

Eaton 111938

Catalog Number: 111938

Eaton Moeller series Power Defense - Molded Case Circuit Breaker. Circuit-breaker LZM, 3 p, 160A, C2-A160-I

General specifications

Product Name	Catalog Number
Eaton Moeller series Power Defense molded case circuit-breaker	111938 EAN 4015081114863
Product Length/Depth	Product Height
142 mm	185 mm
Product Width	Product Weight
105 mm	2.345 kg
Compliances	Certifications
RoHS conform	IEC IEC/EN 60947 VDE 0660
Model Code	
LZMC2-A160-I	



Product specifications

Rated operational current for specified heat dissipation (In)

160 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

DIN rail (top hat rail) mounting optional

Built-in device fixed built-in technique

Fixed

Amperage Rating

160 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)

M8 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 Icn) Rated current = rated uninterrupted current: 160 A

Position of connection for main current circuit

Front side

Resources

Drawings

[eaton-circuit-breaker-nzm-mccb-dimensions-019.eps](#)

[123X312](#)

[123X341](#)

[eaton-circuit-breaker-switch-nzm-mccb-dimensions-017.eps](#)

User guides

[IL01206012Z](#)

Rated insulation voltage (Ui)

690 V AC

Climatic proofing

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

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

Features

Motor drive optional

Protection unit

Lifespan, electrical

10000 operations at 400 V AC-1

6500 operations at 415 V AC-3

7500 operations at 690 V AC-1

7500 operations at 415 V AC-1

Electrical connection type of main circuit

Screw connection

Short-circuit total breaktime

< 10 ms

Rated impulse withstand voltage (Uimp) at main contacts

8000 V

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

36 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

38.4 W

Instantaneous current setting (Ii) - min

960 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

300 A (415 V AC-1, making and breaking capacity)
300 A (380/400 V AC-1, making and breaking capacity)
160 A (415 V AC-3, making and breaking capacity)
160 A (660-690 V AC-3, making and breaking capacity)
300 A (690 V AC-1, making and breaking capacity)

Rated short-circuit breaking capacity I_{cs} (IEC/EN 60947) at 230 V, 50/60 Hz

55 kA

Application

Use in unearthed 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 I_{cm} at 240 V, 50/60 Hz

121 kA

Rated short-circuit breaking capacity I_{cs} (IEC/EN 60947) at 440 V, 50/60 Hz

22.5 kA

Degree of protection (IP), front side

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

Rated short-circuit making capacity I_{cm} at 525 V, 50/60 Hz

24 kA

Rated short-circuit making capacity I_{cm} at 690 V, 50/60 Hz

14 kA

Instantaneous current setting (I_i) - max

1600 A

Overload current setting (I_r) - min

125 A

Short delay current setting (I_{sd}) - 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

20000 operations

Overload current setting (I_r) - max

160 A

Voltage rating

690 V - 690 V

Terminal capacity (copper solid conductor/cable)

16 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

960 A

Degree of protection

IP20

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

Overvoltage category

III

Short delay current setting (I_{sd}) - max

0 A

Rated impulse withstand voltage (U_{imp}) at auxiliary contacts

6000 V

Number of auxiliary contacts (change-over contacts)

0

Release system

Thermomagnetic release

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

6 kA

Pollution degree

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

System and cable protection

Short-circuit release non-delayed setting - max

1600 A

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

76 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

63 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

120

Circuit breaker frame type

LZM2

Direction of incoming supply

As required

Shock resistance

20 g (half-sinusoidal shock 20 ms)



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