DATASHEET - XNH1-FCE-A250

NH fuse-switch 3p flange connection M10 max. 150 mm²; mounting plate; electronic fuse monitoring; NH1

Powering Business Worldwide™

Part no.	**XNH1-FCE-A250**
Catalog No.	**183047**
EL-Nummer (Norway)	**1624022**

Delivery program

Basic function			Fuse control - electronic
Number of poles			3 pole
Mounting type			DIN rails Mounting plate
Size			1
Type of connection			Flat connection
Rated operational current	I_e	A	250
Front degree of protection (XNH installed)			IP20 (Operating status) IP2XC (Contact protection) IP10 (Handle cover open)
Rated operational voltage	U_e	V AC	690
Rated operational voltage	U_e	V DC	440
Rated conditional short-circuit current		kA	120 (500 V) 100 (690 V)
Flammability characteristics			Self-extinguishing as per UL 94
Description			Current paths of electrolytic copper, silver-plated With electronic monitoring of fuse-links

Technical data

Electrical

Standards			IEC/EN 60947-3
Rated operational voltage	U_e	V AC	690
Rated operational voltage	U_e	V DC	440
Rated operational current	I_e	A	250
Rated frequency	f	Hz	40 - 60
Rated insulation voltage	U_i	V AC	800
Total heat dissipation at I_{th} (without fuses)	P_v	W	16
Heat dissipation at 80% (without fuses)	P_v	W	10.2
Rated impulse withstand voltage	U_{imp}	kV	8
Utilization category AC-23B			
Rated operating voltage	U_e	V AC	400
Rated operating current	I_e	A	250
Utilization category AC22B			
Rated operating voltage	U_e	V AC	500
Rated operating current	I_e	A	250
Utilization category AC-21B			
Rated operating voltage	U_e	V AC	690
Rated operating current	I_e	A	250
Utilization category DC-22B			
Rated operating voltage	U_e	V DC	250
Rated operating current	I_e	A	250
Utilization category DC21B			
Rated operating voltage	U_e	V DC	440
Rated operating current	I_e	A	250
Rated conditional short-circuit current		kA	120 (500 V) 100 (690 V)

Rated short-time withstand current	I_{cw}	kA	10
Max. fuse			
Size according to DIN VDE 0636-2			1
Max. permitted power loss per fuse link	P_v	W	23
Lifespan, electrical	Operations		200

Mechanical

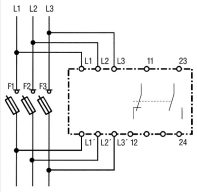
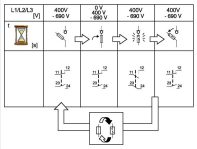
Front degree of protection (XNH installed)			IP20 (Operating status) IP2XC (Contact protection) IP10 (Handle cover open)
Ambient temperature		°C	-25 - +55
Rated operating mode			Permanent operation
Activation			Dependent manual activation
Mounting position			Vertical, horizontal
Altitude		m	Max. 2000
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
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		1400
Track resistance			CTI 600
Heat deflection temperature		°C	125

Terminal capacity

Flange connection			
Bolt diameter			M10
Cable lug max. width		mm	37
Flat busbar		mm	30 x 10
Box terminal			
Stranded		mm^2	35 - 150 Cu/Al
Copper strip	Number of segments x width x thickness	mm	10 x 16 x 0,8
Box terminal			
Stranded		mm^2	25 - 150 Cu
Copper band	Number of segments x width x thickness	mm	6 x 16 x 0,8
Clamp-type terminal			
Stranded		mm^2	10 - 150 Cu/Al
Double clamp-type terminal			
Stranded		mm^2	2x (70 - 95) Cu/Al

Electronic fuse monitoring

Power supply			Self-supplied
Power consumption		VA	1.5
Overvoltage category			230/400V : III 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 IEC 61000-4-5
Fuse links			NH with live handle straps
Outputs			
Relay output			1 NC 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	250
Heat dissipation per pole, current-dependent	P_{vid}	W	5.3
Equipment heat dissipation, current-dependent	P_{vid}	W	16
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 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 7.0

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@ss10.0.1-27-37-14-01 [AKF058013])

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		Screw connection
Cable entry		Other
Equipped with connectors		Yes
Suitable for ground mounting		Yes
Suitable for front mounting 4-hole		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

Dimensions