

# Specifications

Photo is representative

## Eaton 199170

Eaton Moeller® series PKZM0 Transformer-protective circuit-breaker, 2.5 - 4 A, Push in terminals

### General specifications

<b>PRODUCT NAME</b>	Eaton Moeller® series PKZM0 Transformer- protective circuit-breaker
<b>CATALOG NUMBER</b>	199170
<b>EAN</b>	4015081972548
<b>PRODUCT LENGTH/DEPTH</b>	75 mm
<b>PRODUCT HEIGHT</b>	109 mm
<b>PRODUCT WIDTH</b>	45 mm
<b>PRODUCT WEIGHT</b>	0.337 kg
<b>CERTIFICATIONS</b>	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
<b>MODEL CODE</b>	PKZM0-4-T-PI

## Features & Functions

<b>ACTUATOR TYPE</b>	Turn button
<b>FEATURES</b>	Phase-failure sensitivity (according to IEC/EN 60947-4-1, VDE 0660 Part 102)
<b>FUNCTIONS</b>	For the protection of transformers with a high inrush current Transformer protection
<b>NUMBER OF POLES</b>	Three-pole

## General

<b>LIFESPAN, ELECTRICAL</b>	100,000 operations
<b>LIFESPAN, MECHANICAL</b>	100,000 Operations
<b>MOUNTING METHOD</b>	DIN rail (top hat rail) mounting optional
<b>MOUNTING POSITION</b>	Can be snapped on to IEC/EN 60715 top-hat rail with 7.5 or 15 mm height.
<b>OPERATING FREQUENCY</b>	40 Operations/h
<b>OVERVOLTAGE CATEGORY</b>	III
<b>POLLUTION DEGREE</b>	3
<b>PRODUCT CATEGORY</b>	Transformer protective circuit breaker
<b>PROTECTION</b>	Finger and back-of-hand proof, Protection against direct contact when actuated from front (EN 50274)
<b>RATED IMPULSE WITHSTAND VOLTAGE (UIMP)</b>	6000 V AC
<b>SHOCK RESISTANCE</b>	25 g, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms
<b>SUITABLE FOR</b>	Also motors with efficiency class IE3
<b>TEMPERATURE COMPENSATION</b>	≤ 0.25 %/K, residual error for T > 40° -5 - 40 °C to IEC/EN 60947, VDE 0660 -25 - 55 °C, Operating range

## Climatic environmental conditions

<b>ALTITUDE</b>	Max. 2000 m
<b>AMBIENT OPERATING TEMPERATURE - MIN</b>	-25 °C
<b>AMBIENT OPERATING TEMPERATURE - MAX</b>	55 °C
<b>AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN</b>	-25 °C
<b>AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX</b>	40 °C
<b>AMBIENT STORAGE TEMPERATURE - MIN</b>	-40 °C
<b>AMBIENT STORAGE TEMPERATURE - MAX</b>	80 °C
<b>CLIMATIC PROOFING</b>	Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78

## Electrical rating

<b>RATED FREQUENCY - MIN</b>	50 Hz
<b>RATED FREQUENCY - MAX</b>	60 Hz
<b>RATED OPERATIONAL POWER AT AC-3, 220/230 V, 50 HZ</b>	0.75 kW
<b>RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ</b>	1.5 kW
<b>RATED OPERATIONAL VOLTAGE (UE) - MIN</b>	690 V
<b>RATED OPERATIONAL VOLTAGE (UE) - MAX</b>	690 V
<b>RATED UNINTERRUPTED CURRENT (IU)</b>	4 A

## Terminal capacities

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

## Short-circuit rating

<b>SHORT-CIRCUIT CURRENT RATING (GROUP PROTECTION)</b>	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)
<b>SHORT-CIRCUIT RELEASE</b>	Basic device, fixed 20 x I <sub>u</sub> ± 20% tolerance 84 A, I <sub>rm</sub>

## Motor rating

ASSIGNED MOTOR POWER AT 115/120 V, 60 HZ, 1-PHASE	0.125 HP
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ASSIGNED MOTOR POWER AT 200/208 V, 60 HZ, 3-PHASE	0.75 HP
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ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 1-PHASE	0.33 HP
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ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 3-PHASE	0.75 HP
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ASSIGNED MOTOR POWER AT 460/480 V, 60 HZ, 3-PHASE	2 HP
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ASSIGNED MOTOR POWER AT 575/600 V, 60 HZ, 3-PHASE	3 HP
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## Contacts

