DATASHEET - PKZM01-4





Part no.	PKZM01-4
	278482
EL Number	4365017
(Norway)	

General specifications	
Product name	Eaton Moeller® series PKZM01 Motor-protective circuit-breaker
Part no.	PKZM01-4
EAN	4015082784829
Product Length/Depth	93 millimetre
Product height	90 millimetre
Product width	45 millimetre
Product weight	0.293 kilogram
Certifications	UL UL Category Control No.: NLRV CSA Class No.: 3211-05 CE CSA File No.: 165628 CSA CSA-C22.2 No. 60947-4-1-14 VDE 0660 IEC/EN 60947 UL File No.: E36332 UL 60947-4-1 IEC/EN 60947-4-1
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	Phase failure sensitive Motor protection
Number of poles	Three-pole
General information	
Connection	Screw terminals
Degree of protection	IP20 Terminals: IP00
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	
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	≤ 0.25 %/K, residual error for T > 40° -25 - 55 °C, Operating range -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 exercting temperature (analoged) min	25 °C
Ambient operating temperature (enclosed) - min	40 °C
Ambient operating temperature (enclosed) - max	
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)	2 x (1 - 6) mm², ferrule to DIN 46228 1 x (1 - 6) mm², ferrule to DIN 46228
Terminal capacity (solid)	2 x (1 - 6) mm ² 1 x (1 - 6) mm ²
Terminal capacity (solid/stranded AWG)	18 - 10
Stripping length (main cable)	10 mm
Tightening torque	1.7 Nm, Screw terminals, Main cable
Electrical rating	
Rated frequency - min	50 Hz
Rated frequency - max	60 Hz
Rated operational current (Ie)	4 A
Rated operational power at AC-3, 220/230 V, 50 Hz	0.75 kW
Rated operational power at AC-3, 380/400 V, 50 Hz	1.5 kW
Rated operational power at AC-3, 440 V, 50 Hz	1.5 kW
Rated operational voltage (Ue) - min	440 V
Rated operational voltage (Ue) - max	440 V
Rated uninterrupted current (Iu)	4 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	62 A, Irm, Setting range max. ± 20% tolerance, Trip blocks Basic device fixed 15.5 x lu, Trip Blocks
Switching capacity	
Switching capacity	4 A (3 contacts in series), DC-5 up to 250V 4 A, AC-3 up to 440 V
Motor rating	
Assigned motor power at 115/120 V, 60 Hz, 1-phase	0.125 HP
Assigned motor power at 200/208 V, 60 Hz, 3-phase	0.75 HP
Assigned motor power at 230/240 V, 60 Hz, 1-phase	0.33 HP
Assigned motor power at 230/240 V, 60 Hz, 3-phase	0.75 HP
Assigned motor power at 230/240 V, 60 Hz, 3-phase Assigned motor power at 460/480 V, 60 Hz, 3-phase	0.75 HP 2 HP
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Assigned motor power at 460/480 V, 60 Hz, 3-phase Assigned motor power at 575/600 V, 60 Hz, 3-phase	2 HP
Assigned motor power at 460/480 V, 60 Hz, 3-phase Assigned motor power at 575/600 V, 60 Hz, 3-phase	2 HP
Assigned motor power at 460/480 V, 60 Hz, 3-phase Assigned motor power at 575/600 V, 60 Hz, 3-phase Trip blocks	2 HP 3 HP
Assigned motor power at 460/480 V, 60 Hz, 3-phase Assigned motor power at 575/600 V, 60 Hz, 3-phase Trip blocks Overload release current setting - min	2 HP 3 HP 2 5 A
Assigned motor power at 460/480 V, 60 Hz, 3-phase Assigned motor power at 575/600 V, 60 Hz, 3-phase Trip blocks Overload release current setting - min Overload release current setting - max Tripping characteristic	2 HP 3 HP 2.5 A 4 A
Assigned motor power at 460/480 V, 60 Hz, 3-phase Assigned motor power at 575/600 V, 60 Hz, 3-phase Trip blocks Overload release current setting - min Overload release current setting - max Tripping characteristic Design verification	2 HP 3 HP 2.5 A 4 A
Assigned motor power at 460/480 V, 60 Hz, 3-phase Assigned motor power at 575/600 V, 60 Hz, 3-phase Trip blocks Overload release current setting - min Overload release current setting - max Tripping characteristic Design verification Equipment heat dissipation, current-dependent Pvid	2 HP 3 HP 2.5 A 4 A Overload trigger: tripping class 10 A
