

# Specifications



Photo is representative



## Eaton 222394

Eaton Moeller® series PKZM4 Motor-protective circuit-breaker, Ir= 50 - 58 A, Screw terminals, Terminations: IP00 PKZM4-58

### General specifications

|                             |                                                                                                                                                                                                                         |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>PRODUCT NAME</b>         | Eaton Moeller® series PKZM4 Motor-protective circuit-breaker                                                                                                                                                            |
| <b>CATALOG NUMBER</b>       | 222394                                                                                                                                                                                                                  |
| <b>MODEL CODE</b>           | PKZM4-58                                                                                                                                                                                                                |
| <b>EAN</b>                  | 4015082223946                                                                                                                                                                                                           |
| <b>PRODUCT LENGTH/DEPTH</b> | 160 mm                                                                                                                                                                                                                  |
| <b>PRODUCT HEIGHT</b>       | 140 mm                                                                                                                                                                                                                  |
| <b>PRODUCT WIDTH</b>        | 55 mm                                                                                                                                                                                                                   |
| <b>PRODUCT WEIGHT</b>       | 1.136 kg                                                                                                                                                                                                                |
| <b>CERTIFICATIONS</b>       | CSA Class No.: 3211-05<br>IEC/EN 60947-4-1<br>CSA File No.: 165628<br>CSA-C22.2 No. 60947-4-1-14<br>UL Category Control No.: NLRV<br>VDE 0660<br>CE<br>CSA<br>IEC/EN 60947<br>UL File No.: E36332<br>UL<br>UL 60947-4-1 |
| <b>GLOBAL CATALOG</b>       | 222394                                                                                                                                                                                                                  |
| <b>PRODUCT TYPE</b>         | Motor-protective circuit-breaker                                                                                                                                                                                        |

## Product specifications

|                                                                                         |                                                                                                                                  |
|-----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <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>10.3 DEGREE OF PROTECTION OF</b>                                                     | Does not apply, since the entire switchgear needs to                                                                             |

## Resources

|                                   |                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>BROCHURES</b>                  | <a href="#">eaton-push-in-technology-product-overview-brochure-br034012-en-us.pdf</a><br><br><a href="#">eaton-motor-starters-system-xstart-brochure-br03407001en-en-us.pdf</a>                                                                                                                                                                                                                                   |
| <b>CATALOGS</b>                   | <a href="#">eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf</a>                                                                                                                                                                                                                                                                                                                            |
| <b>CHARACTERISTIC CURVE</b>       | <a href="#">eaton-manual-motor-starters-tripping-characteristic-pkzm4-characteristic-curve-003.eps</a><br><br><a href="#">eaton-manual-motor-starters-characteristic-pkzm4-characteristic-curve-002.eps</a><br><br><a href="#">eaton-manual-motor-starters-characteristic-pkzm4-characteristic-curve-002.eps</a>                                                                                                  |
| <b>DECLARATIONS OF CONFORMITY</b> | <a href="#">eaton-motor-protective-circuit-breaker-declaration-of-conformity-uk251168en.pdf</a><br><br><a href="#">eaton-motor-protective-circuit-breaker-declaration-of-conformity-eu250685en.pdf</a>                                                                                                                                                                                                            |
| <b>DRAWINGS</b>                   | <a href="#">eaton-manual-motor-starters-pkzm4-characteristic-curve-002-de.eps</a><br><br><a href="#">eaton-manual-motor-starters-circuit-breaker-pkzm4-dimensions.eps</a><br><br><a href="#">eaton-manual-motor-starters-pkzm4-dimensions.eps</a><br><br><a href="#">eaton-manual-motor-starters-pkzm4-3d-drawing.eps</a><br><br><a href="#">eaton-manual-motor-starters-circuit-breaker-pkzm4-3d-drawing.eps</a> |

|                                                                 |                                                                                |
|-----------------------------------------------------------------|--------------------------------------------------------------------------------|
| <b>ASSEMBLIES</b>                                               | 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>LIFESPAN, MECHANICAL</b>                                     | 30,000 Operations (Main conducting paths)                                      |
| <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 UNDELAYED SHORT-CIRCUIT RELEASE - MAX</b>   | 899 A                                                                          |
| <b>ADJUSTMENT RANGE UNDELAYED SHORT-CIRCUIT RELEASE - MIN</b>   | 899 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                                                                          |

