Product specifications

Eaton 046938

Catalog Number: 046938

Eaton Moeller® series PKZM0 Motor-protective circuit-breaker, 7.5 kW, 10 - 16 A, Screw terminals

General specifications

Product Name
Eaton Moeller® series PKZM0 Motor-protective circuit-breaker

Catalog Number
046938

Model Code
PKZM0-16

EAN
4015080469384

Product Length/Depth
76 mm

Product Height
93 mm

Product Width
45 mm

Product Weight
0.292 kg

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

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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 3013, Ex II(2) GD

Lifespan, electrical

100,000 operations

Lifespan, mechanical

100,000 Operations

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

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, constant, to IEC 60068-2-78

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

1 x (1 - 6) mm², ferrule to DIN 46228

2 x (1 - 6) mm², ferrule to DIN 46228

Terminal capacity (solid)

1 x (1 - 6) mm²

2 x (1 - 6) mm²

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 (Ie)

16 A

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

4 kW

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

7.5 kW

Rated operational voltage (Ue) - min

690 V

Rated operational voltage (Ue) - max

690 V

Rated uninterrupted current (Iu)

16 A

Short-circuit rating

Short-circuit current

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

Short-circuit current rating (group protection)

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

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

Motor rating

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

1 HP

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

3 HP

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

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

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

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

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

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

Short-circuit current rating (type E)

Accessories required BK25/3-PKZ0-E

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

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

Short-circuit release

± 20% tolerance, Trip blocks

Basic device fixed 15.5 x Iu, Trip Blocks

248 A, Irm, Setting range max.

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

2 HP

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

5 HP

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

10 HP

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

10 HP

Communication

Connection

Screw terminals

Trip blocks

Overload release current setting - min

10 A

Overload release current setting - max

16 A

Tripping characteristic

Overload trigger: tripping class 10 A

Design verification

Equipment heat dissipation, current-dependent Pvid

6.43 W

Heat dissipation capacity Pdiss

0 W

Heat dissipation per pole, current-dependent Pvid

2.14 W

Rated operational current for specified heat dissipation (In)

16 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

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.

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

Certification reports

DA-DC-00004117.pdf

Characteristic curve

eaton-manual-motor-starters-pkz-characteristic-curve-002.eps

eaton-manual-motor-starters-characteristic-characteristic-curve-009.eps

eaton-manual-motor-starters-characteristic-characteristic-curve-008.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-manual-motor-starters-pkzm0-3d-drawing-008.eps

eaton-manual-motor-starters-pkzm0-3d-drawing-004.eps

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

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

eCAD model

DA-CE-ETN.PKZM0-16

Installation instructions

IL03407011Z

IL03402034Z

Installation videos

WIN-WIN with push-in technology

Manuals and user guides

eaton-motor-protective-circuit-breaker-pkzm0-overload-monitoring-exe-manual-mn03402003z-de-de-en-us.pdf

IL122023ZU

mCAD model

DA-CS-pkzm0

10.13 Mechanical function

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

DA-CD-pkzm0

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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