Assigned motor power at 460/480 V, 60 Hz, 3-phase Assigned motor power at 575/600 V, 60 Hz, 3-phase Trip blocks Overload release current setting - min Overload release current setting - max Tripping characteristic Design verification Equipment heat dissipation, current-dependent Pvid Heat dissipation capacity Pdiss	2 HP 3 HP 2.5 A 4 A Overload trigger: tripping class 10 A 5.33 W 0 W
Assigned motor power at 460/480 V, 60 Hz, 3-phase Assigned motor power at 575/600 V, 60 Hz, 3-phase Trip blocks Overload release current setting - min Overload release current setting - max Tripping characteristic Design verification Equipment heat dissipation, current-dependent Pvid Heat dissipation per pole, current-dependent Pvid	2 HP 3 HP 2.5 A 4 A 0 verload trigger: tripping class 10 A 5.33 W 0 W 1.78 W
Assigned motor power at 460/480 V, 60 Hz, 3-phase Assigned motor power at 575/600 V, 60 Hz, 3-phase Trip blocks Overload release current setting - min Overload release current setting - max Tripping characteristic Design verification Equipment heat dissipation, current-dependent Pvid Heat dissipation capacity Pdiss Heat dissipation per pole, current-dependent Pvid Rated operational current for specified heat dissipation (In)	2 HP 3 HP 2.5 A 4 A 0verload trigger: tripping class 10 A 5.33 W 0 W 1.78 W 4 A
Assigned motor power at 460/480 V, 60 Hz, 3-phase Assigned motor power at 575/600 V, 60 Hz, 3-phase Trip blocks Overload release current setting - min Overload release current setting - max Tripping characteristic Design verification Equipment heat dissipation, current-dependent Pvid Heat dissipation capacity Pdiss Heat dissipation per pole, current-dependent Pvid Rated operational current for specified heat dissipation (In) Static heat dissipation, non-current-dependent Pvs	2 HP 3 HP 2.5 A 4 A Overload trigger: tripping class 10 A 5.33 W 5.33 W 0 W 1.78 W 4 A 0 W
Assigned motor power at 460/480 V, 60 Hz, 3-phase Assigned motor power at 575/600 V, 60 Hz, 3-phase Trip blocks Overload release current setting - min Overload release current setting - max Tripping characteristic Design verification Equipment heat dissipation, current-dependent Pvid Heat dissipation capacity Pdiss Heat dissipation per pole, current-dependent Pvid Rated operational current for specified heat dissipation (In) Static heat dissipation, non-current-dependent Pvs 10.2.2 Corrosion resistance	2 HP 3 HP 2.5 A 4 A 0verload trigger: tripping class 10 A 5.33 W 0 VV 1.78 W 1.78 W 0 VV 0 V 0 V 0 V 0 V 0 V 0 V 0 V
Assigned motor power at 460/480 V, 60 Hz, 3-phase Assigned motor power at 575/600 V, 60 Hz, 3-phase Trip blocks Overload release current setting - min Overload release current setting - max Tripping characteristic Design verification Equipment heat dissipation, current-dependent Pvid Heat dissipation capacity Pdiss Heat dissipation per pole, current-dependent Pvid Rated operational current for specified heat dissipation (In) Static heat dissipation, non-current-dependent Pvs	2 HP 3 HP 2.5 A 4 A Overload trigger: tripping class 10 A 5.33 W 5.33 W 0 W 1.78 W 4 A 0 W

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])

Adjustment range undelayed border circuit release 6 6 6 With themal overload protection No 7 Phase failure sensitive Termonagnetic 7 Switch off technique V 40-440 Rated operation power at AC-3, 200 V K 40 Rated operation power at AC-3, 400 V K 5 Power loss V 5.3 Type of electrical connection of main circuit Y Push button View integrated auxiliary switch Y Push button With integrated under voltage release Y Push button Number of poles Y Solon Solon Rated short-circuit (P) Y Solon Solon With integrated under voltage release Y Y Solon Number of poles Y Solon Solon Rated short-circuit (P) Y Solon Solon Height Y Solon Solon Roted short-circuit Poles Y Solon Solon Rated short-circuit Poles Y Solon Solon Roted short-circuit P				
