# **DATASHEET - NZMC3-4-A400-SVE**



Circuit-breaker, 4p, 400A, plug-in module

Part no. NZMC3-4-A400-SVE Catalog No. 168466
Alternate Catalog NZMC3-4-A400-SVE



Similar to illustration

### **Delivery program**

| Don't or y program                          |                          |     |           |
|---|--------------------------|-----|-----------|
| Switching capacity                          |                          |     |           |
| 400/415 V 50 Hz                             | I <sub>cu</sub>          | kA  | 36        |
| Rated current = rated uninterrupted current |                          |     |           |
| Rated current = rated uninterrupted current | $I_n = I_u$              | Α   | 400       |
| Neutral conductor                           | % of phase conductor     | CSA | 100       |
| Setting range                               |                          |     |           |
| Overload trip                               |                          |     |           |
| Main pole                                   | I <sub>r</sub>           | Α   | 320 - 400 |
| Short-circuit releases                      |                          |     |           |
| Non-delayed                                 | $I_i = I_n \times \dots$ |     | 6 - 10    |

### **Technical data**

#### General

| Ambient temperature, storage  °C -40 - +70  Operation  °C -25 - +70  Circuit-breakers  Rated current = rated uninterrupted current  In = Iu A 400  Switching capacity  |   |                 |    |             |
|--|---|-----------------|----|-------------|
| Operation  °C -25 - +70  Circuit-breakers  Rated current = rated uninterrupted current  In = Iu A 400  Switching capacity  Rated short-circuit breaking capacity I <sub>cn</sub> Icu to IEC/EN 60947 test cycle 0-t-C0  Icu kA | Ambient temperature                                   |                 |    |             |
| Circuit-breakers  Rated current = rated uninterrupted current  In = Iu A 400  Switching capacity  Rated short-circuit breaking capacity Icn  Icu to IEC/EN 60947 test cycle 0-t-C0  Icu kA                                     | Ambient temperature, storage                          |                 | °C | - 40 - + 70 |
| Rated current = rated uninterrupted current  I <sub>n</sub> = I <sub>u</sub> A 400  Switching capacity  Rated short-circuit breaking capacity I <sub>cn</sub> Icu to IEC/EN 60947 test cycle 0-t-CO  Icu kA                    | Operation   |                 | °C | -25 - +70   |
| Switching capacity Rated short-circuit breaking capacity I <sub>cn</sub> Icu to IEC/EN 60947 test cycle 0-t-C0  Icu kA   | Circuit-breakers                                      |                 |    |             |
| Rated short-circuit breaking capacity I <sub>cn</sub> I <sub>cn</sub> I <sub>cn</sub> Icu to IEC/EN 60947 test cycle 0-t-CO Icu kA   | Rated current = rated uninterrupted current           | $I_n = I_u$     | Α  | 400         |
| Icu to IEC/EN 60947 test cycle 0-t-CO  Icu kA  | Switching capacity                                    |                 |    |             |
| ADDIATE V EDIZO II-  | Rated short-circuit breaking capacity I <sub>cn</sub> | I <sub>cn</sub> |    |             |
| 400/415 V 50/60 Hz I <sub>cu</sub> kA 36   | Icu to IEC/EN 60947 test cycle 0-t-C0                 | lcu             | kA |             |
|  | 400/415 V 50/60 Hz                                    | I <sub>cu</sub> | kA | 36          |

# **Design verification as per IEC/EN 61439**

| 2001gii 1011110111101111011101110111011101110   |                  |    |  |
|---|------------------|----|--|
| Technical data for design verification  |                  |    |  |
| Equipment heat dissipation, current-dependent   | P <sub>vid</sub> | W  | 96.48  |
| Operating ambient temperature min.  |                  | °C | -25  |
| Operating ambient temperature max.  |                  | °C | 70   |
| IEC/EN 61439 design verification  |                  |    |  |
| 10.2 Strength of materials and parts  |                  |    |  |
| 10.2.2 Corrosion resistance   |                  |    | Meets the product standard's requirements.                         |
| 10.2.3.1 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 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric 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 Insulation properties                               |  |
| 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.                         |

