# DATASHEET - XNH1-FCE-A250-BT

**NH fuse-switch 3p box terminal 35 - 150 mm²; mounting plate; electronic fuse monitoring; NH1**

Powering Business Worldwide

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|---|---|
| **Part no.** | **XNH1-FCE-A250-BT** |
| | **183048** |
| **EL Number (Norway)** | **1624023** |

## General specifications

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|---|---|
| Product name | Eaton xEffect XNH device for mounting plate |
| Part no. | XNH1-FCE-A250-BT |
| EAN | 4015081779758 |
| Product Length/Depth | 306 millimetre |
| Product height | 148 millimetre |
| Product width | 184 millimetre |
| Product weight | 2.213 kilogram |
| Compliances | RoHS conform |
| Certifications | IEC/EN 60947-3 |
| Product Tradename | xEffect |
| Product Type | XNH device for mounting plate |
| Product Sub Type | None |

## Delivery program

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|---|---|
| Type | Fuse control - electronic |
| Color | Gray |
| Number of poles | Three-pole |
| Actuator type | Cover grip |

## Technical Data - Electrical

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|---|---|
| Voltage test | Yes, sliding inspection windows |
| Voltage inputs | 400 V AC - 500 V AC (+/-10%) |
| Voltage rating at AC | 690 V (AC-21B)<br>500 V (AC-22B)<br>400 V (AC-23B) |
| Voltage rating at AC - max | 250 V AC |
| Voltage rating at DC | 440 V (DC-21B)<br>250 V (DC-22B) |
| Voltage rating at DC - max | 24 V DC |
| Rated operating voltage (Ue) at AC - max | 500 V |
| Rated insulation voltage (Ui) | 800 V AC |
| Rated impulse withstand voltage (Uimp) | 8 kV |
| Rated uninterrupted current (Iu) | 250 A |
| Rated conditional short-circuit current (Iq) | 120 kA |
| Rated operation current (Ie) | 250 A |
| Rated operational current | 250 A (DC-22B)<br>250 A (AC-22B)<br>250 A (AC-23B)<br>250 A (AC-21B)<br>250 A (DC-21B) |
| Switching current of electronic fuse monitoring - max | 1 A |
| Rated short-time withstand current (Icw) | 6 kA |
| Rated conditional short-circuit rating | 100 kA (690 V)<br>120 kA (500 V) |
| Conditioned rated short-circuit current Iq | 120 kA |
| Frequency rating | 40 Hz - 60 Hz |
| Frequency rating of contacts | 40 Hz - 60 Hz |
| Frequency rating (electronic fuse monitoring) | 50 - 60 Hz |
| Creepage resistance | CTI 600 |
| Power rating at AC-23, 400 V | 0 kW |
| Rated operation power at AC-23, 400 V | 0 kW |

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| Permitted power loss per fuse link - max | 23 W |
| Electronic fuse monitoring | 1 NO<br>> 1 kOhm/V<br>NH with live handle straps<br>3 LEDs (F1, F2, F3) red<br>Self-supplied<br>1 LED green<br>Test button for relay + LEDs<br>1.5 VA<br>1 NC |
| Electrical connection type of main circuit | Frame clamp |
| Operating altitude without derating - max | 2000 mm |
| Overvoltage category | II (500 V)<br>III (230/400 V)<br>III |
| Pollution degree | 3 |
| Direction of incoming supply | As required |
| Lifespan, electrical | 200 operations |

## Technical Data - Mechanical

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|---|---|
| Activation type | Dependent manual activation |
| Actuator position | Front side |
| Size | NH1 fuse |
| Mounting method | DIN rail<br>Mounting plate |
| Mounting position | Vertical or horizontal |
| Material | Polyamide |
| Degree of protection | IP3X<br>IP20 (operating status, XNH installed)<br>IP10 (handle cover open, XNH installed)<br>IP2XC (contact protection, XNH installed) |
| Degree of protection (front side) | Other |
| Connection type | Box terminal |
| Terminal capacity (copper band) | 6 mm x 16 mm x 0.8 mm (6x) at box terminal |
| Terminal capacity (copper busbar) | 30 mm x 10 mm<br>Max. 37 mm cable lug width at flange connection<br>Bolt diameter at flange connection: M10 |
| Terminal capacity (copper strip) | 16 mm x 0.8 mm (10x) at box terminal |
| Terminal capacity (stranded cable) | 10 $mm^2$ -150 $mm^2$ at clamp-type terminal<br>35 $mm^2$ - 150 $mm^2$ at box terminal<br>25 $mm^2$ - 150 $mm^2$ at box terminal<br>70 $mm^2$ - 95 $mm^2$ (2x) at double clamp-type terminal |
| Cable entry type | Other |
| Locking facility | Yes, optional |
| Suitable for fuses | NH1 |
| Lifespan, mechanical | 1400 operations |

## Design verification as per IEC/EN 61439 - technical data

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|---|---|
| Rated operational current for specified heat dissipation (In) | 250 A |
| Equipment heat dissipation, current-dependent | 16 W |
| Heat dissipation per pole, current-dependent | 5.3 W |
| Heat dissipation at 80% without fuses | 10.2 W |
| Ambient operating temperature details | Operating temperature range: -5 °C - 55 °C<br>Ambient temperature range: -25 °C - 55 °C |
| Heat deflection temperature | 125 °C |

## Design verification as per IEC/EN 61439

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|---|---|
| 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 Resist. of insul. mat. to abnormal heat/fire by internal elect. 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. |

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|---|---|---|---|
| 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. |
| 10.9.2 Power-frequency electric strength | | | Ui = 800 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. |

## Additional information

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| Features | | | Electronic fuse monitoring and EMC (Electromagnetic compatibility) as of IEC 61000-4-4<br>Standard sealable<br>Halogen free<br>Electronic fuse monitoring and EMC (Electromagnetic compatibility) as of IEC 61000-4-5 |
| Fitted with: | | | Error protection<br>Connectors |
| Flammability characteristics (UL) | | | Self-extinguishing (UL 94) |
| Special features | | | With electronic monitoring of fuse-links<br>Current paths of electrolytic copper, silver-plated<br>Permanent operation (rated operating mode) |
| Suitable for | | | Ground mounting |

# Technical data ETIM 9.0

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

Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Fuse switch disconnector (ecl@ss13-27-37-14-01 [AKF058018])

| | | | |
|---|---|---|---|
| Version as main switch | | | No |
| Version as safety switch | | | No |
| Max. rated operation voltage Ue AC | | V | 500 |
| Rated permanent current Iu | | A | 250 |
| Rated operation power at AC-23, 400 V | | kW | 0 |
| Conditioned rated short-circuit current Iq | | kA | 120 |
| Rated short-time withstand current Icw | | kA | 6 |
| Suitable for fuses | | | NH1 |
| Number of poles | | | 3 |
| With error protection | | | Yes |
| Type of electrical connection of main circuit | | | Frame clamp |
| Cable entry | | | Other |
| Equipped with connectors | | | Yes |
| Suitable for floor mounting | | | Yes |
| Suitable for front mounting | | | No |
| Suitable for busbar mounting | | | No |
| 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 |


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