

Motor-protective circuit-breaker, 440 V: 0.25 kW, Ir= 0.4 - 0.63 A, IP20



**Part no.** PKZM01-0,63  
**278478**  
**EL Number** 4365013  
**(Norway)**

| General specifications                 |  |
|--|--|
| Product name                           | Eaton Moeller® series PKZM01 Motor-protective circuit-breaker  |
| Part no.                               | PKZM01-0,63  |
| EAN                                    | 4015082784782  |
| Product Length/Depth                   | 93 millimetre  |
| Product height                         | 90 millimetre  |
| Product width                          | 45 millimetre  |
| Product weight                         | 0.263 kilogram   |
| Certifications                         | CSA Class No.: 3211-05<br>UL 60947-4-1<br>CE<br>VDE 0660<br>UL File No.: E36332<br>UL Category Control No.: NLRV<br>CSA<br>UL<br>CSA File No.: 165628<br>IEC/EN 60947<br>CSA-C22.2 No. 60947-4-1-14<br>IEC/EN 60947-4-1<br>UL<br>CSA |
| Product Tradename                      | PKZM01   |
| 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.  |
| Features & Functions                   |  |
| Actuator type                          | Push 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 information                    |  |
| Connection                             | Screw terminals  |
| Degree of protection                   | Terminals: IP00<br>IP20  |
| Lifespan, electrical                   | 50,000 operations (at 400V, AC-3)  |
| Lifespan, mechanical                   | 50,000 Operations (Main conducting paths)  |
| Mounting position                      | Can be snapped on to IEC/EN 60715 top-hat rail with 7.5 or 15 mm height.   |
| Operating frequency                    | 25 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               | -25 - 55 °C, Operating range<br>-5 - 40 °C to IEC/EN 60947, VDE 0660<br>≤ 0.25 %/K, residual error for T > 40°   |
| Climatic environmental conditions      |  |
| Altitude                               | Max. 2000 m  |

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| 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, constant, to IEC 60068-2-78<br>Damp heat, cyclic, to IEC 60068-2-30  |
| <b>Terminal capacities</b>   |  |   |
| Terminal capacity (flexible with ferrule)  |  | 1 x (1 - 6) mm <sup>2</sup> , ferrule to DIN 46228<br>2 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   |
| <b>Electrical rating</b>   |  |   |
| Rated frequency - min  |  | 50 Hz   |
| Rated frequency - max  |  | 60 Hz   |
| Rated operational current (Ie)   |  | 0.63 A  |
| 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 power at AC-3, 440 V, 50 Hz                                    |  | 0.18 kW   |
| Rated operational voltage (Ue) - min   |  | 690 V   |
| Rated operational voltage (Ue) - max   |  | 690 V   |
| Rated uninterrupted current (Iu)   |  | 0.63 A  |
| <b>Short-circuit rating</b>  |  |   |
| Rated short-circuit breaking capacity Icu at 400 V AC                            |  | 50 kA   |
| Short-circuit current  |  | 60 kA DC, up to 250 V DC, Main conducting paths   |
| Short-circuit release  |  | 9.8 A, I <sub>rm</sub> , Setting range max.<br>Basic device fixed 15.5 x I <sub>u</sub> , Trip Blocks<br>± 20% tolerance, Trip blocks |
| <b>Switching capacity</b>  |  |   |
| Switching capacity   |  | 0.63 A (3 contacts in series), DC-5 up to 250V<br>0.63 A, AC-3 up to 440 V  |
| <b>Trip blocks</b>   |  |   |
| Overload release current setting - min   |  | 0.4 A   |
| Overload release current setting - max   |  | 0.63 A  |
| Tripping characteristic  |  | Overload trigger: tripping class 10 A   |
| <b>Design verification</b>   |  |   |
| Equipment heat dissipation, current-dependent P <sub>vid</sub>                   |  | 5.16 W  |
| Heat dissipation capacity P <sub>diss</sub>                                      |  | 0 W   |
| Heat dissipation per pole, current-dependent P <sub>vid</sub>                    |  | 1.72 W  |
| Rated operational current for specified heat dissipation (I <sub>n</sub> )       |  | 0.63 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.  |

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| 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

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|---|----|--|
| 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  | 0.4 - 0.63                               |
| Adjustment range undelayed short-circuit release  | A  | 9.8 - 9.8                                |
| 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  | 0.63                                     |
| Rated operation power at AC-3, 230 V  | kW | 0.09                                     |
| Rated operation power at AC-3, 400 V  | kW | 0.12                                     |
| Power loss  | W  | 5.16                                     |
| Type of electrical connection of main circuit   |    | Screw connection                         |
| Type of control element   |    | Push 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 | 50                                       |
| Degree of protection (IP)   |    | IP20                                     |
| Height  | mm | 90                                       |
| Width   | mm | 45                                       |
| Depth   | mm | 93                                       |