

# Eaton 222354

Catalog Number: 222354

Eaton Moeller® series PKZM4 Motor-protective circuit-breaker, I<sub>r</sub>= 32 - 40 A, Screw terminals, Terminations: IP00 PKZM4-40



## General specifications

<b>Product Name</b>	<b>Catalog Number</b>
Eaton Moeller® series PKZM4 Motor-protective circuit-breaker	222354
	<b>Model Code</b>
	PKZM4-40
<b>EAN</b>	<b>Product Length/Depth</b>
4015082223540	160 mm
<b>Product Height</b>	<b>Product Width</b>
140 mm	55 mm
<b>Product Weight</b>	<b>Certifications</b>
1.136 kg	CSA File No.: 165628
	CSA-C22.2 No. 60947-4-1-14
	IEC/EN 60947-4-1
	UL 60947-4-1
	CE
	CSA
	CSA Class No.: 3211-05
	UL Category Control No.: NLRV
	UL File No.: E36332
	VDE 0660
	IEC/EN 60947
	UL

## Features & Functions

### Actuator type

Turn button

### Features

Phase-failure sensitivity (according to IEC/EN 60947-4-1, VDE 0660 Part 102)

### Functions

Motor protection

Phase failure sensitive

### Number of poles

Three-pole

## General

### Explosion safety category for dust

ATEX dust-ex-protection, PTB 10, ATEX 3012, Ex II(2) G

### Lifespan, electrical

30,000 operations (at 400V, AC-3)

### Lifespan, mechanical

30,000 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

40 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

15 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

-5 - 40 °C to IEC/EN 60947, VDE 0660

-25 - 55 °C, Operating range

≤ 0.25 %/K, residual error for T > 40°

## Climatic environmental conditions

### Altitude

## Terminal capacities

### Terminal capacity (flexible with ferrule)

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

1 x (0.75 - 35) mm<sup>2</sup>, Main cables

2 x (0.75 - 25) mm<sup>2</sup>, Main cables

Terminal capacity (solid)

1 x (0.75 - 16) mm<sup>2</sup>, Main cables

2 x (0.75 - 16) mm<sup>2</sup>

Terminal capacity (solid/stranded AWG)

14 - 2

Stripping length (main cable)

14 mm

Tightening torque

3.3 Nm, Screw terminals, Main cable

## Electrical rating

Rated frequency - min

50 Hz

Rated frequency - max

60 Hz

Rated operational current (I<sub>e</sub>)

40 A

Rated operational power at AC-3, 220/230 V, 50 Hz

11 kW

Rated operational power at AC-3, 380/400 V, 50 Hz

20 kW

Rated operational voltage (U<sub>e</sub>) - min

690 V

Rated operational voltage (U<sub>e</sub>) - max

690 V

Rated uninterrupted current (I<sub>u</sub>)

40 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. CB, SCCR (UL/CSA)

600 A, 600 V High Fault, max. Fuse, SCCR (UL/CSA)

42 kA, 600 V High Fault, CB, SCCR (UL/CSA)

## Motor rating

Assigned motor power at 115/120 V, 60 Hz, 1-phase

3 HP

Assigned motor power at 200/208 V, 60 Hz, 3-phase

10 HP

Assigned motor power at 230/240 V, 60 Hz, 1-phase

42 kA, 600 V High Fault, Fuse, SCCR (UL/CSA)

#### Short-circuit current rating (type E)

Accessories required BK50/3-PKZ4-E

65 kA, 480 Y/277 V, SCCR (UL/CSA)

25 kA, 600 Y/347 V, SCCR (UL/CSA)

65 kA, 240 V, SCCR (UL/CSA)

#### Short-circuit release

± 20% tolerance, Trip blocks

620 A, I<sub>rm</sub>, Setting range max.

Basic device fixed 15.5 x I<sub>u</sub>, Trip Blocks

### Trip blocks

#### Overload release current setting - min

32 A

#### Overload release current setting - max

40 A

#### Tripping characteristic

Overload trigger: tripping class 10 A

7.5 HP

Assigned motor power at 460/480 V, 60 Hz, 3-phase

30 HP

Assigned motor power at 575/600 V, 60 Hz, 3-phase

30 HP

### Communication

#### Connection

Screw terminals

### Design verification

Equipment heat dissipation, current-dependent P<sub>vid</sub>

20.7 W

Heat dissipation capacity P<sub>diss</sub>

0 W

Heat dissipation per pole, current-dependent P<sub>vid</sub>

6.9 W

Rated operational current for specified heat dissipation (I<sub>n</sub>)

40 A

Static heat dissipation, non-current-dependent P<sub>vs</sub>

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.

#### 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

Save time and space thanks to the new link module PKZM0-XDM32ME

Motor Starters in System xStart - brochure

### Catalogues

Product Range Catalog Switching and protecting motors

Switching and protecting motors - catalog

### Characteristic curve

[eaton-manual-motor-starters-characteristic-pkzm4-characteristic-curve.eps](#)

[eaton-manual-motor-starters-tripping-characteristic-pkzm4-characteristic-curve.eps](#)

[eaton-manual-motor-starters-pkzm4-characteristic-curve-002.eps](#)

[eaton-manual-motor-starters-characteristic-pkzm4-characteristic-curve-002.eps](#)

### Declarations of conformity

[DA-DC-00004960.pdf](#)

[DA-DC-00004953.pdf](#)

### Drawings

[eaton-manual-motor-starters-pkzm4-dimensions.eps](#)

[eaton-manual-motor-starters-circuit-breaker-pkzm4-dimensions.eps](#)

[eaton-manual-motor-starters-pkzm4-3d-drawing.eps](#)

[eaton-manual-motor-starters-circuit-breaker-pkzm4-3d-drawing.eps](#)

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

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

### eCAD model

[ETN.PKZM4-40](#)

### Installation instructions

[eaton-motors-starters-pkzm4-motor-protective-circuit-breaker-instruction-leaflet-il03407012z.pdf](#)

### Installation videos

[WIN-WIN with push-in technology](#)

### Manuals and user guides

[MN03402002Z\\_DE\\_EN](#)

### mCAD model

[DA-CD-pkzm4](#)

[DA-CS-pkzm4](#)

### Wiring diagrams

[eaton-manual-motor-starters-transformer-pkzm0-wiring-diagram.eps](#)

[eaton-manual-motor-starters-starter-nzm-mccb-wiring-diagram.eps](#)



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