

**NH fuse-switch 3p flange connection M10 max. 150 mm<sup>2</sup>; busbar 60 mm;  
electronic fuse monitoring; NH1**

**Part no. XNH1-FCE-S250**  
**183055**  
**EL Number 1624030**  
**(Norway)**

General specifications		
Product name		Eaton xEffect XNH device for busbar system
Part no.		XNH1-FCE-S250
EAN		4015081779826
Product Length/Depth		306 millimetre
Product height		173 millimetre
Product width		184 millimetre
Product weight		2.292 kilogram
Compliances		RoHS conform
Certifications		IEC/EN 60947-3
Product Tradename		xEffect
Product Type		XNH device for busbar system
Product Sub Type		None
Delivery program		
Type		Fuse control - electronic
Color		Gray
Number of poles		Three-pole
Actuator type		Cover grip
Technical Data - Electrical		
Voltage test		Yes, sliding inspection windows
Voltage inputs		400 V AC - 500 V AC (+/-10%)
Voltage rating at AC		400 V (AC-23B) 500 V (AC-22B) 690 V (AC-21B)
Voltage rating at AC - max		250 V AC
Voltage rating at DC		250 V (DC-22B) 440 V (DC-21B)
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 (AC-22B) 250 A (DC-21B) 250 A (AC-21B) 250 A (AC-23B) 250 A (DC-22B)
Switching current of electronic fuse monitoring - max		1 A
Rated short-time withstand current (Icw)		6 kA
Rated conditional short-circuit rating		120 kA (500 V) 100 kA (690 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

Permitted power loss per fuse link - max		23 W
Electronic fuse monitoring		NH with live handle straps > 1 kOhm/V 3 LEDs (F1, F2, F3) red 1 NC Test button for relay + LEDs 1 LED green 1 NO 1.5 VA Self-supplied
Electrical connection type of main circuit		Screw connection
Operating altitude without derating - max		2000 mm
Overvoltage category		III II (500 V) III (230/400 V)
Pollution degree		3
Direction of incoming supply		As required (FLEX System)
Lifespan, electrical		200 operations
<b>Technical Data - Mechanical</b>		
Activation type		Dependent manual activation
Actuator position		Front side
Size		NH1 fuse
Mounting method		Busbars of 60 mm
Mounting position		Vertical or horizontal
Material		Polyamide
Degree of protection		IP20 (operating status, XNH installed) IP2XC (contact protection, XNH installed) IP10 (handle cover open, XNH installed) IP3X
Degree of protection (front side)		Other
Connection type		Flat connection
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 Max. 37 mm cable lug width at flange connection 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 <sup>2</sup> - 150 mm <sup>2</sup> at clamp-type terminal 25 mm <sup>2</sup> - 150 mm <sup>2</sup> at box terminal 70 mm <sup>2</sup> - 95 mm <sup>2</sup> (2x) at double clamp-type terminal 35 mm <sup>2</sup> - 150 mm <sup>2</sup> at box terminal
Cable entry type		Other
Locking facility		Yes, optional
Suitable for fuses		NH1
Lifespan, mechanical		1400 operations
<b>Design verification as per IEC/EN 61439 - technical data</b>		
Rated operational current for specified heat dissipation (In)		250 A
Equipment heat dissipation, current-dependent		22 W
Heat dissipation per pole, current-dependent		7.3 W
Heat dissipation at 80% without fuses		14.1 W
Ambient operating temperature details		Ambient temperature range: -25 °C - 55 °C Operating temperature range: -5 °C - 55 °C
Heat deflection temperature		125 °C
<b>Design verification as per IEC/EN 61439</b>		
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.
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		U <sub>i</sub> = 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.
<b>Additional information</b>		
Features		Electronic fuse monitoring and EMC (Electromagnetic compatibility) as of IEC 61000-4-4 Electronic fuse monitoring and EMC (Electromagnetic compatibility) as of IEC 61000-4-5 Standard sealable Halogen free
Fitted with:		Error protection Connectors
Flammability characteristics (UL)		Self-extinguishing (UL 94)
Special features		Permanent operation (rated operating mode) Current paths of electrolytic copper, silver-plated Cable connection optionally at the top or bottom With electronic monitoring of fuse-links
Suitable for		Busbar mounting

## Technical data ETIM 9.0

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 (ecl@ss13-27-37-14-01 [AKF058018])			
Version as main switch			No
Version as safety switch			No
Max. rated operation voltage U <sub>e</sub> AC		V	500
Rated permanent current I <sub>u</sub>		A	250
Rated operation power at AC-23, 400 V		kW	0
Conditioned rated short-circuit current I <sub>q</sub>		kA	120
Rated short-time withstand current I <sub>cw</sub>		kA	6
Suitable for fuses			NH1
Number of poles			3
With error protection			Yes
Type of electrical connection of main circuit			Screw connection
Cable entry			Other
Equipped with connectors			Yes
Suitable for floor mounting			No
Suitable for front mounting			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