DATASHEET - PKZM4-58/AK

Motor-protective circuit-breaker, Ir= 50 - 58 A, Screw terminals, Terminations: IP00

Part no. **PKZM4-58/AK**
158255

Product name	Eaton Moeller® series PKZM4 Motor-protective circuit-breaker
Part no.	PKZM4-58/AK
EAN	4015081548439
Product Length/Depth	175 millimetre
Product height	140 millimetre
Product width	55 millimetre
Product weight	1.25 kilogram
Certifications	VDE 0660 CE CSA-C22.2 No. 60947-4-1-14 CSA Class No.: 3211-05 UL Category Control No.: NLRV IEC/EN 60947 UL File No.: E36332 IEC/EN 60947-4-1 CSA File No.: 165628 UL UL 60947-4-1 CSA
Product Tradename	PKZM4
Product Type	Motor-protective circuit-breaker
Product Sub Type	None
Catalog Notes	IE3-ready devices are identified by the logo on their packaging.
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
Degree of protection	IP20 Terminals: IP00
Explosion safety category for dust	ATEX dust-ex-protection, PTB 10, ATEX 3012, Ex II(2) G
Lifespan, electrical	30,000 operations (at 400V, AC-3)
Lifespan, mechanical	30,000 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	15 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° -25 - 55 °C, Operating range -5 - 40 °C to IEC/EN 60947, VDE 0660
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 capacity (flexible with ferrule)	1 x (0.75 - 35) mm^2, Main cables 2 x (0.75 - 25) mm^2, Main cables
Terminal capacity (solid)	1 x (0.75 - 16) mm^2, Main cables 2 x (0.75 - 16) mm^2
Terminal capacity (solid/stranded AWG)	14 - 2
Stripping length (main cable)	14 mm
Tightening torque	3.3 Nm, Screw terminals, Main cable
Rated frequency - min	50 Hz
Rated frequency - max	60 Hz
Rated operational current (Ie)	58 A
Rated operational power at AC-3, 220/230 V, 50 Hz	17 kW
Rated operational power at AC-3, 380/400 V, 50 Hz	30 kW
Rated operational power at AC-3, 440 V, 50 Hz	37 kW
Rated operational power at AC-3, 500 V, 50 Hz	37 kW
Rated operational power at AC-3, 690 V, 50 Hz	55 kW
Rated operational voltage (Ue) - min	690 V
Rated operational voltage (Ue) - max	690 V
Rated uninterrupted current (Iu)	58 A
Short-circuit current	60 kA DC, up to 250 V DC, Main conducting paths
Short-circuit current rating (group protection)	42 kA, 600 V High Fault, Fuse, SCCR (UL/CSA) 600 A, 600 V High Fault, max. CB, SCCR (UL/CSA) 600 A, 600 V High Fault, max. Fuse, SCCR (UL/CSA) 42 kA, 600 V High Fault, CB, SCCR (UL/CSA)
Short-circuit current rating (type E)	Accessories required BK50/3-PKZ4-E 50 kA, 480 Y/277 V, SCCR (UL/CSA) 50 kA, 240 V, SCCR (UL/CSA)
Short-circuit release	± 20% tolerance, Trip blocks Basic device fixed 15.5 x Iu, Trip Blocks 899 A, Irm, Setting range max.
Switching capacity	58 A, AC-3 up to 690 V 58 A (3 contacts in series), DC-5 up to 250V
Assigned motor power at 230/240 V, 60 Hz, 1-phase	10 HP
Assigned motor power at 460/480 V, 60 Hz, 3-phase	40 HP
Assigned motor power at 575/600 V, 60 Hz, 3-phase	50 HP
Connection	Screw terminals
Overload release current setting - min	50 A
Overload release current setting - max	58 A
Tripping characteristic	Overload trigger: tripping class 10 A
Equipment heat dissipation, current-dependent Pvid	28.2 W
Heat dissipation capacity Pdiss	0 W
Heat dissipation per pole, current-dependent Pvid	9.4 W
Rated operational current for specified heat dissipation (In)	58 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 8.0

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@ss10.0.1-27-37-04-01 [AGZ529016])			
Overload release current setting		A	50 - 58
Adjustment range undelayed short-circuit release		A	899 - 899
With thermal protection			No
Phase failure sensitive			Yes
Switch off technique			Thermomagnetic
Rated operating voltage		V	690 - 690
Rated permanent current Iu		A	58
Rated operation power at AC-3, 230 V		kW	17
Rated operation power at AC-3, 400 V		kW	30
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	140
Width		mm	55
Depth		mm	175

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