



**Motor-protective circuit-breaker, 0.55 kW, 1 - 1.6 A, Screw terminals**



**Part no.** PKZM0-1,6  
**072735**  
**EL Number** 4355126  
**(Norway)**

| <b>General specifications</b>            |   |
|--|---|
| Product name                             | Eaton Moeller® series PKZM0 Motor-protective circuit-breaker  |
| Part no.                                 | PKZM0-1,6   |
| EAN                                      | 4015080727354   |
| Product Length/Depth                     | 76 millimetre   |
| Product height                           | 93 millimetre   |
| Product width                            | 45 millimetre   |
| Product weight                           | 0.28 kilogram   |
| Certifications                           | UL 60947-4-1<br>VDE 0660<br>CSA-C22.2 No. 60947-4-1-14<br>CSA File No.: 165628<br>UL<br>UL File No.: E36332<br>CSA<br>CE<br>UL Category Control No.: NLRV<br>IEC/EN 60947<br>CSA Class No.: 3211-05<br>IEC/EN 60947-4-1 |
| Product Tradename                        | PKZM0   |
| Product Type                             | Motor-protective circuit-breaker  |
| Product Sub Type                         | None  |
| Catalog Notes                            | Calculate assigned motor power according to rated current (NEC Table 430-150)<br>IE3-ready devices are identified by the logo on their packaging.   |
| <b>Features &amp; Functions</b>          |   |
| 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  |
| <b>General information</b>               |   |
| Connection                               | Screw terminals   |
| Degree of protection                     | Terminals: IP00<br>IP20   |
| Explosion safety category for dust       | ATEX dust-ex-protection, PTB 10, ATEX 3013, Ex II(2) GD   |
| Lifespan, electrical                     | 100,000 operations  |
| Lifespan, mechanical                     | 100,000 Operations  |
| 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  |
| <b>Climatic environmental conditions</b> |   |
| 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   |
| <b>Terminal capacities</b>                            |  |  |
| Terminal capacity (flexible with ferrule)             |  | 2 x (1 - 6) mm <sup>2</sup> , ferrule to DIN 46228<br>1 x (1 - 6) mm <sup>2</sup> , ferrule to DIN 46228   |
| Terminal capacity (solid)                             |  | 2 x (1 - 6) mm <sup>2</sup><br>1 x (1 - 6) mm <sup>2</sup>   |
| Terminal capacity (solid/stranded AWG)                |  | 18 - 10  |
| Stripping length (main cable)                         |  | 10 mm  |
| Tightening torque                                     |  | 1.7 Nm, Screw terminals, Main cable<br>1 Nm, Screw terminals, Control circuit cables   |
| <b>Electrical rating</b>                              |  |  |
| Rated frequency - min                                 |  | 50 Hz  |
| Rated frequency - max                                 |  | 60 Hz  |
| Rated operational current (Ie)                        |  | 1.6 A  |
| Rated operational power at AC-3, 220/230 V, 50 Hz     |  | 0.25 kW  |
| Rated operational power at AC-3, 380/400 V, 50 Hz     |  | 0.55 kW  |
| Rated operational power at AC-3, 440 V, 50 Hz         |  | 0.55 kW  |
| Rated operational power at AC-3, 500 V, 50 Hz         |  | 0.75 kW  |
| Rated operational power at AC-3, 690 V, 50 Hz         |  | 1.1 kW   |
| Rated operational voltage (Ue) - min                  |  | 690 V  |
| Rated operational voltage (Ue) - max                  |  | 690 V  |
| Rated uninterrupted current (Iu)                      |  | 1.6 A  |
| <b>Short-circuit rating</b>                           |  |  |
| Rated short-circuit breaking capacity Icu at 400 V AC |  | 150 kA   |
| Rated short-circuit breaking capacity Ics at 400 V AC |  | 150 kA   |
| Rated short-circuit breaking capacity Icu at 440 V AC |  | 150 kA   |
| Rated short-circuit breaking capacity Ics at 440 V AC |  | 150 kA   |
| Rated short-circuit breaking capacity Icu at 500 V AC |  | 150 kA   |
| Rated short-circuit breaking capacity Ics at 500 V AC |  | 150 kA   |
| Rated short-circuit breaking capacity Icu at 690 V AC |  | 150 kA   |
| Rated short-circuit breaking capacity Ics at 690 V AC |  | 150 kA   |
| 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) |
| Short-circuit current rating (type E)                 |  | Accessories required BK25/3-PKZ0-E<br>65 kA, 240 V, SCCR (UL/CSA)<br>65 kA, 480 Y/277 V, SCCR (UL/CSA)<br>50 kA, 600 Y/347 V, SCCR (UL/CSA)  |
| Short-circuit release                                 |  | ± 20% tolerance, Trip blocks<br>24.8 A, Irm, Setting range max.<br>Basic device fixed 15.5 x Iu, Trip Blocks   |
| <b>Switching capacity</b>                             |  |  |
| Switching capacity                                    |  | 1.6 A (3 contacts in series), DC-5 up to 250V<br>1.6 A, AC-3 up to 690 V   |
| <b>Motor rating</b>                                   |  |  |
| Assigned motor power at 230/240 V, 60 Hz, 1-phase     |  | 0.1 HP   |
| Assigned motor power at 460/480 V, 60 Hz, 3-phase     |  | 0.75 HP  |
| Assigned motor power at 575/600 V, 60 Hz, 3-phase     |  | 0.75 HP  |
| <b>Trip blocks</b>                                    |  |  |
| Overload release current setting - min                |  | 1 A  |
| Overload release current setting - max                |  | 1.6 A  |

