Specifications

Eaton 278490

Catalog Number: 278490

Eaton Moeller® series PKM0 Short-circuit protective breaker, Iu 12 A, Irm 186 A, Screw terminals, Also suitable for motors with efficiency class IE3.



General specifications

Product Name
Eaton Moeller® series PKM0 Short-circuit protective breaker

Catalog Number
278490

EAN
4015082784904

Product Length/Depth
76 mm

Product Height
93 mm

Product Width
45 mm

Product Weight
0.288 kg

Compliances
CE Marked

Certifications
IEC 60947-4-1
CSA Std. C22.2 No. 14
UL 508
VDE
VDE 0660
IEC/EN 60947

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

Powering Business Worldwide

Features & Functions

Actuator type

Turn button

Number of poles

Three-pole

General

Connection

Screw terminals

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

Temperature compensation

-5 - 40 °C to IEC/EN 60947, VDE 0660

-25 - 55 °C, Operating range

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

Type

Short-circuit protective device only

Climatic environmental conditions

Terminal capacities

Altitude

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

Terminal capacity (flexible with ferrule)

2 x (1 - 6) mm², ferrule to DIN 46228

1 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)

12 A

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

3 kW

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

5.5 kW

Rated operational voltage (Ue) - min

690 V

Rated operational voltage (Ue) - max

690 V

Rated uninterrupted current (Iu)

12 A

Short-circuit rating

Short-circuit release

± 20% tolerance, Trip blocks

Basic device fixed 15.5 x Iu, Trip Blocks

186 A, Irm, Setting range max.

Trip blocks

Overload release current setting - min

0 A

Overload release current setting - max

0 A

Rated short-circuit breaking capacity Ics at 400 V AC

38 kA

Rated short-circuit breaking capacity Icu at 400 V AC

50 kA

Rated short-circuit breaking capacity Icu at 440 V AC

15 kA

Rated short-circuit breaking capacity Ics at 440 V AC

12 kA

Rated short-circuit breaking capacity Icu at 500 V AC

15 kA

Rated short-circuit breaking capacity Ics at 500 V AC

4 kA

Rated short-circuit breaking capacity Icu at 690 V AC

3 kA

Rated short-circuit breaking capacity Ics at 690 V AC

2 kA

Design verification

Equipment heat dissipation, current-dependent Pvid

6.64 W

Heat dissipation capacity Pdiss

0 W

Heat dissipation per pole, current-dependent Pvid

2.21 W

Rated operational current for specified heat dissipation (In)

12 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.

10.13 Mechanical function

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

Resources

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-characteristic-curve-009.eps

eaton-manual-motor-starters-characteristic-characteristic-curve-008.eps

Declarations of conformity

DA-DC-00004920.pdf

DA-DC-00004891.pdf

Drawings

eaton-manual-motor-starters-pkz-dimensions-002.eps

eaton-manual-motor-starters-pkz-dimensions-003.eps

eaton-manual-motor-starters-pkz-dimensions.eps

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

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

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

eaton-manual-motor-starters-circuit-breaker-pkzm0-3d-drawing.eps

eCAD model

ETN.278490.edz

Installation instructions

IL03407011Z.pdf

IL03402034Z

Installation videos

WIN-WIN with push-in technology

mCAD model

DA-CS-pkzm0

DA-CD-pkzm0

Sales notes

eaton-link-module-for-motor-starters-pkz-flyer-fl034003en-en-us.pdf

Wiring diagrams

eaton-motor-protective-switch-starter-pkm0-wiring-diagram.eps

eaton-manual-motor-starters-diagram-pkm0-wiring-diagram.eps



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