|                               |                                                                                                                                                                     |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                               | <a href="#">eaton-general-ie-ready-dilm-contactor-standards.eps</a>                                                                                                 |
|                               | <a href="#">eaton-manual-motor-starters-mounting-3d-drawing-002.eps</a>                                                                                             |
| ECAD MODEL                    | <a href="#">ETN.222394.edz</a>                                                                                                                                      |
| INSTALLATION INSTRUCTIONS     | <a href="#">eaton-motors-starters-pkzm4-il03407012z.pdf</a>                                                                                                         |
| INSTALLATION VIDEOS           | <a href="#">WIN-WIN with push-in technology</a>                                                                                                                     |
| MANUALS AND USER GUIDES       | <a href="#">eaton-motor-protective-circuit-breaker-pkzm4-overload-monitoring-exe-manual-mn03402002z-de-de-en-us.pdf</a>                                             |
| MCAD MODEL                    | <a href="#">eaton-breakers-mcad-drawings-pkzm4.dwg</a><br><a href="#">DA-CS-pkzm4</a>                                                                               |
| SALES NOTES                   | <a href="#">eaton-link-module-for-motor-starters-pkz-flyer-fl034003en-en-us.pdf</a>                                                                                 |
| SPECIFICATIONS AND DATASHEETS | <a href="#">Eaton Specification Sheet - 222394</a>                                                                                                                  |
| WIRING DIAGRAMS               | <a href="#">eaton-manual-motor-starters-transformer-pkzm0-wiring-diagram.eps</a><br><a href="#">eaton-manual-motor-starters-starter-nzm-mccb-wiring-diagram.eps</a> |

|                                                           |                                                                                  |
|-----------------------------------------------------------|----------------------------------------------------------------------------------|
| <b>AMBIENT STORAGE TEMPERATURE - MIN</b>                  | -40 °C                                                                           |
| <b>ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 1-PHASE</b>  | 10 HP                                                                            |
| <b>ASSIGNED MOTOR POWER AT 460/480 V, 60 HZ, 3-PHASE</b>  | 40 HP                                                                            |
| <b>ASSIGNED MOTOR POWER AT 575/600 V, 60 HZ, 3-PHASE</b>  | 50 HP                                                                            |
| <b>EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID</b> | 28.2 W                                                                           |
| <b>HEAT DISSIPATION CAPACITY PDISS</b>                    | 0 W                                                                              |
| <b>HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID</b>  | 9.4 W                                                                            |
| <b>INTERNAL RESISTANCE</b>                                | 2 mΩ                                                                             |
| <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>EXPLOSION SAFETY CATEGORY FOR DUST</b>                 | ATEX dust-ex-protection, PTB 10, ATEX 3012, Ex II(2) G                           |
| <b>CONNECTION</b>                                         | Screw terminals                                                                  |
| <b>ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT</b>         | Screw connection                                                                 |
| <b>MOUNTING POSITION</b>                                  | Can be snapped on to IEC/EN 60715 top-hat rail with 7.5 or 15 mm height.         |
| <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>                               | 30,000 operations (at 400V, AC-3)                                                |
| <b>SHOCK RESISTANCE</b>                                   | 15 g, Mechanical,<br>According to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms |
| <b>FUNCTIONS</b>                                          | Motor protection<br>Phase failure sensitive                                      |
| <b>TERMINAL CAPACITY (SOLID/STRANDED AWG)</b>             | 14 - 2                                                                           |

