# Eaton 278475

Eaton Moeller® series PKZM01 Motor-protective circuit-breaker, 440 V, Ir = 0.1 - 0.16 A, IP20

| □□□□ | |
|---|---|
| **PRODUCT NAME** | Eaton Moeller® series PKZM01 Motor-protective circuit-breaker |
| **CATALOG NUMBER** | 278475 |
| **PRODUCT LENGTH/DEPTH** | 93 mm |
| **PRODUCT HEIGHT** | 90 mm |
| **PRODUCT WIDTH** | 45 mm |
| **PRODUCT WEIGHT** | 0.253 kg |
| **CERTIFICATIONS** | IEC/EN 60947<br>CSA-C22.2 No. 60947-4-1-14<br>UL Category Control No.: NLRV<br>UL 60947-4-1<br>CSA Class No.: 3211-05<br>VDE 0660<br>CE<br>CSA File No.: 165628<br>IEC/EN 60947-4-1<br>UL<br>UL File No.: E36332<br>CSA |

Powering Business Worldwide

| □□□□ | |
|---|---|
| **FEATURES** | Phase-failure sensitivity (according to IEC/EN 60947-4-1, VDE 0660 Part 102) |
| **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. |
| **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** | Does not apply, since the entire switchgear needs to |

| □□ | |
|---|---|
| CHARACTERISTIC CURVE | eaton-manual-motor-starters-characteristic-characteristic-curve.eps<br>eaton-manual-motor-starters-characteristic-characteristic-curve-008.eps |
| DECLARATIONS OF CONFORMITY | eaton-motor-protective-circuit-breaker-declaration-of-conformity-uk251175en.pdf |
| □□□□□ | IL03407011Z.pdf<br>IL03402034Z IL122012ZU |

| | |
|---|---|
| **ASSEMBLIES** | 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. |
| **OPERATING FREQUENCY** | 25 Operations/h |
| **POLLUTION DEGREE** | 3 |
| **CLIMATIC PROOFING** | Damp heat, cyclic, to IEC 60068-2-30<br>Damp heat, constant, to IEC 60068-2-78 |
| **ACTUATOR TYPE** | Push button |
| **TRIPPING CHARACTERISTIC** | Overload trigger: tripping class 10 A |
| **ADJUSTMENT RANGE UNDELAYED SHORT-CIRCUIT RELEASE - MAX** | 2.5 A |
| **ADJUSTMENT RANGE UNDELAYED SHORT-CIRCUIT RELEASE - MIN** | 2.5 A |
| **AMBIENT OPERATING TEMPERATURE - MAX** | 55 °C |
| **AMBIENT OPERATING TEMPERATURE - MIN** | -25 °C |
| **AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX** | 40 °C |
| **AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN** | -25 °C |
| **AMBIENT STORAGE TEMPERATURE - MAX** | 80 °C |
| **AMBIENT STORAGE TEMPERATURE - MIN** | -40 °C |

| | |
|---|---|
| **EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID** | 5.39 W |
| **HEAT DISSIPATION CAPACITY PDISS** | 0 W |
| **HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID** | 1.8 W |
| **INTERNAL RESISTANCE** | 68000 mΩ |
| **RATED IMPULSE WITHSTAND VOLTAGE (UIMP)** | 6000 V AC |
| **ALTITUDE** | Max. 2000 m |
| **DEVICE CONSTRUCTION** | Built-in device fixed built-in technique |
| **CONNECTION** | Screw terminals |
| **ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT** | Screw connection |
| **MOUNTING POSITION** | Can be snapped on to IEC/EN 60715 top-hat rail with 7.5 or 15 mm height. |
| **LIFESPAN, MECHANICAL** | 50,000 Operations (Main conducting paths) |
| **OVERVOLTAGE CATEGORY** | III |
| **DEGREE OF PROTECTION** | Terminals: IP00<br>IP20 |
| **NUMBER OF POLES** | Three-pole |
| **LIFESPAN, ELECTRICAL** | 50,000 operations (at 400V, AC-3) |
| **SHOCK RESISTANCE** | 25 g, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms |
| **FUNCTIONS** | Phase failure sensitive<br>Motor protection |
| **TERMINAL CAPACITY (SOLID/STRANDED AWG)** | 18 - 10 |
| **SWITCHING CAPACITY** | 0.16 A (3 contacts in series), DC-5 up to 250V<br>0.16 A, AC-3 up to 440 V |
| **OVERLOAD RELEASE CURRENT SETTING - MAX** | 0.16 A |
| **OVERLOAD RELEASE CURRENT SETTING - MIN** | 0.1 A |
| **RATED FREQUENCY - MAX** | 60 Hz |
| **RATED FREQUENCY - MIN** | 50 Hz |
| **RATED OPERATIONAL** | 440 V |

| | |
|---|---|
| **VOLTAGE (UE) - MAX** | |
| **RATED OPERATIONAL VOLTAGE (UE) - MIN** | 440 V |
| **RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)** | 0.16 A |
| **RATED OPERATIONAL POWER AT AC-3E, 220/230 V, 50 HZ** | 0 kW |
| **RATED OPERATIONAL POWER AT AC-3E, 380/400 V, 50 HZ** | 0 kW |
| **RATED UNINTERRUPTED CURRENT (IU)** | 0.16 A |
| **STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS** | 0 W |
| **STRIPPING LENGTH (MAIN CABLE)** | 10 mm |
| **PRODUCT CATEGORY** | Motor protective circuit breaker |
| **PROTECTION** | Finger and back-of-hand proof, Protection against direct contact when actuated from front (EN 50274) |
| **RATED SHORT-CIRCUIT BREAKING CAPACITY ICU AT 400 V AC** | 50 kA |
| **RATED SHORT-CIRCUIT BREAKING CAPACITY ICS AT 400 V AC** | 50 kA |
| **RATED SHORT-CIRCUIT BREAKING CAPACITY ICU AT 440 V AC** | 50 kA |
| **RATED SHORT-CIRCUIT BREAKING CAPACITY ICS AT 440 V AC** | 50 kA |
| **SUITABLE FOR** | Branch circuit: Manual type E if used with terminal, or suitable for group installations, (UL/CSA)<br>Also motors with efficiency class IE3 |
| **SHORT-CIRCUIT RELEASE** | Basic device fixed 15.5 x Iu<br><br>± 20% tolerance<br>2.5 A, Irm |
| **TERMINAL CAPACITY (SOLID)** | 2 x (1 - 6) mm²<br>1 x (1 - 6) mm² |
| **RATED OPERATIONAL** | 0.16 A |

| | |
|---|---|
| **CURRENT (IE)** | |
| **TEMPERATURE COMPENSATION** | -25 - 55 °C, Operating range<br>-5 - 40 °C to IEC/EN 60947, VDE 0660<br>≤ 0.25 %/K, residual error for T > 40° |
| **SHORT-CIRCUIT CURRENT** | 60 kA DC, up to 250 V DC, Main conducting paths |
| **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) |
| **TIGHTENING TORQUE** | 1.7 Nm, Screw terminals, Main cable |
| **SWITCH OFF TECHNIQUE** | Thermomagnetic |
| **TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)** | 2 x (1 - 6) mm², ferrule to DIN 46228<br>1 x (1 - 6) mm², ferrule to DIN 46228 |
| **POWER LOSS** | 5.39 W |

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

□□□□
Eaton House
30 Pembroke Road
Dublin 4, □□□
Eaton.com



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