With thermal overload protection No Phase failure sensitive No Switch off technique Temmonagnetic Rated operating voltage V 40 - 440 Rated operating voltage A 5 Rated operating power at AC-3,230 V KW 0.5 Rated operating power at AC-3,230 V KW 5.3 Power loss So 5.3 Power loss So South off technique View of operating ower at AC-3,200 V M 5.3 Power loss South off technique South off technique Power loss South off technique South off technique View of operating ower at AC-3,200 V South off technique South off technique Power loss South off technique South off technique South off technique Power loss South off technique South off technique South off technique Number of poles South off technique South off technique South off technique Number of poles South off technique South off technique South off technique South off technique Read short-circuit breaking capacity low off technique	Overload release current setting	Д	4	2.5 - 4
Phase failure sensitive Yes Switch off technique Termomagnetic Rate operating voltage 40 Rate operating voltage V 40-440 Rate operating voltage V 40 Rate operating voltage V 40 Rate operating voltage V 40 Rate operation power at AC-3,230 V KW 5.3 Power loss V Said Power loss V V Said Type of electrical connection of main circuit V Said Screw connection View of control element V V Suith indevice fixed built-in technique With integrated auxiliary workch V No No Number of poles V Soid Soid Rated short-circuit breaking capacity (cu at 400 V, AC No Soid Degree of protection (IP) V Soid Soid Rated short-circuit breaking capacity (cu at 400 V, AC No Soid Bate of protection (IP) V Soid Soid Rat	Adjustment range undelayed short-circuit release	Д	4	62 - 62
Switch off technique Thermomagnetic Switch off technique Face Rated operating voltage 40 440 Rated operating voltage G A Rated operating voltage G A Rated operating voltage G A Rated operation power at AC-3, 200 V G NV Rated operation power at AC-3, 400 V G NV Power loss S S Type of electrical connection of main circuit MV S Type of control element MV S Power loss S S Type of control element MI S Vib integrated auxiliary switch MI S With integrated auxiliary switch MI S Number of poles S S Rated short-circuit breaking capacity lcu at 400 V, AC KA S Degree of protection (IP) MI S Height Mom S S	With thermal overload protection			No
Rated operating voltage V 40-440 Rated operating voltage 40-440 Rated operating nower at AC-3, 230 V A 4 Rated operation power at AC-3, 230 V KW 0.5 Rated operation power at AC-3, 200 V S 5.3 Power loss Serve connection Forwer loss Type of electrical connection of main circuit Serve connection Forwer loss Type of control element Serve connection Forwer loss Nuber of poles Serve connection Forwer loss Nuth integrated auxiliary switch Serve Construction No Nuber of poles Serve Construction Forwer loss Number of poles Serve Construction Serve Construction Number of poles Serve Construction Serve Construction Number of poles Serve Construction Serve Construction Rated short-circuit breaking capacity lou at 400 V, AC KA Serve Construction Bage of protection (IP) Serve Construction Forwer construction Height Serve Construction Serve Construction <t< td=""><td>Phase failure sensitive</td><td></td><td></td><td>Yes</td></t<>	Phase failure sensitive			Yes
Rated permanent current lu A 4 Rated operation power at AC-3, 230 V KW .05 Rated operation power at AC-3, 400 V KW .5 Power loss KW .5 Type of electrical connection of main circuit KW .5 Type of control element Screw connection With integrated auxiliary switch KW .5 Number of poles No .5 Rated short-circuit breaking capacity lcu at 400 V, AC KA .5 Degree of protection (IP) KA .5 Height mm .5 Mith .5 .5	Switch off technique			Thermomagnetic
Rated operation power at AC-3, 230 V kW 5 Rated operation power at AC-3, 400 V KW 1.5 Power loss KW 5.3 Type of electrical connection of main circuit VW Screw connection Type of control element VM Sub button Device construction VM Built-in device fixed built-in technique With integrated auxiliary switch VM No Number of poles Screw connection Rated short-circuit breaking capacity lcu at 400 V, AC KA Soce Degree of protection (IP) KA Soce Soce Height mm Soce Soce Soce With mm Soce	Rated operating voltage	V	/	440 - 440
