

Motor-protective circuit-breaker, 440 V: 1.5 kW, Ir= 1.6 - 2.5 A, IP20



Part no. PKZM01-2,5
278481
EL Number 4365016
(Norway)

General specifications		
Product name		Eaton Moeller® series PKZM01 Motor-protective circuit-breaker
Part no.		PKZM01-2,5
EAN		4015082784812
Product Length/Depth		93 millimetre
Product height		90 millimetre
Product width		45 millimetre
Product weight		0.293 kilogram
Certifications		VDE 0660 CSA CE IEC/EN 60947-4-1 UL Category Control No.: NLRV UL UL 60947-4-1 CSA File No.: 165628 CSA Class No.: 3211-05 CSA-C22.2 No. 60947-4-1-14 UL File No.: E36332 IEC/EN 60947
Product Tradename		PKZM01
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		Push 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
Degree of protection		Terminals: IP00 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 Branch circuit: Manual type E if used with terminal, or suitable for group installations, (UL/CSA)
Temperature compensation		-25 - 55 °C, Operating range ≤ 0.25 %/K, residual error for T > 40° -5 - 40 °C to IEC/EN 60947, VDE 0660
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, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
Terminal capacities		
Terminal capacity (flexible with ferrule)		1 x (1 - 6) mm ² , ferrule to DIN 46228 2 x (1 - 6) mm ² , ferrule to DIN 46228
Terminal capacity (solid)		1 x (1 - 6) mm ² 2 x (1 - 6) mm ²
Terminal capacity (solid/stranded AWG)		18 - 10
Stripping length (main cable)		10 mm
Electrical rating		
Rated frequency - min		50 Hz
Rated frequency - max		60 Hz
Rated operational current (Ie)		2.5 A
Rated operational power at AC-3, 220/230 V, 50 Hz		0.37 kW
Rated operational power at AC-3, 380/400 V, 50 Hz		0.75 kW
Rated operational power at AC-3, 440 V, 50 Hz		1.1 kW
Rated operational voltage (Ue) - min		440 V
Rated operational voltage (Ue) - max		440 V
Rated uninterrupted current (Iu)		2.5 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)		50 kA, 600 V High Fault, Fuse, SCCR (UL/CSA) with 600 A, 600 V High Fault, Fuse, SCCR (UL/CSA) 50 kA, 600 V High Fault, CB, SCCR (UL/CSA) with 600 A, 600 V High Fault, CB, SCCR (UL/CSA)
Short-circuit release		38.8 A, I _{rm} , Setting range max. Basic device fixed 15.5 x I _u , Trip Blocks ± 20% tolerance, Trip blocks
Switching capacity		
Switching capacity		2.5 A (3 contacts in series), DC-5 up to 250V 2.5 A, AC-3 up to 440 V
Motor rating		
Assigned motor power at 200/208 V, 60 Hz, 3-phase		0.5 HP
Assigned motor power at 230/240 V, 60 Hz, 1-phase		0.17 HP
Assigned motor power at 230/240 V, 60 Hz, 3-phase		0.5 HP
Assigned motor power at 460/480 V, 60 Hz, 3-phase		1 HP
Assigned motor power at 575/600 V, 60 Hz, 3-phase		1.5 HP
Trip blocks		
Overload release current setting - min		1.6 A
Overload release current setting - max		2.5 A
Design verification		
Equipment heat dissipation, current-dependent P _{vid}		5.16 W
Heat dissipation capacity P _{diss}		0 W
Heat dissipation per pole, current-dependent P _{vid}		1.72 W
Rated operational current for specified heat dissipation (I _n)		2.5 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	1.6 - 2.5	
Adjustment range undelayed short-circuit release	A	39 - 39	
With thermal overload protection		No	
Phase failure sensitive		Yes	
Switch off technique		Thermomagnetic	
Rated operating voltage	V	440 - 440	
Rated permanent current Iu	A	2.5	
Rated operation power at AC-3, 230 V	kW	0.37	
Rated operation power at AC-3, 400 V	kW	0.75	
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 Icu at 400 V, AC	kA	50	
Degree of protection (IP)		IP20	
Height	mm	90	
Width	mm	45	
Depth	mm	93	