Specifications

Photo is representative

Eaton 286087

Eaton Moeller® series PKZM01 Motor-protective circuit-breaker, 440 V: 4 kW, Ir = 6.3 - 10 A, IP65

General specifications	
PRODUCT NAME	Eaton Moeller® series PKZM01 Motor-protective circuit-breaker
CATALOG NUMBER	286087
EAN	4015082860875
PRODUCT LENGTH/DEPTH	158 mm
PRODUCT HEIGHT	80 mm
PRODUCT WIDTH	117 mm
PRODUCT WEIGHT	0.594 kg
COMPLIANCES	CE Marked
CERTIFICATIONS	IEC 60947-4-1 CSA Std. C22.2 No. 14 UL 508 VDE VDE 0660 IEC/EN 60947
MODEL CODE	PKZM01-10-G

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Features & Functions

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

General

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	Also motors with efficiency class IE3

Climatic environmental conditions

ALTITUDE	Max. 2000 m
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

Terminal capacities

TERMINAL CAPACITY (SOLID/STRANDED AWG)	18 - 10
STRIPPING LENGTH (MAIN CABLE)	10 mm
TIGHTENING TORQUE	1.7 Nm, Screw terminals, Main cable

Electrical rating

RATED FREQUENCY - MIN	50 Hz
RATED FREQUENCY - MAX	60 Hz
RATED OPERATIONAL POWER AT AC-3, 220/230 V, 50 HZ	2.2 kW
RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ	4 kW
RATED OPERATIONAL VOLTAGE (UE) - MIN	440 V
RATED OPERATIONAL VOLTAGE (UE) - MAX	440 V
RATED UNINTERRUPTED CURRENT (IU)	10 A

Short-circuit rating

SHORT-CIRCUIT CURRENT	60 kA DC, up to 250 V DC, Main conducting paths
SHORT-CIRCUIT CURRENT RATING (GROUP PROTECTION)	600 A, 600 V High Fault, max. Fuse, SCCR (UL/CSA) 600 A, 600 V High Fault, max. CB, SCCR (UL/CSA) 30 kA, 600 V High Fault, Fuse, SCCR (UL/CSA) 30 kA, 600 V High Fault, CB, SCCR (UL/CSA)
SHORT-CIRCUIT RELEASE	Basic device fixed 15.5 x Iu ± 20% tolerance 155 A, Irm

Communication

CONNECTION	Screw terminals

Trip blocks

OVERLOAD RELEASE CURRENT SETTING - MIN	6.3 A
OVERLOAD RELEASE CURRENT SETTING - MAX	10 A
TRIPPING CHARACTERISTIC	Overload trigger: tripping class 10 A

Design verification

EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	6.48 W
HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	2.16 W
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	10 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.

Resources

BROCHURES	eaton-motor-starters-system-xstart-brochure-br03407001en-en-us.pdf
CATALOGUES	Product Range Catalog Switching and protecting motors eaton-switching-and-protecting-motors-product-range-catalog-ca034001en-en-us.pdf eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf
CHARACTERISTIC CURVE	eaton-manual-motor-starters-characteristic-characteristic-curve-012.eps eaton-manual-motor-starters-characteristic-characteristic-curve-009.eps eaton-manual-motor-starters-characteristic-characteristic-curve-008.eps
DECLARATIONS OF CONFORMITY	DA-DC-00004884.pdf DA-DC-00004914.pdf
DRAWINGS	eaton-manual-motor-starters-circuit-breaker-pkzm01-dimensions.eps eaton-general-ie-ready-dilm-contactor-standards.eps
ECAD MODEL	ETN.286087.edz
INSTALLATION VIDEOS	WIN-WIN with push-in technology
MCAD MODEL	DA-CS-pkzm0 DA-CS-ci_pkz01_g DA-CD-pkzm0 DA-CD-ci_pkz01_g
SALES NOTES	eaton-link-module-for-motor-starters-pkz-flyer-fl034003en-en-us.pdf

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.

PROJECT NAME:	
PROJECT NUMBER:	
PREPARED BY:	
DATE:	

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