|  |  |  |
|--|--|--|
| Tripping characteristic  |  | Overload trigger: tripping class 10 A  |
| <b>Design verification</b>   |  |  |
| Equipment heat dissipation, current-dependent P <sub>vid</sub>                   |  | 5.36 W   |
| Heat dissipation capacity P <sub>diss</sub>                                      |  | 0 W  |
| Heat dissipation per pole, current-dependent P <sub>vid</sub>                    |  | 1.79 W   |
| Rated operational current for specified heat dissipation (I <sub>n</sub> )       |  | 1.6 A  |
| Static heat dissipation, non-current-dependent P <sub>vs</sub>                   |  | 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 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.                         |

## Technical data ETIM 9.0

|   |    |  |
|---|----|--|
| Low-voltage industrial components (EG000017) / Motor protection circuit-breaker (EC000074)  |    |  |
| Electric engineering, automation, process control engineering / Low-voltage switch technology / Circuit breaker (LV < 1 kV) / Motor protection circuit-breaker (ecl@ss13-27-37-04-01 [AGZ529021]) |    |  |
| Overload release current setting  | A  | 1 - 1.6                                  |
| Adjustment range undelayed short-circuit release  | A  | 25 - 25                                  |
| With thermal overload protection  |    | No                                       |
| Phase failure sensitive   |    | Yes                                      |
| Switch off technique  |    | Thermomagnetic                           |
| Rated operating voltage   | V  | 690 - 690                                |
| Rated permanent current I <sub>u</sub>  | A  | 1.6                                      |
| Rated operation power at AC-3, 230 V  | kW | 0.25                                     |
| Rated operation power at AC-3, 400 V  | kW | 0.55                                     |
| Power loss  | W  | 5.36                                     |
| Type of electrical connection of main circuit   |    | Screw connection                         |
| Type of control element   |    | Turn button                              |
| Device construction   |    | Built-in device fixed built-in technique |
| With integrated auxiliary switch  |    | No                                       |
| With integrated under voltage release   |    | No                                       |
| Number of poles   |    | 3  |
| Rated short-circuit breaking capacity I <sub>cu</sub> at 400 V, AC  | kA | 150                                      |
| Degree of protection (IP)   |    | IP20                                     |
| Height  | mm | 93                                       |
| Width   | mm | 45                                       |

