

# Specifications



Photo is representative



## Eaton 199161

Eaton Moeller® series PKZM0 Motor-protective circuit-breaker, 12.5 kW, 20 - 25 A, Push in terminals

### General specifications

<b>PRODUCT NAME</b>	Eaton Moeller® series PKZM0 Motor-protective circuit-breaker
<b>CATALOG NUMBER</b>	199161
<b>EAN</b>	4015081972456
<b>PRODUCT LENGTH/DEPTH</b>	75 mm
<b>PRODUCT HEIGHT</b>	109 mm
<b>PRODUCT WIDTH</b>	45 mm
<b>PRODUCT WEIGHT</b>	0.347 kg
<b>CERTIFICATIONS</b>	IEC/EN 60947 VDE 0660 UL CSA IEC/EN 60947-4-1 UL 60947-4-1 CSA-C22.2 No. 60947-4-1-14 CE UL File No.: E36332 UL Category Control No.: NLRV CSA File No.: 165628 CSA Class No.: 3211-05
<b>MODEL CODE</b>	PKZM0-25-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>	Motor protection Phase failure sensitive
<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>OVERTVOLTAGE CATEGORY</b>	III
<b>POLLUTION DEGREE</b>	3
<b>PRODUCT CATEGORY</b>	Motor 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 Branch circuit: Manual type E in combination with contactor DILM and terminal BK25/3-PKZ0-E, or suitable for group installations, (UL/CSA)
<b>TEMPERATURE COMPENSATION</b>	-25 - 55 °C, Operating range -5 - 40 °C to IEC/EN 60947, VDE 0660 ≤ 0.25 %/K, residual error for T > 40°
<b>USED WITH</b>	Motor starter combinations type MSC...

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

## 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>	5.5 kW
<b>RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 Hz</b>	12.5 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>	25 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>
	1 x (1 - 6) mm <sup>2</sup> , Push-in terminals
<b>TERMINAL CAPACITY (FLEXIBLE)</b>	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>	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) 18 kA, 240 V, SCCR (UL/CSA) with contactor
<b>SHORT-CIRCUIT CURRENT RATING (TYPE E)</b>	

DILM25
18 kA, 480 Y/277 V, SCCR (UL/CSA) with contactor
DILM25

Basic device fixed 15.5 x lu

#### SHORT-CIRCUIT RELEASE

± 20% tolerance  
388 A, Irm

## Motor rating

### ASSIGNED MOTOR

POWER AT 115/120 V, 60 HZ, 1-PHASE 2 HP

### ASSIGNED MOTOR

POWER AT 230/240 V, 60 HZ, 3-PHASE 7.5 HP

### ASSIGNED MOTOR

POWER AT 460/480 V, 60 HZ, 3-PHASE 15 HP

### ASSIGNED MOTOR

POWER AT 575/600 V, 60 HZ, 3-PHASE 20 HP

## Communication

### CONNECTION

Push in terminals

## 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 20 A

### OVERLOAD RELEASE

CURRENT SETTING - MAX 25 A

### TRIPPING

CHARACTERISTIC Overload trigger: tripping class 10 A

## Design verification

<b>EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID</b>	7.04 W
<b>HEAT DISSIPATION CAPACITY PDISS</b>	0 W
<b>HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID</b>	2.3 W
<b>RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)</b>	25 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="#">eaton-switching-and-protecting-motors-product-range-catalog-ca034001en-en-us.pdf</a>
<b>DECLARATIONS OF CONFORMITY</b>	<a href="#">Product Range Catalog Switching and protecting motors</a> <a href="#">eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf</a>
<b>DRAWINGS</b>	<a href="#">eaton-manual-motor-starters-pkzm-pkzm0-dimensions.eps</a> <a href="#">eaton-manual-motor-starters-pkz-dimensions-002.eps</a> <a href="#">eaton-manual-motor-starters-pkz-dimensions.eps</a>
<b>ECAD MODEL</b>	<a href="#">ETN.199161.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="#">pkzm0_pi.stp</a> <a href="#">motorschutzschalter_bis_32a_pi.dwg</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.

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**PROJECT NAME:**

**PROJECT NUMBER:**

**PREPARED BY:**

**DATE:**

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