



**NH fuse-switch 3p flange connection M10 max. 300 mm<sup>2</sup>; busbar 60 mm;  
electronic fuse monitoring; NH3**

**Part no. XNH3-FCE-S630**  
**Catalog No. 183081**

**EL-Nummer 1624056**  
**(Norway)**

## Technical data

### Electrical

|                                                           |                  |      |                            |
|-----------------------------------------------------------|------------------|------|----------------------------|
| Standards                                                 |                  |      | IEC/EN 60947-3             |
| Rated operational voltage                                 | U <sub>e</sub>   | V AC | 690                        |
| Rated operational voltage                                 | U <sub>e</sub>   | V DC | 440                        |
| Rated operational current                                 | I <sub>e</sub>   | A    | 630                        |
| Rated frequency                                           | f                | Hz   | 40 - 60                    |
| Rated insulation voltage                                  | U <sub>i</sub>   | V AC | 800                        |
| Total heat dissipation at I <sub>th</sub> (without fuses) | P <sub>v</sub>   | W    | 86                         |
| Heat dissipation at 80% (without fuses)                   | P <sub>v</sub>   | W    | 54.8                       |
| Rated impulse withstand voltage                           | U <sub>imp</sub> | kV   | 8                          |
| Utilization category AC-23B                               |                  |      |                            |
| Rated operating voltage                                   | U <sub>e</sub>   | V AC | 400                        |
| Rated operating current                                   | I <sub>e</sub>   | A    | 630                        |
| Utilization category AC22B                                |                  |      |                            |
| Rated operating voltage                                   | U <sub>e</sub>   | V AC | 500                        |
| Rated operating current                                   | I <sub>e</sub>   | A    | 630                        |
| Utilization category AC-21B                               |                  |      |                            |
| Rated operating voltage                                   | U <sub>e</sub>   | V AC | 690                        |
| Rated operating current                                   | I <sub>e</sub>   | A    | 630                        |
| Utilization category DC-22B                               |                  |      |                            |
| Rated operating voltage                                   | U <sub>e</sub>   | V DC | DC values on request       |
| Rated operating current                                   | I <sub>e</sub>   | A    | DC values on request       |
| Utilization category DC21B                                |                  |      |                            |
| Rated operating voltage                                   | U <sub>e</sub>   | V DC | DC values on request       |
| Rated operating current                                   | I <sub>e</sub>   | A    | DC values on request       |
| Rated conditional short-circuit current                   |                  | kA   | 120 (500 V)<br>100 (690 V) |
| Rated short-time withstand current                        | I <sub>cw</sub>  | kA   | 10                         |
| Max. fuse                                                 |                  |      |                            |
| Size according to DIN VDE 0636-2                          |                  |      | 3 / 2                      |
| Max. permitted power loss per fuse link                   | P <sub>v</sub>   | W    | 48                         |
| Lifespan, electrical                                      | Operations       |      | 200                        |

### Mechanical

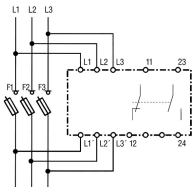
|                                                                                       |  |    |                                                                                   |
|---------------------------------------------------------------------------------------|--|----|-----------------------------------------------------------------------------------|
| Front degree of protection (XNH installed)                                            |  |    | IP20 (Operating status)<br>IP2XC (Contact protection)<br>IP10 (Handle cover open) |
| Ambient temperature                                                                   |  | °C | -25 - +55                                                                         |
| Rated operating mode                                                                  |  |    | Permanent operation                                                               |
| Activation                                                                            |  |    | Dependent manual activation                                                       |
| Mounting position                                                                     |  |    | Vertical, horizontal                                                              |
| Altitude                                                                              |  | m  | Max. 2000                                                                         |
| Overvoltage category/pollution degree                                                 |  |    | III/3                                                                             |
| RoHS (in accordance with Directive 2002/95/EC of the European Parliament and Council) |  |    | Yes                                                                               |
| Direction of incoming supply                                                          |  |    | as required (FLEX System)                                                         |
| Lockable                                                                              |  |    | Yes, optional                                                                     |

|                              |            |    |                                 |
|------------------------------|------------|----|---------------------------------|
| Sealable                     |            |    | Yes, Standard                   |
| Material characteristics     |            |    |                                 |
| Material                     |            |    | Polyamide                       |
| Colour                       |            |    | Grey                            |
| Flammability characteristics |            |    | Self-extinguishing as per UL 94 |
| Halogen-free                 |            |    | Yes                             |
| Voltage test                 |            |    | Yes, sliding inspection windows |
| Lifespan, mechanical         | Operations |    | 800                             |
| Track resistance             |            |    | CTI 600                         |
| Heat deflection temperature  |            | ?C | 125                             |

