 |
| Tripping characteristic | C |
| Release characteristic | C |
| Amperage Rating | 80 A |
| Type | Miniature circuit breaker<br>PLHT |

## Technical Data - Electrical

| | |
|---|---|
| Voltage type | AC |
| Rated operational voltage (Ue) - max | 400 V |
| Rated insulation voltage (Ui) | 440 V |
| Rated impulse withstand voltage (Uimp) | 4 kV |
| Frequency rating - min | 50 Hz |
| Frequency rating - max | 60 Hz |
| Rated switching capacity (IEC/EN 60947-2) | 20 kA |
| Rated short-circuit breaking capacity (EN 60898) at 230 V | 0 kA |
| Rated short-circuit breaking capacity (EN 60898) at 400 V | 0 kA |
| Rated short-circuit breaking capacity (IEC 60947-2) at 230 V | 20 kA |
| Rated short-circuit breaking capacity (IEC 60947-2) at 400 V | 20 kA |
| Overvoltage category | III |
| Pollution degree | 2 |

## Technical Data - Mechanical

| | |
|---|---|
| Width in number of modular spacings | 1.5 |
| Built-in depth | 75 mm |
| Degree of protection | IP20 |
| Connectable conductor cross section (solid-core) - min | 2.5 $mm^2$ |
| Connectable conductor cross section (solid-core) - max | 50 $mm^2$ |
| Connectable conductor cross section (multi-wired) - min | 2.5 $mm^2$ |
| Connectable conductor cross section (multi-wired) - max | 50 $mm^2$ |

## Design verification as per IEC/EN 61439 - technical data

| | |
|---|---|
| Rated operational current for specified heat dissipation (In) | 80 A |
| Heat dissipation per pole, current-dependent | 0 W |
| Equipment heat dissipation, current-dependent | 7.14 W |

| | | |
|---|---|---|
| Static heat dissipation, non-current-dependent | | 0 W |
| Heat dissipation capacity | | 0 W |
| Ambient operating temperature - min | | -25 °C |
| Ambient operating temperature - max | | 55 °C |
| **Design verification as per IEC/EN 61439** | | |
| 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 Resist. of insul. mat. to abnormal heat/fire by internal elect. 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. |
| 10.9.2 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. |
| **Additional information** | | |
| Current limiting class | | 3 |
| Features | | Additional equipment possible |
| Special features | | Ambient temperature hint: a 1 °C increase results in a 0.35% linear reduction of current carrying capacity |

## Technical data ETIM 8.0

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) (ecl@ss10.0.1-27-14-19-01 [AAB905014])

| | | |
|---|---|---|
| Built-in depth | mm | 75 |
| Release characteristic | | C |
| Number of poles (total) | | 1 |
| Number of protected poles | | 1 |
| Rated current | A | 80 |
| Rated voltage | V | 400 |
| Rated insulation voltage Ui | V | 440 |
| Rated impulse withstand voltage Uimp | kV | 4 |
| Rated short-circuit breaking capacity Icn according to EN 60898 at 230 V | kA | 0 |
| Voltage type | | AC |
| Rated short-circuit breaking capacity Icn according to EN 60898 at 400 V | kA | 0 |
| Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V | kA | 20 |
| Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V | kA | 20 |
| Frequency | Hz | 50 - 60 |
| Current limiting class | | 3 |
| Flush-mounted installation | | No |
| Concurrently switching neutral conductor | | No |

| | | | |
|---|---|---|---|
| Over voltage category | | | 3 |
| Pollution degree | | | 2 |
| Additional equipment possible | | | Yes |
| Width in number of modular spacings | | | 1.5 |
| Degree of protection (IP) | | | IP20 |
| Ambient temperature during operating | | °C | -25 - 55 |
| Connectable conductor cross section multi-wired | | $mm^2$ | 2.5 - 50 |
| Connectable conductor cross section solid-core | | $mm^2$ | 2.5 - 50 |
| Explosion-proof | | | No |