

**Motor-protective circuit-breaker, Complete device with AK lockable rotary handle, Electronic, 3 - 12 A, With overload release**

**Part no. PKE12/AK/XTU-12  
158243**

<b>General specifications</b>		
Product name		Eaton Moeller® series PKE System-protective circuit-breaker
Part no.		PKE12/AK/XTU-12
EAN		4015081548316
Product Length/Depth		101 millimetre
Product height		120 millimetre
Product width		45 millimetre
Product weight		0.425 kilogram
Compliances		Contact Manufacturer
Certifications		VDE 0660 CSA File No.: 165628 UL Category Control No.: NLRV CSA CSA-C22.2 No. 60947-4-1-14 CE IEC/EN 60947-4-1 UL IEC/EN 60947 UL File No.: E36332 CSA Class No.: 3211-05 UL 60947-4-1
Product Tradename		PKE
Product Type		System-protective circuit-breaker
Product Sub Type		None
Catalog Notes		IE3-ready devices are identified by the logo on their packaging.
<b>Features &amp; Functions</b>		
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		Overload release Motor protection Phase failure sensitive Motor protection for heavy starting duty
Number of poles		Three-pole
<b>General information</b>		
Current flow times - min		500 (Class 5) AC-4 cycle operation, Main conducting paths Note: Going below the minimum current flow time can cause overheating of the load (motor). 1000 (Class 20) AC-4 cycle operation, Main conducting paths 900 (Class 15) AC-4 cycle operation, Main conducting paths For all combinations with an SWD activation, you need not adhere to the minimum current flow times and minimum cut-out periods. 700 (Class 10) AC-4 cycle operation, Main conducting paths
Cut-out periods - min		≤ 500 ms, main conducting paths, AC-4 cycle operation
Degree of protection		Terminals: IP00 IP20
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		3 A
Overload release current setting - max		12 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

Suitable for		Also motors with efficiency class IE3
Temperature compensation		-25 - 55 °C, Operating range -5 - 40 °C to IEC/EN 60947, VDE 0660
<b>Ambient conditions, mechanical</b>		
Shock resistance		25 g, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms
<b>Climatic environmental conditions</b>		
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
<b>Terminal capacities</b>		
Terminal capacity (flexible with ferrule)		2 x (1 - 6) mm <sup>2</sup> , ferrule to DIN 46228 1 x (1 - 6) mm <sup>2</sup> , ferrule to DIN 46228
Terminal capacity (solid)		1 x (1 - 6) mm <sup>2</sup> 2 x (1 - 6) mm <sup>2</sup>
Terminal capacity (solid/stranded AWG)		14 - 10
Stripping length (main cable)		10 mm
Tightening torque		1 Nm, Screw terminals, Control circuit cables 1.7 Nm, Screw terminals, Main cable
<b>Electrical rating</b>		
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		0 kW
Rated operational power at AC-3, 380/400 V, 50 Hz		0 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		7.5 kW
Rated operational voltage (Ue) - min		690 V
Rated operational voltage (Ue) - max		690 V
Rated uninterrupted current (Iu)		12 A
<b>Short-circuit rating</b>		
Short-circuit current rating (group protection)		100 kA, 600 V High Fault, Fuse, SCCR (UL/CSA) 100 A, Class J, 600 V High Fault, max. Fuse, SCCR (UL/CSA)
Short-circuit release		± 20% tolerance, Trip blocks Trip block fixed 15.5 x Ir Delayed approx. 60 ms, Trip blocks Basic device fixed 15.5 x Iu, Trip Blocks
<b>Switching capacity</b>		
Switching capacity		12 A, AC-3 up to 690 V 12 A, General use UL/CSA
<b>Motor rating</b>		
Assigned motor power at 115/120 V, 60 Hz, 1-phase		1 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		1.5 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
<b>Communication</b>		
Connection		Screw terminals
<b>Design verification</b>		
Equipment heat dissipation, current-dependent Pvid		3.6 W
Heat dissipation capacity Pdiss		0 W

Heat dissipation per pole, current-dependent Pvid		1.2 W
Rated operational current for specified heat dissipation (In)		12 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 (ecI@ss13-27-37-04-01 [AGZ529021])		
Overload release current setting	A	3 - 12
Adjustment range undelayed short-circuit release	A	186 - 186
With thermal overload protection		No
Phase failure sensitive		Yes
Switch off technique		Electronic
Rated operating voltage	V	690 - 690
Rated permanent current Iu	A	12
Rated operation power at AC-3, 230 V	kW	0
Rated operation power at AC-3, 400 V	kW	0
Power loss	W	
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