# Eaton 222413

## Catalog Number: 222413

Eaton Moeller® series PKZM4 Motor-protective circuit-breaker, Ir= 55 - 65 A, Screw terminals, Terminations: IP00 PKZM4-63

## General specifications

**Product Name**
Eaton Moeller® series PKZM4 Motor-protective circuit-breaker

**Catalog Number**
222413

**Model Code**
PKZM4-63

**EAN**
4015082224134

**Product Length/Depth**
160 mm

**Product Height**
140 mm

**Product Width**
55 mm

**Product Weight**
1.136 kg

**Certifications**
CE
IEC/EN 60947
UL 60947-4-1
CSA File No.: 165628
CSA-C22.2 No. 60947-4-1-14
UL Category Control No.: NLRV
UL File No.: E36332
IEC/EN 60947-4-1
CSA Class No.: 3211-05
UL
VDE 0660
CSA

## Features & Functions

### Actuator type
Turn button

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

### Functions
Phase failure sensitive
Motor protection

### 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
-25 - 55 °C, Operating range
-5 - 40 °C to IEC/EN 60947, VDE 0660
≤ 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) mm², Main cables
2 x (0.75 - 25) mm², Main cables

Terminal capacity (solid)

1 x (0.75 - 16) mm², Main cables
2 x (0.75 - 16) mm²

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 (Ie)

65 A

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

18.5 kW

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

34 kW

Rated operational voltage (Ue) - min

690 V

Rated operational voltage (Ue) - max

690 V

Rated uninterrupted current (Iu)

65 A

## Short-circuit rating

Short-circuit current

60 kA DC, up to 250 V DC, Main conducting paths

Short-circuit current rating (group protection)

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)

## Motor rating

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

600 A, 600 V High Fault, max. Fuse, 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)

### Short-circuit release
± 20% tolerance, Trip blocks

1008 A, Irm, Setting range max.

Basic device fixed 15.5 x Iu, Trip Blocks

## Communication

### Connection
Screw terminals

## Trip blocks

### Overload release current setting - min
55 A

### Overload release current setting - max
65 A

### Tripping characteristic
Overload trigger: tripping class 10 A

## Design verification

### Equipment heat dissipation, current-dependent Pvid
31.5 W

### Heat dissipation capacity Pdiss
0 W

### Heat dissipation per pole, current-dependent Pvid
11.17 W

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

### Static heat dissipation, non-current-dependent Pvs
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

## Resources

### Brochures
Motor Starters in System xStart - brochure

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

### Catalogues
Product Range Catalog Switching and protecting motors

Switching and protecting motors - catalog

### Characteristic curve
eaton-manual-motor-starters-tripping-characteristic-pkzm4-characteristic-curve-004.eps

eaton-manual-motor-starters-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-circuit-breaker-pkzm4-3d-drawing.eps

eaton-manual-motor-starters-pkzm4-3d-drawing.eps

eaton-manual-motor-starters-mounting-3d-drawing-002.eps

eaton-general-ie-ready-dilm-contactor-standards.eps

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

### eCAD model

ETN.PKZM4-63

### 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-starter-nzm-mccb-wiring-diagram.eps

eaton-manual-motor-starters-transformer-pkzm0-wiring-diagram.eps

The device meets the requirements, provided the information in
the instruction leaflet (IL) is observed.