

## Eaton 199187

Eaton Moeller® series Motor-protective circuit-breaker, 5.5 kW, 8 - 12 A, Feed-side screw terminals/output-side push-in terminals

|                             |   |
|-----------------------------|---|
|                             |   |
| <b>PRODUCT NAME</b>         | Eaton Moeller® series PKZM0 Motor-protective circuit-breaker  |
| <b>CATALOG NUMBER</b>       | 199187  |
| <b>PRODUCT LENGTH/DEPTH</b> | 75 mm   |
| <b>PRODUCT HEIGHT</b>       | 94 mm   |
| <b>PRODUCT WIDTH</b>        | 45 mm   |
| <b>PRODUCT WEIGHT</b>       | 0.297 kg  |
| <b>CERTIFICATIONS</b>       | IEC/EN 60947<br>VDE 0660<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 |

|   |  |
|---|--|
|   |  |
| <b>FEATURES</b>   | Phase-failure sensitivity (according to IEC/EN 60947-4-1, VDE 0660 Part 102)   |
| <b>10.10 TEMPERATURE RISE</b>   | The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices. |
| <b>10.11 SHORT-CIRCUIT RATING</b>   | Is the panel builder's responsibility. The specifications for the switchgear must be observed.                                   |
| <b>10.12 ELECTROMAGNETIC COMPATIBILITY</b>  | Is the panel builder's responsibility. The specifications for the switchgear must be observed.                                   |
| <b>10.13 MECHANICAL FUNCTION</b>  | The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.                         |
| <b>10.2.2 CORROSION RESISTANCE</b>  | Meets the product standard's requirements.   |
| <b>10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES</b>                         | Meets the product standard's requirements.   |
| <b>10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT</b>       | Meets the product standard's requirements.   |
| <b>10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS</b> | Meets the product standard's requirements.   |
| <b>10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION</b>                                 | Meets the product standard's requirements.   |
| <b>10.2.5 LIFTING</b>   | Does not apply, since the entire switchgear needs to be evaluated.   |
| <b>10.2.6 MECHANICAL IMPACT</b>   | Does not apply, since the entire switchgear needs to be evaluated.   |
| <b>10.2.7 INSCRIPTIONS</b>  | Meets the product standard's requirements.   |

|                                   |   |
|-----------------------------------|---|
|                                   |   |
| <b>DECLARATIONS OF CONFORMITY</b> | <a href="#">eaton-motor-protective-circuit-breaker-declaration-of-conformity-uk251170en.pdf</a> |
| <b>MCAD MODEL</b>                 | <a href="#">pkzm0_s16_pi.stp</a>  |
|                                   | <a href="#">pkzm0_s16_pi.dwg</a>  |
|                                   | <a href="#">IL03407011Z.pdf</a>   |
|                                   | <a href="#">eaton-manual-motor-starters-pkzm-pkzm0-dimensions-002.eps</a>                       |