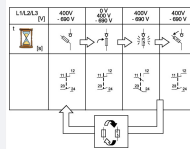
### Terminal capacity

|                            |                                           |                 |                            |
|----------------------------|-------------------------------------------|-----------------|----------------------------|
| Flange connection          |                                           |                 |                            |
| Bolt diameter              |                                           |                 | M10                        |
| Cable lug max. width       |                                           | mm              | 56                         |
| Flat busbar                |                                           | mm              | 50 x 10                    |
| Box terminal               |                                           |                 |                            |
| Stranded                   |                                           | mm <sup>2</sup> | 95 - 300 Cu/Al             |
| Copper strip               | Number of segments<br>x width x thickness | mm              | 6 x 16 x 0,8 - 10 x 32 x 1 |
| Box terminal               |                                           |                 |                            |
| Stranded                   |                                           | mm <sup>2</sup> | auf Anfrage                |
| Copper band                | Number of segments<br>x width x thickness | mm              | 11 x 21 x 1                |
| Clamp-type terminal        |                                           |                 |                            |
| 1-hole                     |                                           | mm <sup>2</sup> | 120 - 300 Cu/Al            |
| Double clamp-type terminal |                                           |                 |                            |
| Stranded                   |                                           | mm <sup>2</sup> | 2x (120 - 240) Cu/Al       |

### Electronic fuse monitoring

|                                     |  |        |                                                                                      |
|-------------------------------------|--|--------|--------------------------------------------------------------------------------------|
| Power supply                        |  |        | Self-supplied                                                                        |
| Power consumption                   |  | VA     | 1.5                                                                                  |
| Overvoltage category                |  |        | 230/400V : III<br>500V : II                                                          |
| Frequency range                     |  |        | 50 - 60                                                                              |
| Input resistance                    |  | kOhm/V | > 1                                                                                  |
| Voltage inputs                      |  | V AC   | 400 - 500 (+/-10%)                                                                   |
| Temperature range                   |  | °C     | -5 - +55                                                                             |
| Operation indicator                 |  |        | 1 LED green                                                                          |
| Failure indicator                   |  |        | 3 LEDs (F1, F2, F3) red                                                              |
| Degree of protection                |  |        | IP3X                                                                                 |
| Function test                       |  |        | Test button for relay + LEDs                                                         |
| EMC (Electromagnetic compatibility) |  |        | IEC 61000-4-4<br>IEC 61000-4-5                                                       |
| Fuse links                          |  |        | NH with live handle straps                                                           |
| Outputs                             |  |        |                                                                                      |
| Relay output                        |  |        | 1 NC<br>1 NO                                                                         |
| Max. voltage                        |  | V AC   | 250                                                                                  |
| Max. voltage                        |  | V DC   | 24                                                                                   |
| Max. switching current              |  | A      | 1                                                                                    |
| Contact sequence                    |  |        |  |

Function diagram



## Design verification as per IEC/EN 61439

|                                                                                                                        |           |   |                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------|-----------|---|----------------------------------------------------------------------------------------------------------------------------------|
| Technical data for design verification                                                                                 |           |   |                                                                                                                                  |
| Rated operational current for specified heat dissipation                                                               | $I_n$     | A | 630                                                                                                                              |
| Heat dissipation per pole, current-dependent                                                                           | $P_{vid}$ | W | 7.3                                                                                                                              |
| Equipment heat dissipation, current-dependent                                                                          | $P_{vid}$ | W | 22                                                                                                                               |
| 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                                                                                 |           |   | Is the panel builder's responsibility.                                                                                           |
| 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                                                                               |           |   | $U_i = 800 \text{ V AC}$                                                                                                         |
| 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 6.0

Low-voltage industrial components (EG000017) / Fuse switch disconnecter (EC001040)

Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Fuse switch disconnecter (ecI@ss8.1-27-37-14-01 [AKF058010])

|                                               |    |                  |
|-----------------------------------------------|----|------------------|
| Version as main switch                        |    | No               |
| Version as safety switch                      |    | No               |
| Max. rated operation voltage $U_e \text{ AC}$ | V  | 500              |
| Rated permanent current $I_u$                 | A  | 630              |
| Rated operation power at AC-23, 400 V         | kW | 0                |
| Conditioned rated short-circuit current $I_q$ | kA | 120              |
| Rated short-time withstand current $I_{cw}$   | kA | 3                |
| Suitable for fuses                            |    | NH3              |
| Number of poles                               |    | 3                |
| With error protection                         |    | Yes              |
| Type of electrical connection of main circuit |    | Screw connection |
| Suitable for ground mounting                  |    | No               |
| Suitable for front mounting 4-hole            |    | No               |

|                                        |  |            |
|----------------------------------------|--|------------|
| Suitable for busbar mounting           |  | Yes        |
| Type of control element                |  | Cover grip |
| Position control element               |  | Front side |
| Motor drive optional                   |  | No         |
| Motor drive integrated                 |  | No         |
| Version as emergency stop installation |  | No         |
| Degree of protection (IP), front side  |  | Other      |

## Dimensions

