

Short-circuit protective breaker, Iu 12 A, Irm 186 A, Screw terminals, Also suitable for motors with efficiency class IE3.

Part no. **PKM0-12**  
**278490**

| <b>General specifications</b>                  |  |  |
|--|--|--|
| Product name                                   |  | Eaton Moeller® series PKM0 Short-circuit protective breaker  |
| Part no.                                       |  | PKM0-12  |
| EAN  |  | 4015082784904  |
| Product Length/Depth                           |  | 76 millimetre  |
| Product height                                 |  | 93 millimetre  |
| Product width                                  |  | 45 millimetre  |
| Product weight                                 |  | 0.288 kilogram   |
| Compliances                                    |  | CE Marked  |
| Certifications                                 |  | IEC 60947-4-1<br>UL 508<br>CSA Std. C22.2 No. 14<br>VDE<br>IEC/EN 60947<br>VDE 0660                            |
| Product Tradename                              |  | PKM0   |
| Product Type                                   |  | Short-circuit protective breaker   |
| Product Sub Type                               |  | None   |
| Catalog Notes                                  |  | Can be snapped on to IEC/EN 60715 top-hat rail with 7.5 or 15 mm height.                                       |
| <b>Features &amp; Functions</b>                |  |  |
| Actuator type                                  |  | Turn button  |
| Number of poles                                |  | Three-pole   |
| <b>General information</b>                     |  |  |
| Connection                                     |  | Screw terminals  |
| Degree of protection                           |  | IP20<br>Terminals: IP00  |
| Lifespan, electrical                           |  | 100,000 operations (at 400V, AC-3)   |
| Lifespan, mechanical                           |  | 100,000 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                            |  | 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  |
| Temperature compensation                       |  | -5 - 40 °C to IEC/EN 60947, VDE 0660<br>-25 - 55 °C, Operating range<br>≤ 0.25 %/K, residual error for T > 40° |
| Type   |  | Short-circuit protective device only   |
| <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, constant, to IEC 60068-2-78   |

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|--|--|---|
|  |  | Damp heat, cyclic, to IEC 60068-2-30  |
| <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)  |  | 1 x (1 - 6) mm <sup>2</sup><br>2 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)   |  | 12 A  |
| Rated operational power at AC-3, 220/230 V, 50 Hz                                |  | 3 kW  |
| Rated operational power at AC-3, 380/400 V, 50 Hz                                |  | 5.5 kW  |
| Rated operational power at AC-3, 440 V, 50 Hz                                    |  | 5.5 kW  |
| Rated operational power at AC-3, 500 V, 50 Hz                                    |  | 5.5 kW  |
| Rated operational power at AC-3, 690 V, 50 Hz                                    |  | 11 kW   |
| Rated operational voltage (Ue) - min   |  | 690 V   |
| Rated operational voltage (Ue) - max   |  | 690 V   |
| Rated uninterrupted current (Iu)   |  | 12 A  |
| <b>Short-circuit rating</b>  |  |   |
| Rated short-circuit breaking capacity Icu at 400 V AC                            |  | 50 kA   |
| Short-circuit release  |  | ± 20% tolerance, Trip blocks<br>Basic device fixed 15.5 x Iu, Trip Blocks<br>186 A, Irm, Setting range max. |
| <b>Switching capacity</b>  |  |   |
| Switching capacity   |  | 12 A (3 contacts in series), DC-5 up to 250V<br>12 A, AC-3 up to 690 V                                      |
| <b>Trip blocks</b>   |  |   |
| Overload release current setting - min   |  | 0 A   |
| Overload release current setting - max   |  | 0 A   |
| <b>Design verification</b>   |  |   |
| Equipment heat dissipation, current-dependent Pvid                               |  | 6.64 W  |
| Heat dissipation capacity Pdis   |  | 0 W   |
| Heat dissipation per pole, current-dependent Pvid                                |  | 2.21 W  |
| Rated operational current for specified heat dissipation (In)                    |  | 12 A  |
| Static heat dissipation, non-current-dependent Pvs                               |  | 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.  |

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|-------------------------------------|--|--|
| 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 - 0                                    |
| Adjustment range undelayed short-circuit release  | A  | 186 - 186                                |
| With thermal overload protection  |    | No                                       |
| Phase failure sensitive   |    | No                                       |
| Switch off technique  |    | Magnetic                                 |
| Rated operating voltage   | V  | 690 - 690                                |
| Rated permanent current I <sub>u</sub>  | A  | 12                                       |
| Rated operation power at AC-3, 230 V  | kW | 3  |
| Rated operation power at AC-3, 400 V  | kW | 5.5                                      |
| Power loss  | W  | 6.64                                     |
| 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 | 50                                       |
| Degree of protection (IP)   |    | IP20                                     |
| Height  | mm | 93                                       |
| Width   | mm | 45                                       |
| Depth   | mm | 76                                       |