

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



Part no. PKZM0-12-SC
278487
EL Number 4315195
(Norway)

General specifications		
Product name		Eaton Moeller® series PKZM0 Motor-protective circuit-breaker
Part no.		PKZM0-12-SC
EAN		4015082784874
Product Length/Depth		76 millimetre
Product height		93 millimetre
Product width		45 millimetre
Product weight		0.291 kilogram
Compliances		CE Marked
Certifications		CSA Std. C22.2 No. 14 UL 508 IEC 60947-4-1 VDE CSA UL 60947-4-1 UL UL Category Control No.: NLRV IEC/EN 60947-4-1 VDE 0660 CE CSA Class No.: 3211-05 CSA File No.: 165628 UL File No.: E36332 IEC/EN 60947 CSA-C22.2 No. 60947-4-1-14
Product Tradename		PKZM0
Product Type		Motor-protective circuit-breaker
Product Sub Type		None
Catalog Notes		This item can only be ordered until December 31, 2023 with a maximum delivery date of May 31, 2024.
Features & Functions		
Actuator type		Turn button
Features		Phase-failure sensitivity (according to IEC/EN 60947-4-1, VDE 0660 Part 102)
Functions		Motor protection Phase failure sensitive
Number of poles		Three-pole
General information		
Connection		Screw terminals on feed side Spring-cage terminals on output side
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		Also motors with efficiency class IE3 Branch circuit: Manual type E if used with terminal, or suitable for group installations, (UL/CSA)
Temperature compensation		≤ 0.25 %/K, residual error for T > 40°

			-5 - 40 °C to IEC/EN 60947, VDE 0660 -25 - 55 °C, Operating range
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
Terminal capacities			
Terminal capacity (flexible with ferrule)			1 x (1 - 6) mm ² , ferrule to DIN 46228, Screw terminals 2 x (1 - 6) mm ² , ferrule to DIN 46228, Screw terminals
Terminal capacity (flexible)			1 x (0.75 - 2.5) mm ² , ferrule to DIN 46228, Spring-loaded terminals 2 x (0.75 - 2.5) mm ² , ferrule to DIN 46228, Spring-loaded terminals
Terminal capacity (solid)			2 x (0.75 - 2.5) mm ² , Spring-loaded terminals 1 x (0.75 - 2.5) mm ² , Spring-loaded terminals
Terminal capacity (solid/stranded AWG)			18 - 14
Stripping length (main cable)			10 mm
Tightening torque			1 Nm, Screw terminals, Control circuit cables 1.7 Nm, Screw terminals, Main cable
Electrical rating			
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
Short-circuit rating			
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 current rating (group protection)			600 A, 600 V High Fault, max. Fuse, SCCR (UL/CSA) 18 kA, 600 V High Fault, CB, SCCR (UL/CSA) 600 A, 600 V High Fault, max. CB, SCCR (UL/CSA) 18 kA, 600 V High Fault, Fuse, SCCR (UL/CSA)
Short-circuit current rating (type E)			65 kA, 240 V, SCCR (UL/CSA) 65 kA, 480 Y/277 V, SCCR (UL/CSA) Accessories required BK25/3-PKZ0-E 18 kA, 600 Y/347 V, SCCR (UL/CSA)
Short-circuit release			± 20% tolerance, Trip blocks Basic device fixed 15.5 x Iu, Trip Blocks 186 A, Irm, Setting range max.
Switching capacity			
Switching capacity			12 A (3 contacts in series), DC-5 up to 250V 12 A, AC-3 up to 690 V
Motor rating			
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
Trip blocks			

Overload release current setting - min		8 A
Overload release current setting - max		12 A
Tripping characteristic		Overload trigger: tripping class 10 A
Design verification		
Equipment heat dissipation, current-dependent P _{vid}		6.64 W
Heat dissipation capacity P _{diss}		0 W
Heat dissipation per pole, current-dependent P _{vid}		2.21 W
Rated operational current for specified heat dissipation (I _n)		12 A
Static heat dissipation, non-current-dependent P _{vs}		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 I _u	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 _{cu} at 400 V, AC	kA	50
Degree of protection (IP)		IP20

Height		mm	93
Width		mm	45
Depth		mm	76