|  |  |
|--|--|
| <b>10.3 DEGREE OF PROTECTION OF ASSEMBLIES</b>                         | Does not apply, since the entire switchgear needs to be evaluated.             |
| <b>10.4 CLEARANCES AND CREEPAGE DISTANCES</b>                          | Meets the product standard's requirements.                                     |
| <b>10.5 PROTECTION AGAINST ELECTRIC SHOCK</b>                          | Does not apply, since the entire switchgear needs to be evaluated.             |
| <b>10.6 INCORPORATION OF SWITCHING DEVICES AND COMPONENTS</b>          | Does not apply, since the entire switchgear needs to be evaluated.             |
| <b>10.7 INTERNAL ELECTRICAL CIRCUITS AND CONNECTIONS</b>               | Is the panel builder's responsibility.   |
| <b>10.8 CONNECTIONS FOR EXTERNAL CONDUCTORS</b>                        | Is the panel builder's responsibility.   |
| <b>10.9.2 POWER-FREQUENCY ELECTRIC STRENGTH</b>                        | Is the panel builder's responsibility.   |
| <b>10.9.3 IMPULSE WITHSTAND VOLTAGE</b>                                | Is the panel builder's responsibility.   |
| <b>10.9.4 TESTING OF ENCLOSURES MADE OF INSULATING MATERIAL</b>        | Is the panel builder's responsibility.   |
| <b>OPERATING FREQUENCY</b>   | 40 Operations/h  |
| <b>POLLUTION DEGREE</b>  | 3  |
| <b>MOUNTING METHOD</b>   | DIN rail (top hat rail)<br>mounting optional                                   |
| <b>CLIMATIC PROOFING</b>   | Damp heat, cyclic, to IEC 60068-2-30<br>Damp heat, constant, to IEC 60068-2-78 |
| <b>ACTUATOR TYPE</b>   | Turn button  |
| <b>TRIPPING CHARACTERISTIC</b>   | Overload trigger: tripping class 10 A  |
| <b>ADJUSTMENT RANGE SHORT-TERM DELAYED SHORT-CIRCUIT RELEASE - MAX</b> | 0 A  |
| <b>ADJUSTMENT RANGE SHORT-TERM DELAYED SHORT-CIRCUIT RELEASE - MIN</b> | 0 A  |
| <b>ADJUSTMENT RANGE UNDELAYED SHORT-CIRCUIT RELEASE - MAX</b>          | 186 A  |
| <b>ADJUSTMENT RANGE UNDELAYED SHORT-CIRCUIT RELEASE - MIN</b>          | 186 A  |

|   |  |
|---|--|
| <b>AMBIENT OPERATING TEMPERATURE - MAX</b>                | 55 °C  |
| <b>AMBIENT OPERATING TEMPERATURE - MIN</b>                | -25 °C   |
| <b>AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX</b>     | 40 °C  |
| <b>AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN</b>     | -25 °C   |
| <b>AMBIENT STORAGE TEMPERATURE - MAX</b>                  | 80 °C  |
| <b>AMBIENT STORAGE TEMPERATURE - MIN</b>                  | -40 °C   |
| <b>ASSIGNED MOTOR POWER AT 115/120 V, 60 HZ, 1-PHASE</b>  | 0.5 HP   |
| <b>ASSIGNED MOTOR POWER AT 200/208 V, 60 HZ, 3-PHASE</b>  | 3 HP   |
| <b>ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 1-PHASE</b>  | 2 HP   |
| <b>ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 3-PHASE</b>  | 3 HP   |
| <b>ASSIGNED MOTOR POWER AT 460/480 V, 60 HZ, 3-PHASE</b>  | 7.5 HP   |
| <b>ASSIGNED MOTOR POWER AT 575/600 V, 60 HZ, 3-PHASE</b>  | 10 HP  |
| <b>EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID</b> | 6.64 W   |
| <b>HEAT DISSIPATION CAPACITY PDISS</b>                    | 0 W  |
| <b>HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID</b>  | 2.2 W  |
| <b>RATED IMPULSE WITHSTAND VOLTAGE (UIMP)</b>             | 6000 V AC  |
| <b>ALTITUDE</b>   | Max. 2000 m  |
| <b>DEVICE CONSTRUCTION</b>                                | Built-in device fixed built-in technique             |
| <b>CONNECTION</b>   | Screw terminals on feed side<br>Push-in terminals on |