### **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 lu         A         40           Rated voltage         V         600-690           Rated short-circuit breaking capacity lcu at 400 V, 50 Hz         KA         30           Overload release current setting         A         20-400           Adjustment range undelayed short-circuit release         A         0-0           Adjustment range undelayed short-circuit release         B         No           Integrated earth fault protection         No         Screw connection           Type of electrical connection of main circuit         No         Screw connection           Suitable for DIN rail (top hat rail) mounting         No         No           Number of auxiliary contacts as normally closed contact         No         No           Number of auxiliary contacts as normally open contact         No         No           With switched-off indicator         No         No           Visual activities of protection (since in main current circuit </th <th></th> <th></th> <th></th>   |   |    |                                   |
|--|---|----|-----------------------------------|
| Rated short-circuit breaking capacity lou at 400 V, 50 Hz         KA         36           Overload release current setting         A         20 - 400           Adjustment range short-term delayed short-circuit release         A         0 - 0           Adjustment range undelayed short-circuit release         A         6 - 10           Adjustment range undelayed short-circuit release         A         6 - 10           Integrated earth fault protection         B         No           Type of electrical connection of main circuit         Built-in device plug-in technique           Suitable for DIN rail (top hat rail) mounting         Built-in device plug-in technique           Number of auxiliary contacts as normally closed contact         No         No           Number of auxiliary contacts as change-over contact         P         0         O           With switched-off indicator         P         No         No           With under voltage release         No         No         No           Number of poles         P         No         No           Position of connection for main current circuit         P         No         No           Type of control element         P         No         No           Complete device with protection unit         P         No         No  | Rated permanent current lu                                | Α  | 400                               |
| Overload release current setting         A         320 - 4000           Adjustment range short-term delayed short-circuit release         A         0 - 0           Adjustment range undelayed short-circuit release         A         6 - 10           Integrated earth fault protection         Some of the protection of main circuit         Some of the protection of the protection of main circuit         Some of the protection of the protection of main circuit         Some of the protection of th   | Rated voltage   | V  | 690 - 690                         |
| Adjustment range short-term delayed short-circuit release Adjustment range undelayed short-circuit release Adjustment range undelayed short-circuit release Integrated earth fault protection Type of electrical connection of main circuit Device construction Suitable for DIN rail (top hat rail) mounting Suitable for DIN rail (top hat rail) mounting DIN rail (top hat rail) mounting optional Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as change-over contact Number of pausiliary contacts as change-over contact Number of pausiliary contacts as change-over contact Number of poles Number o | Rated short-circuit breaking capacity Icu at 400 V, 50 Hz | kA | 36                                |
| Adjustment range undelayed short-circuit release Integrated earth fault protection Type of electrical connection of main circuit Device construction Suitable for DIN rail (top hat rail) mounting optional Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as change-over contact Number of pausiliary contacts as change-over contact Number of poles Number of connection for main current circuit Type of control element Complete device with protection unit Motor drive integrated Motor drive integrated No   | Overload release current setting                          | Α  | 320 - 400                         |
| Integrated earth fault protection Type of electrical connection of main circuit Device construction Suitable for DIN rail (top hat rail) mounting DIN rail (top hat rail) mounting optional Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as normally open contact  | Adjustment range short-term delayed short-circuit release | Α  | 0 - 0                             |
| Type of electrical connection of main circuit  Device construction  Device construction  Suitable for DIN rail (top hat rail) mounting  DIN rail (top hat rail) mounting optional  Number of auxiliary contacts as normally closed contact  Number of auxiliary contacts as normally open contact  Number of auxiliary contacts as normally open contact  Number of auxiliary contacts as change-over contact  With switched-off indicator  With under voltage release  Number of poles  Number of poles  Number of poles  Position of connection for main current circuit  Type of control element  Complete device with protection unit  Motor drive integrated  Motor drive optional  | Adjustment range undelayed short-circuit release          | Α  | 6 - 10                            |
