

Specifications



Eaton 278475

Eaton Moeller® series PKZM01 Motor-protective circuit-breaker, 440 V, Ir = 0.1 - 0.16 A, IP20

General specifications

PRODUCT NAME	Eaton Moeller® series PKZM01 Motor-protective circuit-breaker
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CATALOG NUMBER	278475
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MODEL CODE	PKZM01-0,16
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EAN	4015082784751
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PRODUCT LENGTH/DEPTH	93 mm
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PRODUCT HEIGHT	90 mm
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PRODUCT WIDTH	45 mm
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PRODUCT WEIGHT	0.253 kg
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CERTIFICATIONS	IEC/EN 60947 CSA-C22.2 No. 60947-4-1-14 UL Category Control No.: NLRV UL 60947-4-1 CSA Class No.: 3211-05 VDE 0660 CE CSA File No.: 165628 IEC/EN 60947-4-1 UL UL File No.: E36332 CSA
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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, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78

Design verification

RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	0.16 A
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	0 W
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	5.39 W
HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	1.8 W

Electrical rating	
RATED FREQUENCY - MAX	60 Hz
RATED FREQUENCY - MIN	50 Hz
RATED OPERATIONAL CURRENT (IE)	0.16 A
RATED OPERATIONAL VOLTAGE (UE) - MAX	440 V
RATED OPERATIONAL VOLTAGE (UE) - MIN	440 V
RATED UNINTERRUPTED CURRENT (IU)	0.16 A

Features & functions	
ACTUATOR TYPE	Push button
FEATURES	Phase-failure sensitivity (according to IEC/EN 60947-4-1, VDE 0660 Part 102)
FUNCTIONS	Phase failure sensitive Motor protection
NUMBER OF POLES	Three-pole

General information

CONNECTION	Screw terminals
DEGREE OF PROTECTION	Terminals: IP00 IP20
LIFESPAN, ELECTRICAL	50,000 operations (at 400V, AC-3)
LIFESPAN, MECHANICAL	50,000 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	25 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	Branch circuit: Manual type E if used with terminal, or suitable for group installations, (UL/CSA) Also motors with efficiency class IE3
TEMPERATURE COMPENSATION	-25 - 55 °C, Operating range -5 - 40 °C to IEC/EN 60947, VDE 0660 ≤ 0.25 %/K, residual error for T > 40°

Switching capacity

SWITCHING CAPACITY	0.16 A (3 contacts in series), DC-5 up to 250V 0.16 A, AC-3 up to 440 V
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Short-circuit rating

RATED SHORT-CIRCUIT BREAKING CAPACITY ICS AT 400 V AC	50 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS AT 440 V AC	50 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICU AT 400 V AC	50 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICU AT 440 V AC	50 kA
SHORT-CIRCUIT CURRENT	60 kA DC, up to 250 V DC, Main conducting paths
SHORT-CIRCUIT CURRENT RATING (GROUP PROTECTION)	50 kA, 600 V High Fault, Fuse, SCCR (UL/CSA) with 600 A, 600 V High Fault, Fuse, SCCR (UL/CSA) 50 kA, 600 V High Fault, CB, SCCR (UL/CSA) with 600 A, 600 V High Fault, CB, SCCR (UL/CSA)
SHORT-CIRCUIT RELEASE	Basic device fixed 15.5 x Iu ± 20% tolerance 2.5 A, I _{rm}

Terminal capacities

STRIPPING LENGTH (MAIN CABLE)	10 mm
TERMINAL CAPACITY (FLEXIBLE WITH FERRULE)	2 x (1 - 6) mm ² , ferrule to DIN 46228 1 x (1 - 6) mm ² , ferrule to DIN 46228

Trip blocks

**OVERLOAD RELEASE
CURRENT SETTING - MAX** 0.16 A

**OVERLOAD RELEASE
CURRENT SETTING - MIN** 0.1 A

**TRIPPING
CHARACTERISTIC** Overload trigger: tripping
class 10 A

**TERMINAL CAPACITY
(SOLID)** 2 x (1 - 6) mm²
1 x (1 - 6) mm²

**TERMINAL CAPACITY
(SOLID/STRANDED AWG)** 18 - 10

TIGHTENING TORQUE 1.7 Nm, Screw terminals,
Main cable

Resources

BROCHURES [eaton-push-in-technology-product-overview-brochure-br034012-en-us.pdf](#)

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

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

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

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

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

**DECLARATIONS OF
CONFORMITY** [eaton-motor-protective-circuit-breaker-declaration-of-conformity-uk251175en.pdf](#)

[eaton-motor-protective-circuit-breaker-declaration-of-conformity-eu250692en.pdf](#)

[eaton-manual-motor-starters-circuit-breaker-pkzm01-dimensions.eps](#)

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

DRAWINGS [eaton-manual-motor-starters-circuit-breaker-pkzm01-3d-drawing-002.eps](#)

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

ECAD MODEL	ETN.278475.edz
	IL03402034Z
INSTALLATION INSTRUCTIONS	IL03407011Z.pdf
	IL122012ZU
INSTALLATION VIDEOS	WIN-WIN with push-in technology
MANUALS AND USER GUIDES	IL122023ZU
	DA-CS-pkzm01
MCAD MODEL	eaton-breakers-mcad-drawings-pkzm01.dwg
	eaton-link-module-for-motor-starters-pkz-flyer-fl034003en-en-us.pdf
SALES NOTES	

PROJECT NAME:

PROJECT NUMBER:

PREPARED BY:

DATE:



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