

Specifications



Eaton 039422

Eaton Moeller® series PKZM0 Motor-protective circuit-breaker, 3p+1N/O+1N/C, Ir=16-20A, screw connection

General specifications

PRODUCT NAME	Eaton Moeller® series PKZM0 Motor-protective circuit-breaker
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CATALOG NUMBER	039422
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EAN	4015080394228
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PRODUCT LENGTH/DEPTH	76 mm
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PRODUCT HEIGHT	93 mm
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PRODUCT WIDTH	54 mm
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PRODUCT WEIGHT	0.336 kg
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CERTIFICATIONS	CSA Class No.: 3211-05 UL 60947-4-1 CE CSA-C22.2 No. 60947-4-1-14 UL Category Control No.: NLRV CSA File No.: 165628 UL VDE 0660 CSA IEC/EN 60947-4-1 UL File No.: E36332 IEC/EN 60947
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MODEL CODE	PKZM0-20/NH11
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Features & Functions

ACTUATOR TYPE	Turn button
FEATURES	Phase-failure sensitivity (according to IEC/EN 60947-4-1, VDE 0660 Part 102)
FITTED WITH:	Auxiliary switch
FUNCTIONS	Phase failure sensitive Motor protection
NUMBER OF POLES	Three-pole

General

CONNECTION	Screw terminals
EXPLOSION SAFETY CATEGORY FOR DUST	PTB 10, ATEX 3013 Ex II (2) G [Ex eb Gb] [Ex db Gb] [Ex pxb Gb] Ex II (2) D [Ex tb Db] [Ex pxb Db]
LIFESPAN, ELECTRICAL	100,000 operations
LIFESPAN, MECHANICAL	100,000 Operations
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	25 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	-5 - 40 °C to IEC/EN 60947, VDE 0660 ≤ 0.25 %/K, residual error for T > 40° -25 - 55 °C, Operating range

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

Electrical rating

RATED FREQUENCY - MIN	50 Hz
RATED FREQUENCY - MAX	60 Hz
RATED OPERATIONAL CURRENT (IE)	20 A
RATED OPERATIONAL POWER AT AC-3, 220/230 V, 50 HZ	5.5 kW
RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ	9 kW
RATED OPERATIONAL VOLTAGE (UE) - MIN	690 V
RATED OPERATIONAL VOLTAGE (UE) - MAX	690 V
RATED UNINTERRUPTED CURRENT (IU)	20 A

Terminal capacities

TERMINAL CAPACITY (SOLID)	2 x (0.75 - 2.5) mm ² , Control circuit cables 1 x (0.75 - 2.5) mm ² , Control circuit cables
TERMINAL CAPACITY (SOLID/STRANDED AWG)	18 - 10 18 - 14
STRIPPING LENGTH (MAIN CABLE)	10 mm
TIGHTENING TORQUE	1.7 Nm, Screw terminals, Main cable 1 Nm, Screw terminals, Control circuit cables

Short-circuit rating

SHORT-CIRCUIT CURRENT	40 kA DC, up to 250 V DC, Main conducting paths
SHORT-CIRCUIT CURRENT RATING (GROUP PROTECTION)	10 kA, 600 V High Fault, Fuse, SCCR (UL/CSA) with 150 A, 600 V High Fault, Fuse, SCCR (UL/CSA) 10 kA, 600 V High Fault, CB, SCCR (UL/CSA) with 125 A, 600 V High Fault, CB, SCCR (UL/CSA) 18 kA, 600 V High Fault, Fuse with CL, SCCR (UL/CSA) with 600 A, 600 V High Fault, Fuse with CL, SCCR (UL/CSA) 18 kA, 600 V High Fault, CB with CL, SCCR (UL/CSA) with 600 A, 600 V High Fault, CB with CL, SCCR (UL/CSA) 18 kA, 480 V High Fault, CB, SCCR (UL/CSA) with 600 A, 480 V High Fault, CB, SCCR (UL/CSA) 18 kA, 480 V High Fault, Fuse, SCCR (UL/CSA) with 600 A, 480 V High Fault, Fuse, SCCR (UL/CSA)

