

# Eaton 222394

Catalog Number: 222394

Eaton Moeller® series PKZM4 Motor-protective circuit-breaker, Ir= 50 - 58 A, Screw terminals, Terminations: IP00 PKZM4-58



## General specifications

### Product Name

Eaton Moeller® series PKZM4 Motor-protective circuit-breaker

### Catalog Number

222394

### Model Code

PKZM4-58

### EAN

4015082223946

### Product Length/Depth

160 mm

### Product Height

140 mm

### Product Width

55 mm

### Product Weight

1.136 kg

### Certifications

CSA Class No.: 3211-05

IEC/EN 60947-4-1

CSA File No.: 165628

CSA-C22.2 No. 60947-4-1-14

UL Category Control No.: NLRV

VDE 0660

CE

CSA

IEC/EN 60947

UL File No.: E36332

UL

UL 60947-4-1



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## Features

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

### 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.

#### 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

## Brochures

[eaton-motor-starters-system-xstart-brochure-br03407001en-en-us.pdf](#)

## Catalogs

[eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf](#)

[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-003.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-circuit-breaker-pkzm4-dimensions.eps](#)

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

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

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

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

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

## eCAD model

[ETN.222394.edz](#)

## 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

[eaton-motor-protective-circuit-breaker-pkzm4-overload-monitoring-exe-manual-mn03402002z-de-de-en-us.pdf](#)

## mCAD model

[DA-CS-pkzm4](#)

[DA-CD-pkzm4](#)

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.

#### Operating frequency

40 Operations/h

#### Pollution degree

3

#### Climatic proofing

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

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

#### Actuator type

Turn button

#### Tripping characteristic

Overload trigger: tripping class 10 A

#### Adjustment range undelayed short-circuit release - max

899 A

#### Adjustment range undelayed short-circuit release - min

899 A

#### Ambient operating temperature - max

55 °C

#### Ambient operating temperature - min

-25 °C

#### Sales notes

[eaton-link-module-for-motor-starters-pkz-flyer-fl034003en-en-us.pdf](#)

#### Specifications and datasheets

[Eaton Specification Sheet - 222394](#)

#### Wiring diagrams

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

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

Ambient operating temperature (enclosed) - max

40 °C

Ambient operating temperature (enclosed) - min

-25 °C

Ambient storage temperature - max

80 °C

Ambient storage temperature - min

-40 °C

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

10 HP

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

40 HP

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

50 HP

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

28.2 W

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

0 W

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

9.4 W

Internal resistance

2 mΩ

Rated impulse withstand voltage (U<sub>imp</sub>)

6000 V AC

Altitude

Max. 2000 m

Device construction

Built-in device fixed built-in technique

Explosion safety category for dust

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

Connection

Screw terminals

Electrical connection type of main circuit

Screw connection

Mounting position

Can be snapped on to IEC/EN 60715 top-hat rail with 7.5 or 15 mm height.

#### Lifespan, mechanical

30,000 Operations (Main conducting paths)

#### Overvoltage category

III

#### Degree of protection

IP20

Terminals: IP00

#### Number of poles

Three-pole

#### Lifespan, electrical

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

#### Shock resistance

15 g, Mechanical, According to IEC/EN 60068-2-27, Half-sinusoidal shock 10 ms

#### Functions

Motor protection

Phase failure sensitive

#### Terminal capacity (solid/stranded AWG)

14 - 2

#### Switching capacity

58 A (3 contacts in series), DC-5 up to 250V

58 A, AC-3 up to 690 V

#### Overload release current setting - max

58 A

#### Overload release current setting - min

50 A

#### Rated frequency - max

60 Hz

#### Rated frequency - min

50 Hz

#### Rated operational voltage (Ue) - max

690 V

#### Rated operational voltage (Ue) - min

690 V

#### Rated operational current for specified heat dissipation (In)

58 A

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

17 kW

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

30 kW

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

58 A

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

0 W

Stripping length (main cable)

14 mm

Product category

Motor protective circuit breaker

Protection

Finger and back-of-hand proof, Protection against direct contact when actuated from front (EN 50274)

Rated operational power at AC-3, 440 V, 50 Hz

37 kW

Rated operational power at AC-3, 500 V, 50 Hz

37 kW

Rated operational power at AC-3, 690 V, 50 Hz

55 kW

Rated short-circuit breaking capacity I<sub>cu</sub> at 400 V AC

50 kA

Suitable for

Also motors with efficiency class IE3

Branch circuit: Manual type E if used with terminal, or suitable for group installations, (UL/CSA)

Short-circuit release

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

± 20% tolerance, Trip blocks

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

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

58 A

Temperature compensation

-25 - 55 °C, Operating range

-5 - 40 °C to IEC/EN 60947, VDE 0660

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

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)

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

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

Accessories required BK50/3-PKZ4-E  
50 kA, 480 Y/277 V, SCCR (UL/CSA)  
50 kA, 240 V, SCCR (UL/CSA)

#### Tightening torque

3.3 Nm, Screw terminals, Main cable

#### Switch off technique

Thermomagnetic

#### Terminal capacity (flexible with ferrule)

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>

#### Power loss

28.2 W



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