|                                                                              |                                                                                                                  |
|------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| <b>SWITCHING CAPACITY</b>                                                    | 58 A (3 contacts in series),<br>DC-5 up to 250V<br>58 A, AC-3 up to 690 V                                        |
| <b>OVERLOAD RELEASE<br/>CURRENT SETTING - MAX</b>                            | 58 A                                                                                                             |
| <b>OVERLOAD RELEASE<br/>CURRENT SETTING - MIN</b>                            | 50 A                                                                                                             |
| <b>RATED FREQUENCY -<br/>MAX</b>                                             | 60 Hz                                                                                                            |
| <b>RATED FREQUENCY - MIN</b>                                                 | 50 Hz                                                                                                            |
| <b>RATED OPERATIONAL<br/>VOLTAGE (UE) - MAX</b>                              | 690 V                                                                                                            |
| <b>RATED OPERATIONAL<br/>VOLTAGE (UE) - MIN</b>                              | 690 V                                                                                                            |
| <b>RATED OPERATIONAL<br/>CURRENT FOR SPECIFIED<br/>HEAT DISSIPATION (IN)</b> | 58 A                                                                                                             |
| <b>RATED OPERATIONAL<br/>POWER AT AC-3E,<br/>220/230 V, 50 HZ</b>            | 17 kW                                                                                                            |
| <b>RATED OPERATIONAL<br/>POWER AT AC-3E,<br/>380/400 V, 50 HZ</b>            | 30 kW                                                                                                            |
| <b>RATED UNINTERRUPTED<br/>CURRENT (IU)</b>                                  | 58 A                                                                                                             |
| <b>STATIC HEAT<br/>DISSIPATION, NON-<br/>CURRENT-DEPENDENT<br/>PVS</b>       | 0 W                                                                                                              |
| <b>STRIPPING LENGTH<br/>(MAIN CABLE)</b>                                     | 14 mm                                                                                                            |
| <b>PRODUCT CATEGORY</b>                                                      | Motor protective circuit<br>breaker                                                                              |
| <b>PROTECTION</b>                                                            | Finger and back-of-hand<br>proof, Protection against<br>direct contact when<br>actuated from front (EN<br>50274) |
| <b>RATED OPERATIONAL<br/>POWER AT AC-3E, 440 V,<br/>50 HZ</b>                | 37 kW                                                                                                            |
| <b>RATED OPERATIONAL<br/>POWER AT AC-3E, 500 V,<br/>50 HZ</b>                | 37 kW                                                                                                            |
| <b>RATED OPERATIONAL<br/>POWER AT AC-3E, 690 V,<br/>50 HZ</b>                | 55 kW                                                                                                            |
| <b>RATED SHORT-CIRCUIT<br/>BREAKING CAPACITY ICU<br/>AT 400 V AC</b>         | 50 kA                                                                                                            |
| <b>SUITABLE FOR</b>                                                          | Also motors with efficiency<br>class IE3                                                                         |

|                                                        |                                                                                                                                                                                                    |
|--------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                        | Branch circuit: Manual type E if used with terminal, or suitable for group installations, (UL/CSA)                                                                                                 |
| <b>SHORT-CIRCUIT RELEASE</b>                           | Basic device fixed 15.5 x lu<br>± 20% tolerance<br>899 A, I <sub>rm</sub>                                                                                                                          |
| <b>TERMINAL CAPACITY (SOLID)</b>                       | 1 x (0.75 - 16) mm <sup>2</sup> , Main cables<br>2 x (0.75 - 16) mm <sup>2</sup>                                                                                                                   |
| <b>RATED OPERATIONAL CURRENT (IE)</b>                  | 58 A                                                                                                                                                                                               |
| <b>TEMPERATURE COMPENSATION</b>                        | -25 - 55 °C, Operating range<br>-5 - 40 °C to IEC/EN 60947, VDE 0660<br>≤ 0.25 %/K, residual error for T > 40°                                                                                     |
| <b>SHORT-CIRCUIT CURRENT</b>                           | 60 kA DC, up to 250 V DC, Main conducting paths                                                                                                                                                    |
| <b>SHORT-CIRCUIT CURRENT RATING (GROUP PROTECTION)</b> | 600 A, 600 V High Fault, max. Fuse, SCCR (UL/CSA)<br>42 kA, 600 V High Fault, Fuse, SCCR (UL/CSA)<br>42 kA, 600 V High Fault, CB, SCCR (UL/CSA)<br>600 A, 600 V High Fault, max. CB, SCCR (UL/CSA) |
| <b>SHORT-CIRCUIT CURRENT RATING (TYPE E)</b>           | Accessories required<br>BK50/3-PKZ4-E<br>50 kA, 480 Y/277 V, SCCR (UL/CSA)<br>50 kA, 240 V, SCCR (UL/CSA)                                                                                          |
| <b>TIGHTENING TORQUE</b>                               | 3.3 Nm, Screw terminals, Main cable                                                                                                                                                                |
| <b>SWITCH OFF TECHNIQUE</b>                            | Thermomagnetic                                                                                                                                                                                     |
| <b>TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)</b>       | 1 x (0.75 - 35) mm <sup>2</sup> , Main cables<br>2 x (0.75 - 25) mm <sup>2</sup> , Main cables                                                                                                     |
| <b>POWER LOSS</b>                                      | 28.2 W                                                                                                                                                                                             |

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



**Eaton Corporation plc** Eaton House  
30 Pembroke Road  
Dublin 4, Ireland  
Eaton.com

© 2026 Eaton. All Rights Reserved.

Follow us on social media to get the latest product and support information.

