

Eaton 111967

Catalog Number: 111967

Eaton Moeller series Power Defense - Molded Case Circuit Breaker. Circuit-breaker, 3 p, 400A, N, 3

General specifications

| Product Name | Catalog Number |
|---|----------------------|
| Eaton Moeller series Power Defense molded case circuit-breaker | 111967 |
| Model Code | LZMN3-A400-I |
| EAN | Product Length/Depth |
| 4015081115150 | 166 mm |
| Product Height | Product Width |
| 275 mm | 140 mm |
| Product Weight | Compliances |
| 5.8 kg | RoHS conform |
| Certifications | |
| VDE 0660 | |
| IEC/EN 60947 | |
| IEC | |

Product specifications

Rated operational current for specified heat dissipation (In)

400 A

10.11 Short-circuit rating

Is the panel builder's responsibility. The specifications for the switchgear must be observed.

10.4 Clearances and creepage distances

Meets the product standard's requirements.

10.12 Electromagnetic compatibility

Is the panel builder's responsibility. The specifications for the switchgear must be observed.

Mounting Method

Fixed

Built-in device fixed built-in technique

Amperage Rating

400 A

10.2.5 Lifting

Does not apply, since the entire switchgear needs to be evaluated.

Handle type

Rocker lever

10.2.3.1 Verification of thermal stability of enclosures

Meets the product standard's requirements.

Protection against direct contact

Finger and back-of-hand proof to DIN EN 50274/VDE 0106 part 110

Terminal capacity (copper busbar)

M10 at rear-side screw connection

10.8 Connections for external conductors

Is the panel builder's responsibility.

Special features

Maximum back-up fuse, if the expected short-circuit currents at the installation location exceed the switching capacity of the circuit breaker (Rated short-circuit breaking capacity I_{cn}) Rated current = rated uninterrupted current: 400 A

Position of connection for main current circuit

Front side

Rated insulation voltage (Ui)

Resources

Certification reports

DA-DC-03_N3

Characteristic curve

1230DIA-66

1230DIA-44

1230DIA-41

eaton-circuit-breaker-nzm-mccb-characteristic-curve-034.eps

eaton-circuit-breaker-nzm-mccb-characteristic-curve-031.eps

eaton-circuit-breaker-tripping-characteristic-nzm-mccb-characteristic-curve.eps

Drawings

eaton-circuit-breaker-nzm-mccb-dimensions-020.eps

123X330

123X553

eaton-circuit-breaker-switch-nzm-mccb-dimensions-016.eps

eaton-circuit-breaker-switch-nzm-mccb-3d-drawing-002.eps

123I375

Installation instructions

i01208013z2017_05.pdf

mCAD model

DA-CS-nzm3_3p

DA-CD-nzm3_3p

1000 V AC

Climatic proofing

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

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

Features

Protection unit

Motor drive optional

Lifespan, electrical

2000 operations at 690 V AC-3

2000 operations at 415 V AC-3

2000 operations at 500 V DC-3

5000 operations at 400 V AC-1

5000 operations at 500 V DC-1

5000 operations at 415 V AC-1

2000 operations at 400 V AC-3

2000 operations at 750 V DC-3

3000 operations at 690 V AC-1

5000 operations at 750 V DC-1

Electrical connection type of main circuit

Screw connection

Short-circuit total breaktime

< 10 ms

Rated impulse withstand voltage (Uiimp) at main contacts

8000 V

Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 400/415 V, 50/60 Hz

50 kA

10.9.3 Impulse withstand voltage

Is the panel builder's responsibility.

Utilization category

A (IEC/EN 60947-2)

Number of poles

Three-pole

10.6 Incorporation of switching devices and components

Does not apply, since the entire switchgear needs to be evaluated.

10.5 Protection against electric shock

Does not apply, since the entire switchgear needs to be evaluated.

Equipment heat dissipation, current-dependent

72.48 W

Instantaneous current setting (li) - min

2400 A

10.13 Mechanical function

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

10.2.6 Mechanical impact

Does not apply, since the entire switchgear needs to be evaluated.

10.9.4 Testing of enclosures made of insulating material

Is the panel builder's responsibility.

Rated operational current

500 A (500 V DC-1, making and breaking capacity)
400 A (415 V AC-3, making and breaking capacity)
500 A (415 V AC-1, making and breaking capacity)
500 A (500 V DC-3, making and breaking capacity)
500 A (750 V DC-1, making and breaking capacity)
500 A (750 V DC-3, making and breaking capacity)
630 A (690 V AC-1, making and breaking capacity)
400 A (660-690 V AC-3, making and breaking capacity)
630 A (380/400 V AC-1, making and breaking capacity)

Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 230 V, 50/60 Hz

85 kA

Application

Use in unearthing supply systems at 690 V

10.3 Degree of protection of assemblies

Does not apply, since the entire switchgear needs to be evaluated.

Rated short-circuit making capacity Icm at 240 V, 50/60 Hz

187 kA

Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 440 V, 50/60 Hz

35 kA

Degree of protection (IP), front side

IP66 (with door coupling rotary handle)
IP40 (with insulating surround)

Rated short-circuit making capacity Icm at 525 V, 50/60 Hz

53 kA

Rated short-circuit making capacity Icm at 690 V, 50/60 Hz

40 kA

Instantaneous current setting (li) - max

4000 A

Overload current setting (Ir) - min

320 A

Short delay current setting (Isd) - min

0 A

Number of auxiliary contacts (normally closed contacts)

0

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.

Lifespan, mechanical

15000 operations

Overload current setting (Ir) - max

400 A

Voltage rating

690 V - 690 V

Terminal capacity (copper solid conductor/cable)

16 mm² - 185 mm² (1x) at tunnel terminal

Degree of protection (terminations)

IP00 (terminations, phase isolator and band terminal)

IP10 (tunnel terminal)

10.9.2 Power-frequency electric strength

Is the panel builder's responsibility.

Short-circuit release non-delayed setting - min

2400 A

Degree of protection

IP20

In the area of the HMI devices: IP20 (basic protection type)

Overvoltage category

III

Rated short-time withstand current (t = 1 s)

3.3 kA

Short delay current setting (Isd) - max

0 A

Rated impulse withstand voltage (Uiimp) at auxiliary contacts

6000 V

Number of auxiliary contacts (change-over contacts)

0

Rated short-time withstand current ($t = 0.3$ s)

3.3 kA

Release system

Thermomagnetic release

Rated short-circuit breaking capacity I_{cs} (IEC/EN 60947) at 525 V, 50/60 Hz

13 kA

Pollution degree

3

10.7 Internal electrical circuits and connections

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.

Functions

Photovoltaic applications

System and cable protection

Short-circuit release non-delayed setting - max

4000 A

Rated short-circuit making capacity I_{cm} at 400/415 V, 50/60 Hz

105 kA

Standard terminals

Screw terminal

Type

Circuit breaker

10.2.2 Corrosion resistance

Meets the product standard's requirements.

10.2.4 Resistance to ultra-violet (UV) radiation

Meets the product standard's requirements.

10.2.7 Inscriptions

Meets the product standard's requirements.

Rated short-circuit making capacity I_{cm} at 440 V, 50/60 Hz

74 kA

Number of auxiliary contacts (normally open contacts)

0

Isolation

500 V AC (between auxiliary contacts and main contacts)

300 V AC (between the auxiliary contacts)

Number of operations per hour - max

60

Circuit breaker frame type

LZM3

Direction of incoming supply

As required

Shock resistance

20 g (half-sinusoidal shock 20 ms)



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