# Specifications

**Photo is representative**

## Eaton 199180

Eaton Moeller® series Motor-protective circuit-breaker; 0.12 kW, 0.4 - 0.63 A, Feed-side screw terminals/output-side push-in terminals

### General specifications

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|---|---|
| **PRODUCT NAME** | Eaton Moeller® series PKZM0 Motor-protective circuit-breaker |
| **CATALOG NUMBER** | 199180 |
| **EAN** | 4015081972647 |
| **PRODUCT LENGTH/DEPTH** | 75 mm |
| **PRODUCT HEIGHT** | 94 mm |
| **PRODUCT WIDTH** | 45 mm |
| **PRODUCT WEIGHT** | 0.25 kg |
| **CERTIFICATIONS** | VDE 0660<br>IEC/EN 60947<br>UL File No.: E36332<br>IEC/EN 60947-4-1<br>CSA File No.: 165628<br>UL Category Control No.: NLRV<br>UL<br>CSA-C22.2 No. 60947-4-1-14<br>CSA Class No.: 3211-05<br>CSA<br>UL 60947-4-1<br>CE |
| **MODEL CODE** | PKZM0-0,63-SPI16 |

## Features & Functions

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| **ACTUATOR TYPE** | Turn button |
| **FEATURES** | Phase-failure sensitivity (according to IEC/EN 60947-4-1, VDE 0660 Part 102) |
| **FUNCTIONS** | Phase failure sensitive<br>Motor protection |
| **NUMBER OF POLES** | Three-pole |

## General

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| **LIFESPAN, ELECTRICAL** | 100,000 operations |
| **LIFESPAN, MECHANICAL** | 100,000 Operations |
| **MOUNTING METHOD** | DIN rail (top hat rail) mounting optional |
| **MOUNTING POSITION** | Can be snapped on to IEC/EN 60715 top-hat rail with 7.5 or 15 mm height. |
| **OPERATING FREQUENCY** | 40 Operations/h |
| **OVERVOLTAGE CATEGORY** | III |
| **POLLUTION DEGREE** | 3 |
| **PRODUCT CATEGORY** | Motor protective circuit breaker |
| **PROTECTION** | Finger and back-of-hand proof, Protection against direct contact when actuated from front (EN 50274) |
| **RATED IMPULSE WITHSTAND VOLTAGE (UIMP)** | 6000 V AC |
| **SHOCK RESISTANCE** | 25 g, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms |
| **SUITABLE FOR** | Also motors with efficiency class IE3<br>Branch circuit: Manual type E if used with terminal, or suitable for group installations, (UL/CSA) |
| **TEMPERATURE COMPENSATION** | -5 - 40 °C to IEC/EN 60947, VDE 0660<br>≤ 0.25 %/K, residual error for T > 40°<br>-25 - 55 °C, Operating range |

## Climatic environmental conditions

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| **ALTITUDE** | Max. 2000 m |
| **AMBIENT OPERATING TEMPERATURE - MIN** | -25 °C |
| **AMBIENT OPERATING TEMPERATURE - MAX** | 55 °C |
| **AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN** | -25 °C |
| **AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX** | 40 °C |
| **AMBIENT STORAGE TEMPERATURE - MIN** | -40 °C |
| **AMBIENT STORAGE TEMPERATURE - MAX** | 80 °C |
| **CLIMATIC PROOFING** | Damp heat, cyclic, to IEC 60068-2-30<br>Damp heat, constant, to IEC 60068-2-78 |

## Terminal capacities

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| **TERMINAL CAPACITY (FLEXIBLE WITH UNISOLATED FERRULE)** | 1 x (1 - 6) $mm^2$, Screw terminals<br>2 x (1 - 6) $mm^2$, Screw terminals<br>1 x (1 - 2.5) $mm^2$, Push-in terminals<br>2 x (1 - 2.5) $mm^2$, Push-in terminals |
| **TERMINAL CAPACITY (FLEXIBLE WITH ULTRASONIC WELDED CABLE END)** | 1 x (1 - 6) $mm^2$, Screw terminals<br>2 x (1 - 6) $mm^2$, Screw terminals<br>1 x (1 - 2.5) $mm^2$, Push-in terminals<br>2 x (1 - 2.5) $mm^2$, Push-in terminals |
| **TERMINAL CAPACITY (FLEXIBLE)** | 1 x (1 - 6) $mm^2$, Screw terminals<br>2 x (1 - 6) $mm^2$, Screw terminals<br>1 x (1 - 2.5) $mm^2$, Push-in terminals<br>2 x (1 - 2.5) $mm^2$, Push-in terminals |
| **TERMINAL CAPACITY (SOLID/STRANDED AWG)** | 18 - 10, screw terminals<br>20 - 14, Push-in terminals |
| **STRIPPING LENGTH (MAIN CABLE)** | 10 mm |
| **TIGHTENING TORQUE** | 1.7 Nm, Screw terminals, Main cable |

