Specifications



Eaton 158243

Eaton Moeller® series PKE12 Motor-protective circuit-breaker, Complete device with AK lockable rotary handle, Electronic, 3 - 12 A, With overload release

General specifications	
PRODUCT NAME	Eaton Moeller® series PKE System-protective circuit-breaker
CATALOG NUMBER	158243
MODEL CODE	PKE12/AK/XTU-12
EAN	4015081548316
PRODUCT LENGTH/DEPTH	101 mm
PRODUCT HEIGHT	120 mm
PRODUCT WIDTH	45 mm
PRODUCT WEIGHT	0.425 kg
CERTIFICATIONS	IEC/EN 60947 UL File No.: E36332 CE CSA UL 60947-4-1 IEC/EN 60947-4-1 VDE 0660 CSA Class No.: 3211-05 UL CSA File No.: 165628 CSA-C22.2 No. 60947-4-1-14 UL Category Control No.: NLRV
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.

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 - MAX	55 °C
AMBIENT STORAGE TEMPERATURE - MAX	80 °C
AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX	40 °C
AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN	-25 °C
AMBIENT STORAGE TEMPERATURE - MIN	-40 °C
CLIMATIC PROOFING	Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30

Communication

CONNECTION	Screw terminals

Design verification

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.
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.
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

Electrical rating

RATED FREQUENCY - MAX	60 Hz
RATED FREQUENCY - MIN	50 Hz
RATED OPERATIONAL CURRENT (IE)	12 A
RATED OPERATIONAL POWER AT AC-3E, 220/230 V, 50 HZ	3 kW
RATED OPERATIONAL POWER AT AC-3E, 380/400 V, 50 HZ	5.5 kW
RATED OPERATIONAL POWER AT AC-3E, 440 V, 50 HZ	5.5 kW
RATED OPERATIONAL POWER AT AC-3E, 500 V, 50 HZ	5.5 kW
RATED OPERATIONAL POWER AT AC-3E, 690 V, 50 HZ	7.5 kW
RATED OPERATIONAL VOLTAGE (UE) - MAX	690 V
RATED OPERATIONAL VOLTAGE (UE) - MIN	690 V
RATED UNINTERRUPTED CURRENT (IU)	12 A

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	Overload release Motor protection Phase failure sensitive Motor protection for heavy starting duty
NUMBER OF POLES	Three-pole

General information

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 - MAX	12 A
OVERLOAD RELEASE CURRENT SETTING - MIN	3 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	7.7 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

Motor rating

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

Short-circuit rating

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

Terminal capacities

STRIPPING LENGTH (MAIN CABLE)	10 mm
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)	1 x (1 - 6) mm² 2 x (1 - 6) mm²
TERMINAL CAPACITY (SOLID/STRANDED AWG)	14 - 10
TIGHTENING TORQUE	1 Nm, Screw terminals, Control circuit cables 1.7 Nm, Screw terminals, Main cable

Switching capacity

SWITCHING CAPACITY	12 A, AC-3 up to 690 V 12 A, General use UL/CSA

Resources

BROCHURES	eaton-motor-starters-system-xstart-brochure-br03407001en-en-us.pdf eaton-motor-protective-circuit-breaker-pke-and-communication-modul-pke-brochure-w12107613en-en-us.pdf
CATALOGUES	eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf
CHARACTERISTIC CURVE	eaton-manual-motor-starters-pke65-characteristic-curve-003.eps eaton-manual-motor-starters-pke32-dimensions-005.eps eaton-manual-motor-starters-pke65-characteristic-curve.eps eaton-manual-motor-starters-pke65-characteristic-curve-005.eps
DECLARATIONS OF CONFORMITY	eaton-system-protective-circuit-breaker-declaration-of-conformity-eu250694en.pdf eaton-system-protective-circuit-breaker-declaration-of-conformity-uk251177en.pdf
DRAWINGS	eaton-general-ie-ready-dilm-contactor-standards.eps eaton-manual-motor-starters-mounting-3d-drawing.eps eaton-manual-motor-starters-pke12-3d-drawing.eps
ECAD MODEL	ETN.158243.edz
INSTALLATION INSTRUCTIONS	IL034003ZU eaton-trip-block-pke-xtu-for-pke12-pke32-il034011zu.pdf
INSTALLATION VIDEOS	WIN-WIN with push-in technology Video Motor Protective Circuit Breaker PKE

MANUALS AND USER GUIDES	eaton-motor-protection-pke12-32-65-mn03402004z-de-de-en-us.pdf
MCAD MODEL	DA-CS-pke12_xtu_12_ak_new_a eaton-breakers-mcad-drawings-pke12-xtu-12-ak-new-a.dwg
SALES NOTES	eaton-pke-modbus-rtu-modul-flyer-fl034008en-en-us.pdf

PROJECT NAME:	
PROJECT NUMBER:	
PREPARED BY:	
DATE:	

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