

Motor-protective circuit-breaker, 3p, Ir=8-12A



Part no. PKZM0-12  
278486  
EL Number 4365083  
(Norway)

General specifications		
Product name		Eaton Moeller® series PKZM0 Motor-protective circuit-breaker
Part no.		PKZM0-12
EAN		4015082784867
Product Length/Depth		76 millimetre
Product height		93 millimetre
Product width		45 millimetre
Product weight		0.295 kilogram
Certifications		CE UL File No.: E36332 IEC/EN 60947 UL CSA File No.: 165628 VDE 0660 CSA-C22.2 No. 60947-4-1-14 CSA Class No.: 3211-05 IEC/EN 60947-4-1 UL Category Control No.: NLRV UL 60947-4-1 CSA
Product Tradename		PKZM0
Product Type		Motor-protective circuit-breaker
Product Sub Type		None
Catalog Notes		IE3-ready devices are identified by the logo on their packaging.
Features & Functions		
Actuator type		Turn button
Features		Phase-failure sensitivity (according to IEC/EN 60947-4-1, VDE 0660 Part 102)
Functions		Phase failure sensitive Motor protection
Number of poles		Three-pole
General information		
Connection		Screw terminals
Degree of protection		Terminals: IP00 IP20
Explosion safety category for dust		ATEX dust-ex-protection, PTB 10, ATEX 3013, Ex II(2) GD
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		Branch circuit: Manual type E if used with terminal, or suitable for group installations, (UL/CSA) Also motors with efficiency class IE3
Temperature compensation		-5 - 40 °C to IEC/EN 60947, VDE 0660 -25 - 55 °C, Operating range ≤ 0.25 %/K, residual error for T > 40°
Climatic environmental conditions		
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 Damp heat, constant, to IEC 60068-2-78
<b>Terminal capacities</b>		
Terminal capacity (flexible with ferrule)		1 x (1 - 6) mm <sup>2</sup> , ferrule to DIN 46228 2 x (1 - 6) mm <sup>2</sup> , ferrule to DIN 46228
Terminal capacity (solid)		2 x (1 - 6) mm <sup>2</sup> 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 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
Rated short-circuit breaking capacity Ics at 400 V AC		38 kA
Rated short-circuit breaking capacity Icu at 440 V AC		15 kA
Rated short-circuit breaking capacity Ics at 440 V AC		12 kA
Rated short-circuit breaking capacity Icu at 500 V AC		15 kA
Rated short-circuit breaking capacity Ics at 500 V AC		4 kA
Rated short-circuit breaking capacity Icu at 690 V AC		3 kA
Rated short-circuit breaking capacity Ics at 690 V AC		2 kA
Short-circuit current		60 kA DC, up to 250 V DC, Main conducting paths
Short-circuit current rating (group protection)		18 kA, 600 V High Fault, Fuse, SCCR (UL/CSA) with 600 A, 600 V High Fault, CB, SCCR (UL/CSA) 18 kA, 600 V High Fault, CB, SCCR (UL/CSA) with 600 A, 600 V High Fault, Fuse, SCCR (UL/CSA) 65 kA, 480 V High Fault, Fuse, SCCR (UL/CSA) with 600 A, 480 V High Fault, Fuse, SCCR (UL/CSA) 65 kA, 480 V High Fault, CB, SCCR (UL/CSA) with 600 A, 480 V High Fault, CB, SCCR (UL/CSA)
Short-circuit current rating (type E)		65 kA, 240 V, SCCR (UL/CSA) 18 kA, 600 Y/347 V, SCCR (UL/CSA) Accessories required BK25/3-PKZ0-E 65 kA, 480 Y/277 V, SCCR (UL/CSA)
Short-circuit release		Basic device fixed 15.5 x Iu, Trip Blocks ± 20% tolerance, Trip blocks 186 A, Irm, Setting range max.
<b>Switching capacity</b>		
Switching capacity		12 A, AC-3 up to 690 V 12 A (3 contacts in series), DC-5 up to 250V
<b>Motor rating</b>		
Assigned motor power at 115/120 V, 60 Hz, 1-phase		0.5 HP
Assigned motor power at 200/208 V, 60 Hz, 3-phase		3 HP
Assigned motor power at 230/240 V, 60 Hz, 1-phase		2 HP
Assigned motor power at 230/240 V, 60 Hz, 3-phase		3 HP

Assigned motor power at 460/480 V, 60 Hz, 3-phase		7.5 HP
Assigned motor power at 575/600 V, 60 Hz, 3-phase		10 HP
<b>Trip blocks</b>		
Overload release current setting - min		8 A
Overload release current setting - max		12 A
Tripping characteristic		Overload trigger: tripping class 10 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.
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	8 - 12
Adjustment range undelayed short-circuit release	A	186 - 186
With thermal overload protection		No
Phase failure sensitive		Yes
Switch off technique		Thermomagnetic
Rated operating voltage	V	690 - 690
Rated permanent current Iu	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 Icu at 400 V, AC	kA	50
Degree of protection (IP)		IP20
Height	mm	93
Width	mm	45
Depth	mm	76