

Eaton 281230

Catalog Number: 281230

Eaton Moeller series NZM - Molded Case Circuit Breaker. NZM1, 3 pole, Switching capacity 400/415 V 50 Hz(Icu): 25 kA, 160 A, Fixed, Box terminal, IEC



General specifications

Product Name	Catalog Number
Eaton Moeller series NZM molded case circuit breaker thermo-magnetic	281230
	Model Code
	NZMB1-A160
EAN	Product Length/Depth
4015082812300	88 mm
Product Height	Product Width
145 mm	90 mm
Product Weight	Compliances
1.123 kg	RoHS conform
Certifications	
IEC/EN 60947	
IEC	

Technical data - electrical

Voltage rating

440 V - 440 V

Rated impulse withstand voltage (Uimp) at auxiliary contacts

6000 V

Rated impulse withstand voltage (Uimp) at main contacts

6000 V

Amperage Rating

160 A

Instantaneous current setting (Ii) - min

960 A

Instantaneous current setting (Ii) - max

1600 A

Overload current setting (Ir) - min

125 A

Overload current setting (Ir) - max

160 A

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

0 A

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

0 A

Short-circuit release non-delayed setting - min

1280 A

Short-circuit release non-delayed setting - max

1280 A

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

30 kA

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

25 kA

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

18.5 kA

Rated short-circuit making capacity I_{cm} at 240 V, 50/60 Hz

63 kA

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

53 kA

Technical data - communication

Rated impulse withstand voltage (Uimp) at auxiliary contacts

6000 V

Rated impulse withstand voltage (Uimp) at main contacts

6000 V

Amperage Rating

160 A

Instantaneous current setting (Ii) - min

960 A

Instantaneous current setting (Ii) - max

1600 A

Overload current setting (Ir) - min

125 A

Overload current setting (Ir) - max

160 A

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

0 A

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

0 A

Short-circuit release non-delayed setting - min

1280 A

Short-circuit release non-delayed setting - max

1280 A

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

30 kA

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

25 kA

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

18.5 kA

Rated short-circuit making capacity I_{cm} at 240 V, 50/60 Hz

63 kA

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

53 kA

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

53 kA

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

53 kA

Short-circuit total breaktime

< 10 ms

Electrical connection type of main circuit

Frame clamp

Isolation

300 V AC (between the auxiliary contacts)

500 V AC (between auxiliary contacts and main contacts)

Number of operations per hour - max

120

Handle type

Rocker lever

Utilization category

A (IEC/EN 60947-2)

Overvoltage category

III

Pollution degree

3

Lifespan, electrical

7500 operations at 400 V AC-1

7500 operations at 415 V AC-1

5000 operations at 690 V AC-1

Direction of incoming supply

As required

Short-circuit total breaktime

< 10 ms

Electrical connection type of main circuit

Frame clamp

Isolation

300 V AC (between the auxiliary contacts)

500 V AC (between auxiliary contacts and main contacts)

Number of operations per hour - max

120

Handle type

Rocker lever

Utilization category

A (IEC/EN 60947-2)

Overvoltage category

III

Pollution degree

3

Lifespan, electrical

7500 operations at 400 V AC-1

7500 operations at 415 V AC-1

5000 operations at 690 V AC-1

Direction of incoming supply

As required

Technical data - mechanical

Mounting Method

DIN rail (top hat rail) mounting optional

Built-in device fixed built-in technique

Fixed

Degree of protection

IP20 (basic degree of protection, in the operating controls area)

IP20

Degree of protection (IP), front side

IP40 (with insulating surround)

IP66 (with door coupling rotary handle)

Degree of protection (terminations)

IP00 (terminations, phase isolator and strip terminal)

IP10 (tunnel terminal)

Protection against direct contact

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

Shock resistance

20 g (half-sinusoidal shock 20 ms)

Number of auxiliary contacts (change-over contacts)

0

Number of auxiliary contacts (normally closed contacts)

0

Number of auxiliary contacts (normally open contacts)

0

Position of connection for main current circuit

Front side

Climatic proofing

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

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

Lifespan, mechanical

20000 operations

Resources

Brochures

[eaton-feerum-the-whole-grain-solution-success-story-en-us.pdf](#)

[eaton-digital-nzm-brochure-br013003en-en-us.pdf](#)

Catalogues

[eaton-digital-nzm-catalog-ca013003en-en-us.pdf](#)

Characteristic curve

[eaton-circuit-breaker-characteristic-power-defense-mccb-characteristic-curve-038.eps](#)

[eaton-circuit-breaker-nzm-mccb-characteristic-curve-051.eps](#)

[eaton-circuit-breaker-characteristic-power-defense-mccb-characteristic-curve-032.eps](#)

Drawings

[eaton-circuit-breaker-switch-nzm-mccb-dimensions-014.eps](#)

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

eCAD model

[ETN.NZMB1-A160](#)

Installation instructions

[eaton-circuit-breakers-nzm-pn1-nzmbc-nzmbn-circuit-breaker-switch-disconnector-instruction-leaflet-il01203004z.pdf](#)

Installation videos

[The new digital NZM Range](#)

[Introduction of the new digital circuit breaker NZM](#)

mCAD model

[DA-CD-nzm1_3p](#)

[DA-CS-nzm1_3p](#)

Technical data sheets

[eaton-nzm-technical-information-sheet](#)



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30 Pembroke Road
Dublin 4, Ireland
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