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

CONNECTION	Push in terminals
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## Trip blocks

OVERLOAD RELEASE CURRENT SETTING - MIN	2.5 A
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OVERLOAD RELEASE CURRENT SETTING - MAX	4 A
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TRIPPING CHARACTERISTIC	Overload trigger: tripping class 10 A
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## Design verification

<b>EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID</b>	5.33 W
<b>HEAT DISSIPATION CAPACITY PDISS</b>	0 W
<b>HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID</b>	1.8 W
<b>RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)</b>	4 A
<b>STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS</b>	0 W
<b>10.2.2 CORROSION RESISTANCE</b>	Meets the product standard's requirements.
<b>10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES</b>	Meets the product standard's requirements.
<b>10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT</b>	Meets the product standard's requirements.
<b>10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS</b>	Meets the product standard's requirements.
<b>10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION</b>	Meets the product standard's requirements.
<b>10.2.5 LIFTING</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.2.6 MECHANICAL IMPACT</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.2.7 INSCRIPTIONS</b>	Meets the product standard's requirements.
<b>10.3 DEGREE OF PROTECTION OF ASSEMBLIES</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.4 CLEARANCES AND CREEPAGE DISTANCES</b>	Meets the product standard's requirements.
<b>10.5 PROTECTION AGAINST ELECTRIC SHOCK</b>	Does not apply, since the entire switchgear needs to be evaluated.

## Resources

<b>BROCHURES</b>	<a href="#">eaton-motor-starters-system-xstart-brochure-br03407001en-en-us.pdf</a>
<b>CATALOGUES</b>	<a href="#">Product Range Catalog Switching and protecting motors</a> <a href="#">eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf</a> <a href="#">Switching and protecting motors - catalog</a>
<b>DECLARATIONS OF CONFORMITY</b>	<a href="#">DA-DC-00004916.pdf</a> <a href="#">DA-DC-00004885.pdf</a> <a href="#">DA-DC-00004316.pdf</a>
<b>DRAWINGS</b>	<a href="#">eaton-manual-motor-starters-pkzm-pkzm0-dimensions.eps</a>
<b>ECAD MODEL</b>	<a href="#">ETN.199170.edz</a>
<b>INSTALLATION INSTRUCTIONS</b>	<a href="#">IL122024ZU</a>
<b>INSTALLATION VIDEOS</b>	<a href="#">WIN-WIN with push-in technology</a>
<b>MCAD MODEL</b>	<a href="#">motorschutzschalter bis 32a_pi.dwg</a> <a href="#">pkzm0_pi.stp</a>
<b>SALES NOTES</b>	<a href="#">eaton-link-module-for-motor-starters-pkz-flyer-fl034003en-en-us.pdf</a>

<b>10.6 INCORPORATION OF SWITCHING DEVICES AND COMPONENTS</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.7 INTERNAL ELECTRICAL CIRCUITS AND CONNECTIONS</b>	Is the panel builder's responsibility.
<b>10.8 CONNECTIONS FOR EXTERNAL CONDUCTORS</b>	Is the panel builder's responsibility.
<b>10.9.2 POWER-FREQUENCY ELECTRIC STRENGTH</b>	Is the panel builder's responsibility.
<b>10.9.3 IMPULSE WITHSTAND VOLTAGE</b>	Is the panel builder's responsibility.
<b>10.9.4 TESTING OF ENCLOSURES MADE OF INSULATING MATERIAL</b>	Is the panel builder's responsibility.
<b>10.10 TEMPERATURE RISE</b>	The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.
<b>10.11 SHORT-CIRCUIT RATING</b>	Is the panel builder's responsibility. The specifications for the switchgear must be observed.
<b>10.12 ELECTROMAGNETIC COMPATIBILITY</b>	Is the panel builder's responsibility. The specifications for the switchgear must be observed.
<b>10.13 MECHANICAL FUNCTION</b>	The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

PROJECT NAME:
PROJECT NUMBER:
PREPARED BY:
DATE:



**Eaton Corporation plc**  
Eaton House  
30 Pembroke Road  
Dublin 4, Ireland  
Eaton.com

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