| Device construction  Suitable for DIN rail (top hat rail) mounting  DIN rail (top hat rail) mounting optional  Number of auxiliary contacts as normally closed contact  Number of auxiliary contacts as normally open contact  Number of auxiliary contacts as change-over contact  No  No  Vith under voltage release  No  No  No  No  No  No  No  No  No  N  | Integrated earth fault protection                         |    | No                                |
| Suitable for DIN rail (top hat rail) mounting DIN rail (top hat rail) mounting optional Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as change-over contact Number of puxiliary contacts as change-over contact Number of puxiliary contacts as change-over contact Nith switched-off indicator No No No Number of poles No No No Number of poles Position of connection for main current circuit Type of control element Complete device with protection unit Notor drive integrated No No No Notor drive optional  | Type of electrical connection of main circuit             |    | Screw connection                  |
| DIN rail (top hat rail) mounting optional  Number of auxiliary contacts as normally closed contact  Number of auxiliary contacts as normally open contact  Number of auxiliary contacts as change-over contact  Number of auxiliary contacts as change-over contact  With switched-off indicator  With under voltage release  No  Number of poles  Position of connection for main current circuit  Type of control element  Complete device with protection unit  Motor drive integrated  Motor drive optional  | Device construction                                       |    | Built-in device plug-in technique |
| Number of auxiliary contacts as normally closed contact  Number of auxiliary contacts as normally open contact  Number of auxiliary contacts as change-over contact  Number of auxiliary contacts as change-over contact  No  With switched-off indicator  With under voltage release  No  Number of poles  No  Number of poles  Position of connection for main current circuit  Type of control element  Complete device with protection unit  Motor drive integrated  Motor drive optional  O  O  No  No  No  No  No  No  No  No  | Suitable for DIN rail (top hat rail) mounting             |    | No                                |
| Number of auxiliary contacts as normally open contact  Number of auxiliary contacts as change-over contact  With switched-off indicator  With under voltage release  No  Number of poles  Position of connection for main current circuit  Type of control element  Complete device with protection unit  Motor drive integrated  Motor drive optional  O  O  O  O  O  O  O  O  O  O  O  O  O  | DIN rail (top hat rail) mounting optional                 |    | No                                |
| Number of auxiliary contacts as change-over contact  With switched-off indicator  With under voltage release  No  Number of poles  Position of connection for main current circuit  Type of control element  Complete device with protection unit  Motor drive optional  O  No  No  No  No  No  No  No  No  No   | Number of auxiliary contacts as normally closed contact   |    | 0                                 |
| With switched-off indicator  With under voltage release  No  Number of poles  Number of connection for main current circuit  Type of control element  Complete device with protection unit  Motor drive optional  No  No  No  No  No  No  No  No  No  N  | Number of auxiliary contacts as normally open contact     |    | 0                                 |
| With under voltage release No Number of poles 4 Position of connection for main current circuit Type of control element Complete device with protection unit Motor drive optional No   | Number of auxiliary contacts as change-over contact       |    | 0                                 |
| Number of poles  Position of connection for main current circuit  Type of control element  Complete device with protection unit  Motor drive optional  4  Front side  Rocker lever  Rocker lever  Yes  No  Yes   | With switched-off indicator                               |    | No                                |
| Position of connection for main current circuit  Type of control element  Complete device with protection unit  Motor drive optional  Front side  Rocker lever  Yes  No  Yes   | With under voltage release                                |    | No                                |
| Type of control element Complete device with protection unit Motor drive optional  Rocker lever  Yes  No  Yes  | Number of poles   |    | 4                                 |
| Complete device with protection unit  Yes  Motor drive integrated  No  Motor drive optional  Yes   | Position of connection for main current circuit           |    | Front side                        |
| Motor drive integrated No Motor drive optional Yes   | Type of control element                                   |    | Rocker lever                      |
| Motor drive optional Yes   | Complete device with protection unit                      |    | Yes                               |
|  | Motor drive integrated                                    |    | No                                |
| Degree of protection (IP)  | Motor drive optional                                      |    | Yes                               |
|  | Degree of protection (IP)                                 |    | IP20                              |

# **Additional product information (links)**

additional technical information for NZM power switch

 $ftp://ftp.moeller.net/DOCUMENTATION/PDF/nzm\_technic\_de\_en.pdf$