Rated operation power at AC-3, 400 V 6 KW 5.3 Power loss 5.3 Scew connection Type of electrical connection of main circuit 6 M Scew connection Type of electrical connection of main circuit 6 M Scew connection Type of control element 6 M Subtotn Device construction 6 M Scew connection signed sig	Rated permanent current lu	Д	4	4
Power loss W 5.33 Type of electrical connection of main circuit Scew connection Type of control element Powhottom Device construction MM Sub totnon With integrated auxiliary switch MM Sub integrated built-in technique With integrated under voltage release MM Sub connection Number of poles MM Sub connection Pagree of protection (IP) MM Sub connection Height Mone Sub connection With integrated under voltage release MM Sub connection Number of poles MM Sub connection Reade short-circuit breaking capacity lcu at 400 V, AC MA Sub connection Pogree of protection (IP) MM Sub connection Height Mone Sub connection Height Mm Sub connection With Mone mm Sub connection	Rated operation power at AC-3, 230 V	k	W	0.75
Type of electrical connection of main circuit Screw connection Type of control element Push button Device construction Buit-in device fixed built-in technique With integrated auxiliary switch No With integrated under voltage release Screw connection Number of poles Screw connection Rated short-circuit breaking capacity lou at 400 V, AC Mathematic Degree of protection (IP) Mathematic Height Mathematic With Mathematic With Mathematic With Mathematic Mathematic Mathematic	Rated operation power at AC-3, 400 V	k	W	1.5
Type of control element Pois button Device construction Pois button With integrated auxiliary switch Poise With integrated under voltage release Poise Number of poles Poise Rated short-circuit breaking capacity lcu at 400 V, AC Poise Degree of protection (IP) Poise Height Poise With integrated Poise Poise Poise	Power loss	V	N	5.33
Device construction Mode Built-in device fixed built-in technique With integrated auxiliary switch Mode No With integrated under voltage release Mode No Number of poles Mode So Rated short-circuit breaking capacity lcu at 400 V, AC Mode Mode Height Mode Mode With integrated under voltage release Mode Mode So So So Rated short-circuit breaking capacity lcu at 400 V, AC Mode Mode Mode Mode Mode Mode Bight Mode Mode Mode With Mode Mode Mode Mode Mode Mode Mode Mode	Type of electrical connection of main circuit			Screw connection
With integrated auxiliary switch Mo With integrated under voltage release Mo Number of poles 3 Rated short-circuit breaking capacity lcu at 400 V, AC Mo Degree of protection (IP) Mo Height Mo With integrated under voltage release Mo Stated short-circuit breaking capacity lcu at 400 V, AC Mo Degree of protection (IP) Mo Height Mo With integrated under voltage release Mo Mo Mo	Type of control element			Push button
With integrated under voltage release No Number of poles 3 Rated short-circuit breaking capacity lcu at 400 V, AC KA Degree of protection (IP) IP20 Height mm With integrated under voltage release Mithin tegrated under voltage release	Device construction			Built-in device fixed built-in technique
Number of poles 3 Rated short-circuit breaking capacity lcu at 400 V, AC KA Degree of protection (IP) IP20 Height mm Width mm	With integrated auxiliary switch			No
Rated short-circuit breaking capacity lcu at 400 V, AC KA 50 Degree of protection (IP) IP20 Height mm 90 Width mm 45	With integrated under voltage release			No
Degree of protection (IP)Image: Base of protection (IP)Image: IP2Heightmm90Widthmm45	Number of poles			3
Height mm 90 Width mm 45	Rated short-circuit breaking capacity Icu at 400 V, AC	k	κA	50
Width mm 45	Degree of protection (IP)			IP20
	Height	n	nm	90
Depth mm 93	Width	n	nm	45
	Depth	n	nm	93