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NZMN3-4-A500-SVE - Circuit-breaker, 4p, 500A, withdraw able unit



168512 NZMN3-4-A500-SVE

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# 168512 NZMN3-4-A500-SVE

Circuit-breaker, 4p, 500A, withdraw able unit

Alternate Catalog No.

EL-Nummer (Norway)

NZMN3-4-A500-SVE

4357597

Series NZM.-A circuit-breakers cover all application cases with just four compact sizes and are suitable for the IEC market. Modular function groups always make mounting flexible. With thermomagnetic releases for systems and cable protection. Notes: set value in neutral conductor is synchronous with set value  $I_r$  of phase conductor.

- Delivery program

- Technical data

- Design verification as per IEC/EN 61439

- Technical data ETIM 7.0

## Delivery program

Switching capacity

400/415 V 50 Hz [ $I_{cu}$ ]

50 kA

Rated current = rated uninterrupted current [ $I_n = I_u$ ]

Rated current = rated uninterrupted current [ $I_n = I_u$ ]

500 A

Neutral conductor [% of phase conductor]

100 %

### Setting range

Overload tripMain pole  [ $I_r$ ]

400 - 500 A

Short-circuit releases  [ $I_{rm}$ ] Non-delayed  [ $I_k = I_n \times \dots$ ]

6 - 10

## Technical data

General

Ambient temperatureAmbient temperature, storage

- 40 - + 70 °C

Ambient temperatureOperation

-25 - +70 °C

Circuit-breakers

Rated current = rated uninterrupted current [ $I_n = I_u$ ]

500 A

Switching capacity

Rated short-circuit breaking capacity  $I_{cn}$  [ $I_{cn}$ ]  $I_{cu}$  to IEC/EN 60947 test cycle O-t-OO [ $I_{cu}$ ] 400/415 V 50/60 Hz [ $I_{cu}$ ] 50 kA

Rated short-circuit breaking capacity  $I_{cn}$  [ $I_{cn}$ ]  $I_{cu}$  to IEC/EN 60947 test cycle O-t-OO [ $I_{cu}$ ] 500 V DC [ $I_{cu}$ ] 30 kA

Rated short-circuit breaking capacity  $I_{cn}$  [ $I_{cn}$ ]  $I_{cu}$  to IEC/EN 60947 test cycle O-t-OO [ $I_{cu}$ ] 750 V DC [ $I_{cu}$ ] 30 kA

Rated short-circuit breaking capacity  $I_{cn}$  [ $I_{cn}$ ]  $I_{cs}$  to IEC/EN 60947 test cycle O-t-OO-t-OO [ $I_{cs}$ ] 500 V DC [ $I_{cs}$ ] 30 kA

Rated short-circuit breaking capacity  $I_{cn}$  [ $I_{cn}$ ]  $I_{cs}$  to IEC/EN 60947 test cycle O-t-OO-t-OO [ $I_{cs}$ ] 750 V DC [ $I_{cs}$ ] 30 kA

## Design verification as per IEC/EN 61439

Technical data for design verification

Equipment heat dissipation, current-dependent [ $P_{\text{ed}}$ ]

130.5 W

Operating ambient temperature min.

-25 °C

Operating ambient temperature max.

+70 °C

IEC/EN 61439 design verification

10.2 Strength of materials and parts 10.2.2 Corrosion resistance

Meets the product standard's requirements.

10.2 Strength of materials and parts 10.2.3.1 Verification of thermal stability of enclosures

Meets the product standard's requirements.

10.2 Strength of materials and parts 10.2.3.2 Verification of resistance of insulating materials to normal heat

Meets the product standard's requirements.

10.2 Strength of materials and parts 10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects

Meets the product standard's requirements.

10.2 Strength of materials and parts 10.2.4 Resistance to ultra-violet (UV) radiation

Meets the product standard's requirements.

10.2 Strength of materials and parts 10.2.5 Lifting

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

10.2 Strength of materials and parts 10.2.6 Mechanical impact

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

10.2 Strength of materials and parts 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 Insulation properties 10.9.2 Power-frequency electric strength

Is the panel builder's responsibility.

10.9 Insulation properties 10.9.3 Impulse withstand voltage

Is the panel builder's responsibility.

10.9 Insulation properties 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.

## Technical data ETIM 7.0

Low-voltage industrial components (EG000017) / Power circuit-breaker for trafo/generator/installation protection

(EC000228)

Electric engineering, automation, process control engineering / Low-voltage switch technology / Circuit breaker (LV < 1 kV) / Circuit breaker for power transformer, generator and system protection (ecl@ss10.0.1-27-37-04-09

[AJZ716013])

Rated permanent current I<sub>n</sub>

500 A

Rated voltage

690 - 690 V

Rated short-circuit breaking capacity I<sub>cu</sub> at 400 V, 50 Hz

50 kA

Overload release current setting

400 - 500 A

Adjustment range short-term delayed short-circuit release

0 - 0 A

Adjustment range undelayed short-circuit release

6 - 10 A

Integrated earth fault protection

No

Type of electrical connection of main circuit

Screw connection

Device construction

Built-in device plug-in technique

Suitable for DIN rail (top hat rail) mounting

No

DIN rail (top hat rail) mounting optional

No

Number of auxiliary contacts as normally closed contact

0

Number of auxiliary contacts as normally open contact

0

Number of auxiliary contacts as change-over contact

0

With switched-off indicator

No

With under voltage release

No

Number of poles

4

Position of connection for main current circuit

Front side

Type of control element

Rocker lever

Complete device with protection unit

Yes

Motor drive integrated

No

Motor drive optional

Yes

Degree of protection (IP)

IP20

## CAD data

- [Product-specific CAD data](#)  
(Web)
- [3D Preview](#)  
(Web)

## DWG files

- [DA-CD-nzm3\\_4\\_a320\\_sve](#)  
File  
(Web)

## edz files

- [DA-CE-ETN.NZMN3-4-A500-SVE](#)  
File  
(Web)

## Step files

- [DA-CS-nzm3\\_4\\_a320\\_sve](#)  
File  
(Web)

## Additional product information

- [additional technical information for NZM power switch](#)  
(PDF)

## Product photo

-   
[1230PIC-1320](#)  
Photo

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