|  |   |
|--|---|
|  | output side   |
| <b>ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT</b>                    | Screw-/spring clamp connection  |
| <b>MOUNTING POSITION</b>   | Can be snapped on to IEC/EN 60715 top-hat rail with 7.5 or 15 mm height.      |
| <b>LIFESPAN, MECHANICAL</b>  | 100,000 Operations  |
| <b>OVERVOLTAGE CATEGORY</b>  | III   |
| <b>DEGREE OF PROTECTION</b>  | IP20<br>Terminals: IP00   |
| <b>NUMBER OF POLES</b>   | Three-pole  |
| <b>LIFESPAN, ELECTRICAL</b>  | 100,000 operations  |
| <b>SHOCK RESISTANCE</b>  | 25 g, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms |
| <b>FUNCTIONS</b>   | Phase failure sensitive<br>Motor protection                                   |
| <b>TERMINAL CAPACITY (SOLID/STRANDED AWG)</b>                        | 18 - 10, screw terminals<br>20 - 14, Push-in terminals                        |
| <b>SWITCHING CAPACITY</b>  | 12 A, AC-3 up to 690 V  |
| <b>NUMBER OF AUXILIARY CONTACTS (CHANGE-OVER CONTACTS)</b>           | 0   |
| <b>NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)</b>       | 0   |
| <b>NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)</b>         | 0   |
| <b>OVERLOAD RELEASE CURRENT SETTING - MAX</b>                        | 12 A  |
| <b>OVERLOAD RELEASE CURRENT SETTING - MIN</b>                        | 8 A   |
| <b>RATED FREQUENCY - MAX</b>   | 60 Hz   |
| <b>RATED FREQUENCY - MIN</b>   | 50 Hz   |
| <b>RATED OPERATIONAL VOLTAGE (UE) - MAX</b>                          | 690 V   |
| <b>RATED OPERATIONAL VOLTAGE (UE) - MIN</b>                          | 690 V   |
| <b>RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)</b> | 12 A  |
| <b>RATED OPERATIONAL POWER AT AC-3E,</b>                             | 3 kW  |

|  |  |
|--|--|
| <b>220/230 V, 50 HZ</b>                                      |  |
| <b>RATED OPERATIONAL POWER AT AC-3E, 380/400 V, 50 HZ</b>    | 5.5 kW   |
| <b>RATED UNINTERRUPTED CURRENT (IU)</b>                      | 12 A   |
| <b>STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS</b>    | 0 W  |
| <b>STRIPPING LENGTH (MAIN CABLE)</b>                         | 10 mm  |
| <b>PRODUCT CATEGORY</b>                                      | Motor protective circuit breaker   |
| <b>PROTECTION</b>  | Finger and back-of-hand proof, Protection against direct contact when actuated from front (EN 50274)   |
| <b>RATED OPERATIONAL POWER AT AC-3E, 440 V, 50 HZ</b>        | 5.5 kW   |
| <b>RATED OPERATIONAL POWER AT AC-3E, 500 V, 50 HZ</b>        | 5.5 kW   |
| <b>RATED OPERATIONAL POWER AT AC-3E, 690 V, 50 HZ</b>        | 11 kW  |
| <b>TERMINAL CAPACITY (FLEXIBLE WITH UNISOLATED FERRULE)</b>  | 1 x (1 - 6) mm <sup>2</sup> , Screw terminals<br>2 x (1 - 6) mm <sup>2</sup> , Screw terminals<br>1 x (1 - 2.5) mm <sup>2</sup> , Push-in terminals<br>2 x (1 - 2.5) mm <sup>2</sup> , Push-in terminals |
| <b>RATED SHORT-CIRCUIT BREAKING CAPACITY ICU AT 400 V AC</b> | 50 kA  |
| <b>RATED SHORT-CIRCUIT BREAKING CAPACITY ICS AT 400 V AC</b> | 38 kA  |
| <b>RATED SHORT-CIRCUIT BREAKING CAPACITY ICU AT 440 V AC</b> | 15 kA  |
| <b>RATED SHORT-CIRCUIT BREAKING CAPACITY ICS AT 440 V AC</b> | 12 kA  |
| <b>RATED SHORT-CIRCUIT BREAKING CAPACITY ICU</b>             | 15 kA  |