SHORT-CIRCUIT CURRENT RATING (TYPE E)	18 kA, 240 V, SCCR (UL/CSA) with contactor DILM25 18 kA, 480 Y/277 V, SCCR (UL/CSA) with contactor DILM25
SHORT-CIRCUIT RELEASE	Basic device fixed 15.5 x lu ± 20% tolerance 310 A, I _{rm}
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS AT 400 V AC	38 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICU AT 400 V AC	50 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICU AT 440 V AC	10 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS AT 440 V AC	3 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICU AT 500 V AC	3 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS AT 500 V AC	3 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICU AT 690 V AC	3 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS AT 690 V AC	1 kA

Motor rating

ASSIGNED MOTOR POWER AT 115/120 V, 60 HZ, 1-PHASE 1.5 HP

ASSIGNED MOTOR POWER AT 200/208 V, 60 HZ, 3-PHASE 5 HP

ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 1-PHASE 3 HP

ASSIGNED MOTOR POWER AT 575/600 V, 60 HZ, 3-PHASE 15 HP

Contacts

NUMBER OF AUXILIARY CONTACTS (CHANGE-OVER CONTACTS) 0

NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS) 1

NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS) 1

Trip blocks

OVERLOAD RELEASE CURRENT SETTING - MIN	16 A
OVERLOAD RELEASE CURRENT SETTING - MAX	20 A
TRIPPING CHARACTERISTIC	Overload trigger: tripping class 10 A

Design verification

EQUIPMENT HEAT DISSIPATION, CURRENT- DEPENDENT PVID	5.82 W
HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT- DEPENDENT PVID	1.94 W
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	20 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.

Resources

BROCHURES

[eaton-motor-starters-system-xstart-brochure-br03407001en-en-us.pdf](#)

CATALOGUES

[eaton-switching-and-protecting-motors-product-range-catalog-ca034001en-en-us.pdf](#)

[eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf](#)

[Product Range Catalog Switching and protecting motors](#)

CHARACTERISTIC CURVE

[eaton-manual-motor-starters-characteristic-characteristic-curve-008.eps](#)

[eaton-manual-motor-starters-characteristic-characteristic-curve-009.eps](#)

DECLARATIONS OF CONFORMITY

[DA-DC-00005041.pdf](#)

[DA-DC-00005040.pdf](#)

DRAWINGS

[eaton-manual-motor-starters-pkz-dimensions-002.eps](#)

[eaton-manual-motor-starters-pkz-dimensions-003.eps](#)

[eaton-manual-motor-starters-pkz-dimensions.eps](#)

[eaton-manual-motor-starters-pkzm0-3d-drawing-008.eps](#)

[eaton-manual-motor-starters-circuit-breaker-pkzm0-3d-drawing.eps](#)

[eaton-general-ie-ready-dilm-contactor-standards.eps](#)

[eaton-manual-motor-starters-mounting-3d-drawing-002.eps](#)

ECAD MODEL	eaton-pkzm0-motor-protective-circuit-breaker-eplan-039422.edz
INSTALLATION INSTRUCTIONS	IL03407011Z.pdf IL03402034Z
INSTALLATION VIDEOS	WIN-WIN with push-in technology IL122023ZU
MANUALS AND USER GUIDES	eaton-motor-protection-pkzm0-mn03402003z-de-de-en-us.pdf
MCAD MODEL	DA-CD-pkzm0_nhi11 DA-CS-pkzm0_nhi11
SALES NOTES	eaton-link-module-for-motor-starters-pkz-flyer-fl034003en-en-us.pdf

PROJECT NAME:

PROJECT NUMBER:

PREPARED BY:

DATE:



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