DATASHEET - PKE12/AK/XTU-4

Motor-protective circuit-breaker, Complete device with AK lockable rotary handle, Electronic, 1 - 4 A, With overload release

Part no. PKE12/AK/XTU-4
158244

General specifications

Product name	Eaton Moeller® series PKE System-protective circuit-breaker
Part no.	PKE12/AK/XTU-4
EAN	4015081548323
Product Length/Depth	101 millimetre
Product height	120 millimetre
Product width	45 millimetre
Product weight	0.425 kilogram
Certifications	CSA-C22.2 No. 60947-4-1-14 UL IEC/EN 60947-4-1 UL 60947-4-1 CSA UL Category Control No.: NLRV UL File No.: E36332 CSA Class No.: 3211-05 VDE 0660 CE IEC/EN 60947 CSA File No.: 165628
Product Tradename	PKE
Product Type	System-protective circuit-breaker
Product Sub Type	None
Catalog Notes	This is a product for Environment A (Industrial). In environment B (household) this device may cause undesirable radio interference. In this case the user may be obliged to take appropriate measures.

Features & Functions

Actuator type	Turn button
Features	Phase-failure sensitivity (according to IEC/EN 60947-4-1, VDE 0660 Part 102)
Fitted with:	AK lockable rotary handle
Functions	Phase failure sensitive Overload release Motor protection Motor protection for heavy starting duty
Number of poles	Three-pole

General information

Current flow times - min	900 (Class 15) AC-4 cycle operation, Main conducting paths Note: Going below the minimum current flow time can cause overheating of the load (motor). For all combinations with an SWD activation, you need not adhere to the minimum current flow times and minimum cut-out periods. 1000 (Class 20) AC-4 cycle operation, Main conducting paths 700 (Class 10) AC-4 cycle operation, Main conducting paths 500 (Class 5) AC-4 cycle operation, Main conducting paths
Cut-out periods - min	≤ 500 ms, main conducting paths, AC-4 cycle operation
Degree of protection	IP20 Terminals: IP00
Lifespan, electrical	50,000 operations (at 400V, AC-3)
Lifespan, mechanical	50,000 Operations (Main conducting paths)
Operating frequency	60 Operations/h
Overload release current setting - min	1 A
Overload release current setting - max	4 A
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

Resistance per pole	10 mΩ
Suitable for	Also motors with efficiency class IE3
Temperature compensation	-25 - 55 °C, Operating range -5 - 40 °C to IEC/EN 60947, VDE 0660
Ambient conditions, mechanical	
Shock resistance	25 g, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms
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)	2 x (1 - 6) mm^2 1 x (1 - 6) mm^2
Terminal capacity (solid/stranded AWG)	14 - 10
Stripping length (main cable)	10 mm
Tightening torque	1.7 Nm, Screw terminals, Main cable 1 Nm, Screw terminals, Control circuit cables
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 power at AC-3, 500 V, 50 Hz	2.2 kW
Rated operational power at AC-3, 690 V, 50 Hz	3 kW
Rated operational voltage (Ue) - min	690 V
Rated operational voltage (Ue) - max	690 V
Rated uninterrupted current (Iu)	4 A
Short-circuit rating	
Short-circuit current rating (group protection)	100 A, Class J, 600 V High Fault, max. Fuse, SCCR (UL/CSA) 100 kA, 600 V High Fault, Fuse, SCCR (UL/CSA)
Short-circuit release	Basic device fixed 15.5 x Iu, Trip Blocks ± 20% tolerance, Trip blocks Delayed approx. 60 ms, Trip blocks Trip block fixed 15.5 x Ir
Switching capacity	
Switching capacity	4 A, AC-3 up to 690 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 460/480 V, 60 Hz, 3-phase	2 HP
Assigned motor power at 575/600 V, 60 Hz, 3-phase	3 HP
Communication	
Connection	Screw terminals
Design verification	
Equipment heat dissipation, current-dependent Pvid	0.9 W

Heat dissipation capacity Pdiss			0 W
Heat dissipation per pole, current-dependent Pvid			0.3 W
Rated operational current for specified heat dissipation (In)			4 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	1 - 4
Adjustment range undelayed short-circuit release		A	62 - 62
With thermal overload protection			No
Phase failure sensitive			Yes
Switch off technique			Electronic
Rated operating voltage		V	690 - 690
Rated permanent current Iu		A	4
Rated operation power at AC-3, 230 V		kW	0.75
Rated operation power at AC-3, 400 V		kW	1.5
Power loss		W	0.9
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	0
Degree of protection (IP)			IP20
Height		mm	120
Width		mm	45
Depth		mm	101

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