|  |  |
|--|--|
| <b>AT 500 V AC</b>   |  |
| <b>RATED SHORT-CIRCUIT<br/>BREAKING CAPACITY ICS<br/>AT 500 V AC</b>             | 4 kA   |
| <b>RATED SHORT-CIRCUIT<br/>BREAKING CAPACITY ICU<br/>AT 690 V AC</b>             | 3 kA   |
| <b>RATED SHORT-CIRCUIT<br/>BREAKING CAPACITY ICS<br/>AT 690 V AC</b>             | 2 kA   |
| <b>TERMINAL CAPACITY<br/>(FLEXIBLE WITH<br/>ULTRASONIC WELDED<br/>CABLE END)</b> | 1 x (1 - 6) mm <sup>2</sup> , Screw<br>terminals<br>2 x (1 - 6) mm <sup>2</sup> , Screw<br>terminals<br>1 x (1 - 2.5) mm <sup>2</sup> , Push-in<br>terminals<br>2 x (1 - 2.5) mm <sup>2</sup> , Push-in<br>terminals |
| <b>SUITABLE FOR</b>  | Also motors with efficiency<br>class IE3<br>Branch circuit: Manual<br>type E if used with<br>terminal, or suitable for<br>group installations,<br>(UL/CSA)   |
| <b>SHORT-CIRCUIT RELEASE</b>   | Basic device fixed 15.5 x lu<br>± 20% tolerance<br>186 A, I <sub>rm</sub>  |
| <b>TERMINAL CAPACITY<br/>(SOLID)</b>   | 1 x (1 - 6) mm <sup>2</sup> , Screw<br>terminals<br>2 x (1 - 6) mm <sup>2</sup> , Screw<br>terminals<br>1 x (1 - 2.5) mm <sup>2</sup> , Push-in<br>terminals<br>2 x (1 - 2.5) mm <sup>2</sup> , Push-in<br>terminals |
| <b>RATED OPERATIONAL<br/>CURRENT (IE)</b>  | 12 A   |
| <b>TEMPERATURE<br/>COMPENSATION</b>  | ≤ 0.25 %/K, residual error<br>for T > 40°<br>-5 - 40 °C to IEC/EN 60947,<br>VDE 0660<br>-25 - 55 °C, Operating<br>range  |
| <b>SHORT-CIRCUIT CURRENT<br/>RATING (GROUP<br/>PROTECTION)</b>                   | 18 kA, 600 V High Fault,<br>Fuse, SCCR (UL/CSA) with<br>600 A, 600 V High Fault,<br>CB, SCCR (UL/CSA)<br>18 kA, 600 V High Fault,<br>CB, SCCR (UL/CSA) with<br>600 A, 600 V High Fault,<br>Fuse, SCCR (UL/CSA)       |

|  |  |
|--|--|
|  | 65 kA, 480 V High Fault, Fuse, SCCR (UL/CSA) with 600 A, 480 V High Fault, Fuse, SCCR (UL/CSA)<br>65 kA, 480 V High Fault, CB, SCCR (UL/CSA) with 600 A, 480 V High Fault, CB, SCCR (UL/CSA)             |
| <b>SHORT-CIRCUIT CURRENT RATING (TYPE E)</b> | 65 kA, 240 V, SCCR (UL/CSA)<br>65 kA, 480 Y/277 V, SCCR (UL/CSA)<br>Accessories required BK25/3-PKZ0-E   |
| <b>TIGHTENING TORQUE</b>                     | 1.7 Nm, Screw terminals, Main cable  |
| <b>SWITCH OFF TECHNIQUE</b>                  | Thermomagnetic   |
| <b>TERMINAL CAPACITY (FLEXIBLE)</b>          | 1 x (1 - 6) mm <sup>2</sup> , Screw terminals<br>2 x (1 - 6) mm <sup>2</sup> , Screw terminals<br>1 x (1 - 2.5) mm <sup>2</sup> , Push-in terminals<br>2 x (1 - 2.5) mm <sup>2</sup> , Push-in terminals |
| <b>POWER LOSS</b>                            | 6.64 W   |

PROJECT NAME:

PROJECT NUMBER:

PREPARED BY:

: