Specifications

Photo is representative

Eaton 199169

Eaton Moeller® series PKZM0 Transformer-protective circuit-breaker, 1.6 - 2.5 A, Push in terminals

General specifications	
PRODUCT NAME	Eaton Moeller® series PKZM0 Transformer-protective circuit-breaker
CATALOG NUMBER	199169
EAN	4015081972531
PRODUCT LENGTH/DEPTH	75 mm
PRODUCT HEIGHT	109 mm
PRODUCT WIDTH	45 mm
PRODUCT WEIGHT	0.335 kg
CERTIFICATIONS	IEC/EN 60947 VDE 0660 CE UL CSA IEC/EN 60947-4-1 CSA Class No.: 3211-05 CSA File No.: 165628 CSA-C22.2 No. 60947-4-1-14 UL 60947-4-1 UL Category Control No.: NLRV UL File No.: E36332
MODEL CODE	PKZM0-2,5-T-PI

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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)
FUNCTIONS	For the protection of transformers with a high inrush current Transformer protection
NUMBER OF POLES	Three-pole

General

CONNECTION	Push in terminals
LIFESPAN, ELECTRICAL	100,000 operations
LIFESPAN, MECHANICAL	100,000 Operations
MOUNTING METHOD	DIN rail (top hat rail) mounting optional
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	Transformer 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	-25 - 55 °C, Operating range ≤ 0.25 %/K, residual error for T > 40° -5 - 40 °C to IEC/EN 60947, VDE 0660

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, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78

Terminal capacities

TERMINAL CAPACITY (FLEXIBLE WITH UNISOLATED FERRULE)	1 x (1 - 6) mm^2 2 x (1 - 6) mm^2
TERMINAL CAPACITY (FLEXIBLE WITH ULTRASONIC WELDED CABLE END)	1 x (1 - 10) mm^2 2 x (1 - 6) mm^2
TERMINAL CAPACITY (FLEXIBLE)	1 x (1 - 6) mm^2, Push-in terminals 2 x (1 - 6) mm^2, Push-in terminals 1 x (1 - 6) mm^2 2 x (1 - 6) mm^2
TERMINAL CAPACITY (SOLID)	1 x (1 - 6) mm^2, Push-in terminals 2 x (1 - 6) mm^2, Push-in terminals 1 x (1 - 6) mm^2 2 x (1 - 6) mm^2
TERMINAL CAPACITY (SOLID/STRANDED AWG)	18 - 8
STRIPPING LENGTH (MAIN CABLE)	12 mm

Electrical rating

RATED FREQUENCY - MIN	50 Hz
RATED FREQUENCY - MAX	60 Hz
RATED OPERATIONAL CURRENT (IE)	2.5 A
RATED OPERATIONAL POWER AT AC-3, 220/230 V, 50 HZ	0.37 kW
RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ	0.75 kW
RATED OPERATIONAL VOLTAGE (UE) - MIN	690 V
RATED OPERATIONAL VOLTAGE (UE) - MAX	690 V
RATED UNINTERRUPTED CURRENT (IU)	2.5 A

Short-circuit rating

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 20 x Iu ± 20% tolerance 50 A, Irm
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS AT 400 V AC	150 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICU AT 400 V AC	150 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICU AT 440 V AC	150 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS AT 440 V AC	150 kA

RATED SHORT-CIRCUIT BREAKING CAPACITY ICU AT 500 V AC	150 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS AT 500 V AC	150 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICU AT 690 V AC	5 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS AT 690 V AC	5 kA

Motor rating

ASSIGNED MOTOR POWER AT 200/208 V, 60 HZ, 3-PHASE	0.5 HP
ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 1-PHASE	0.17 HP
ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 3-PHASE	0.5 HP
ASSIGNED MOTOR POWER AT 460/480 V, 60 HZ, 3-PHASE	1 HP
ASSIGNED MOTOR POWER AT 575/600 V, 60 HZ, 3-PHASE	1.5 HP

Contacts

NUMBER OF AUXILIARY CONTACTS (CHANGE-OVER CONTACTS)	0
NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)	0
NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)	0

Trip blocks

OVERLOAD RELEASE CURRENT SETTING - MIN	1.6 A
OVERLOAD RELEASE CURRENT SETTING - MAX	2.5 A
TRIPPING CHARACTERISTIC	Overload trigger: tripping class 10 A

Design verification

EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	5.16 W
HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	1.7 W
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	2.5 A
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	0 W
10.2.2 CORROSION	Meets the product

RESISTANCE	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	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
DECLARATIONS OF CONFORMITY	DA-DC-00004316.pdf DA-DC-00004916.pdf DA-DC-00004885.pdf
DRAWINGS	eaton-manual-motor-starters-pkzm-pkzm0-dimensions.eps
ECAD MODEL	ETN.199169.edz
INSTALLATION INSTRUCTIONS	IL122024ZU
INSTALLATION VIDEOS	WIN-WIN with push-in technology
MCAD MODEL	motorschutzschalter_bis_32a_pi.dwg pkzm0_pi.stp
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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