

# Eaton 278489

Catalog Number: 278489

Eaton Moeller® series PKZM0 Motor-protective circuit-breaker, 3p, Ir=25-32A



## General specifications

### Product Name

Eaton Moeller® series PKZM0 Motor-protective circuit-breaker

### Catalog Number

278489

### Model Code

PKZM0-32

### EAN

4015082784898

### Product Length/Depth

76 mm

### Product Height

93 mm

### Product Width

45 mm

### Product Weight

0.288 kg

### Certifications

CSA File No.: 165628

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

IEC/EN 60947

UL 60947-4-1

VDE 0660

CE

UL Category Control No.: NLRV

UL File No.: E36332

IEC/EN 60947-4-1

CSA Class No.: 3211-05

UL

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

### Lifespan, electrical

100,000 operations (at 400V, AC-3)

### Lifespan, mechanical

100,000 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

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

### Suitable for

Also motors with efficiency class IE3

Branch circuit: Suitable for group installations, (UL/CSA)

### Temperature compensation

-25 - 55 °C, Operating range

-5 - 40 °C to IEC/EN 60947, VDE 0660

$\leq 0.25 \% / K$ , residual error for  $T > 40^\circ$

## Climatic environmental conditions

### Altitude

Max. 2000 m

### Ambient operating temperature - min

-25 °C

## Terminal capacities

### Terminal capacity (flexible with ferrule)

2 x (1 - 6) mm<sup>2</sup>, ferrule to DIN 46228

1 x (1 - 6) mm<sup>2</sup>, ferrule to DIN 46228

### Terminal capacity (solid)

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, constant, to IEC 60068-2-78

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

2 x (1 - 6) mm<sup>2</sup>

1 x (1 - 6) mm<sup>2</sup>

Terminal capacity (solid/stranded AWG)

18 - 10

Stripping length (main cable)

10 mm

Tightening torque

1.7 Nm, Screw terminals, Main cable

1 Nm, Screw terminals, Control circuit cables

## Electrical rating

Rated frequency - min

50 Hz

Rated frequency - max

60 Hz

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

32 A

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

7.5 kW

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

15 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>)

32 A

## Short-circuit rating

Short-circuit current

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

Short-circuit current rating (group protection)

18 kA, 600 V High Fault, Fuse with CL, SCCR (UL/CSA)

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

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

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

18 kA, 600 V High Fault, CB with CL, SCCR (UL/CSA)

## Motor rating

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

7.5 HP

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

5 HP

Assigned motor power at 230/240 V, 60 Hz, 3-phase

10 HP

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

125 A, 600 V High Fault, max. CB, SCCR (UL/CSA)  
150 A, 600 V High Fault, max. Fuse, SCCR (UL/CSA)  
600 A, 600 V High Fault, max. CB with CL, SCCR (UL/CSA)

#### Short-circuit release

± 20% tolerance, Trip blocks  
Basic device fixed 15.5 x I<sub>u</sub>, Trip Blocks  
496 A, I<sub>rm</sub>, Setting range max.

### Trip blocks

Overload release current setting - min  
25 A

Overload release current setting - max  
32 A

#### Tripping characteristic

Overload trigger: tripping class 10 A

20 HP

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

25 HP

### Communication

#### Connection

Screw terminals

### Design verification

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

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

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

Rated operational current for specified heat dissipation (I<sub>n</sub>)  
32 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

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-characteristic-characteristic-curve-008.eps](#)

[eaton-manual-motor-starters-characteristic-characteristic-curve-009.eps](#)

[eaton-manual-motor-starters-tripping-characteristic-pkzm0-characteristic-curve.eps](#)

### Declarations of conformity

[DA-DC-00004921.pdf](#)

[DA-DC-00004892.pdf](#)

### Drawings

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

[eaton-manual-motor-starters-pkz-dimensions-002.eps](#)

[eaton-manual-motor-starters-pkzm0-dimensions-003.eps](#)

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

[eaton-manual-motor-starters-pkzm0-3d-drawing-004.eps](#)

[eaton-manual-motor-starters-pkzm0-3d-drawing-008.eps](#)

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

### eCAD model

[ETN.PKZM0-32](#)

### Installation instructions

[IL03402034Z](#)

[IL03407011Z](#)

### Installation videos

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

### Manuals and user guides

[IL122023ZU](#)

### mCAD model

[DA-CS-pkzm0](#)

[DA-CD-pkzm0](#)

### Wiring diagrams

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



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