## Electrical rating

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| **RATED FREQUENCY - MIN** | 50 Hz |
| **RATED FREQUENCY - MAX** | 60 Hz |
| **RATED OPERATIONAL POWER AT AC-3, 220/230 V, 50 HZ** | 0.09 kW |
| **RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ** | 0.12 kW |
| **RATED OPERATIONAL VOLTAGE (UE) - MIN** | 690 V |
| **RATED OPERATIONAL VOLTAGE (UE) - MAX** | 690 V |
| **RATED UNINTERRUPTED CURRENT (IU)** | 0.63 A |

## Short-circuit rating

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| **SHORT-CIRCUIT CURRENT RATING (GROUP PROTECTION)** | 50 kA, 600 V High Fault, Fuse, SCCR (UL/CSA) with 600 A, 600 V High Fault, Fuse, SCCR (UL/CSA)<br>50 kA, 600 V High Fault, CB, SCCR (UL/CSA) with 600 A, 600 V High Fault, CB, SCCR (UL/CSA) |
| **SHORT-CIRCUIT CURRENT RATING (TYPE E)** | 50 kA, 600 Y/347 V, SCCR (UL/CSA)<br>65 kA, 240 V, SCCR (UL/CSA)<br>65 kA, 480 Y/277 V, SCCR (UL/CSA)<br>Accessories required<br>BK25/3-PKZ0-E |
| **SHORT-CIRCUIT RELEASE** | Basic device fixed 15.5 x Iu |

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| | ± 20% tolerance<br>9.8 A, Irm |

## Communication

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| **CONNECTION** | Screw terminals on feed side<br>Push-in terminals on output side |

## Contacts

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| **NUMBER OF AUXILIARY CONTACTS (CHANGE-OVER CONTACTS)** | 0 |
| **NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)** | 0 |
| **NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)** | 0 |

## Trip blocks

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| **OVERLOAD RELEASE CURRENT SETTING - MIN** | 0.4 A |
| **OVERLOAD RELEASE CURRENT SETTING - MAX** | 0.63 A |
| **TRIPPING CHARACTERISTIC** | Overload trigger: tripping class 10 A |

## Design verification

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| **EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID** | 5.16 W |
| **HEAT DISSIPATION CAPACITY PDISS** | 0 W |
| **HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID** | 1.7 W |
| **RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)** | 0.63 A |
| **STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS** | 0 W |
| **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 |

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| | 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 |

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| | instruction leaflet (IL) is observed. |

## Resources

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| **BROCHURES** | eaton-motor-starters-system-xstart-brochure-br03407001en-en-us.pdf |
| **CATALOGUES** | eaton-switching-and-protecting-motors-product-range-catalog-ca034001en-en-us.pdf<br><br>Product Range Catalog Switching and protecting motors<br><br>eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf |
| **DECLARATIONS OF CONFORMITY** | DA-DC-00004918.pdf<br><br>DA-DC-00004888.pdf |
| **DRAWINGS** | eaton-manual-motor-starters-pkz-dimensions.eps<br><br>eaton-manual-motor-starters-pkzm-pkzm0-dimensions-002.eps<br><br>eaton-manual-motor-starters-pkz-dimensions-002.eps |
| **ECAD MODEL** | ETN.199180.edz |
| **INSTALLATION INSTRUCTIONS** | IL03407011Z.pdf |
| **INSTALLATION VIDEOS** | WIN-WIN with push-in technology |
| **MCAD MODEL** | pkzm0_s16_pi.stp<br><br>pkzm0_s16_pi.dwg |
| **SALES NOTES** | eaton-link-module-for-motor-starters-pkz-flyer-fl034003en-en-us.pdf |

| | |
|---|---|
| **PROJECT NAME:** | |
| **PROJECT NUMBER:** | |
| **PREPARED BY:** | |
| **DATE:** | |

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