### **DATASHEET - XNH2-A400**



NH fuse-switch 3p flange connection M10 max. 240 mm²; mounting plate; NH2



Part no. XNH2-A400 Catalog No. 183057

**EL-Nummer** (Norway)

1624032

### **Delivery program**

Don'tory program			
Basic function			Basic device
Number of poles			3 pole
Mounting type			DIN rails Mounting plate
Size			2
Type of connection			Flat connection
Rated operational current	l <sub>e</sub>	Α	400
Front degree of protection (XNH installed)			IP20 (Operating status) IP2XC (Contact protection) IP10 (Handle cover open)
Rated operational voltage	U <sub>e</sub>	V AC	690
Rated operational voltage	U <sub>e</sub>	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
Successor to			021996 284647

## **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>	Α	400
Rated frequency	f	Hz	40 - 60
Rated insulation voltage	Ui	V AC	800
Total heat dissipation at I <sub>th</sub> (without fuses)	$P_{\nu}$	W	28
Heat dissipation at 80% (without fuses)	$P_{v}$	W	17.8
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>	Α	400
Utilization category AC22B			
Rated operating voltage	U <sub>e</sub>	V AC	500
Rated operating current	I <sub>e</sub>	Α	400
Utilization category AC-21B			
Rated operating voltage	U <sub>e</sub>	V AC	690
Rated operating current	I <sub>e</sub>	Α	400
Utilization category DC-22B			
Rated operating voltage	U <sub>e</sub>	V DC	440
Rated operating current	I <sub>e</sub>	Α	400
Rated conditional short-circuit current		kA	120 (500 V) 100 (690 V)
Rated short-time withstand current	I <sub>cw</sub>	kA	10
Max. fuse			
Size according to DIN VDE 0636-2			2

Mechanical Front degree of protection CNH installed) Ambient temperature Activation Ambient temperature Activation Albert degree and grounde Activation Activation Activation Activation Albert degree and grounde Activation Albert degree of protection (NH installed) Activation Activation Albert degree and grounde Activation Albert degree and grounde Activation Albert degree and grounde Bott degr	Max. permitted power loss per fuse link	$P_{\nu}$	W	34
Front degree of protection (XMH installed) Antibient temperature Antibient temperature Antibent temperature Rated operature growth Rated operature Rated operated operature Rated operature Rated operature Rated operature Ra	Lifespan, electrical	Operations		200
Pack	Mechanical			
Rated operating mode Activation 6 Parmanent operation Mounting position Mounting position Overvoltage category/pollution degree Robl's line accedance with Directive 2002/98/EC of the European Parliament and Official Profession Colour Clark Directive of incensing supply Clark Direct	Front degree of protection (XNH installed)			IP2XC (Contact protection)
Dependent manual activation	Ambient temperature		°C	-25 - +55
Mounting position         Vertical, horizontal           Albitude         m         Max. 2009           Overoutage category/pollution degree         III/2         Vas           ROSIS in accordance with Directive 2002/28/EC of the European Perliament and Council)         Vas         Vas           Discession of incoming supply         Yes         Vas. pointal           Sealable         Yes         Polyamide           Material         Polyamide         Polyamide           Colour         Gray         Gray           Flammability characteristics         Gray         Self-extinguishing as per UL 94           Halogen-free         Yes         Self-extinguishing as per UL 94           Valuage test         Gray         Self-extinguishing as per UL 94           Valuage test         Self-extinguishing as per UL 94         Self-extinguishing as per UL 94           Valuage test         Track resistance         Gray         Track resistance           Heat defice toot temperature         Track resistance         Mark 1809           Flange connection         Mark 1809         Mark 1809           Sold diameter         Mark 1809         Mark 1809           Gabe lug max width         Mark 1809         Self so 300 Cu/Al           Box terminal         Mark 1809	Rated operating mode			Permanent operation
Name	Activation			Dependent manual activation
Overvoltage at stegory/pollution degree           III/3         Yes           RoRS fin accordance with Directive 2002/95/EC of the European Parliament and Colourally           Yes optional           Yes optional           Lockable         Yes, optional           Yes, Optional           Yes, Optional           Material Colour           Yes, Standard           Yes, Optional           Yes, Optional           Yes, Standard	Mounting position			Vertical, horizontal
RollS fin accordance with Directive 2002/95/EC of the European Parliament and Council II Direction of incoming supply  Lockable	Altitude		m	Max. 2000
Council)   Council)   Council   Co	Overvoltage category/pollution degree			III/3
Lockable Sealable Material characteristics Material characteristics Material characteristics Golour Flammability characteristics Allogen-free Woltage test Woltage test Haid genderial characteristics Allogen-free Woltage test Woltage test Bolt dismeter Bolt dismeter Bolt dismeter Goloper strip Stranded  Munumber of survivals Stranded  Munumber of su	RoHS (in accordance with Directive 2002/95/EC of the European Parliament and Council)			Yes
Sealable         Yes, Standard           Material Characteristics         Polyamide           Colour         Grey           Halmmability characteristics         Self-extinguishing as per UL 94           Halogen-free         Yes           Voltage test         Yes, sliding inspection windows           Litiespan, mechanical         Operations         800           Track resistance         CTI 800         Halogen-free           Heat deflection temperature         CTI 800         Halogen-free           Terminal Capacity         William terminal Capacity         MID           Flat bushar         MID         MID           Bolt diameter         mm         40 x 10           Cable lug max. width         MID         MID           Box terminal         MID         MID           Stranded         mm         40 x 10           Box terminal         mm         50 x 300 Cu/Al           Stranded         mm         6 x 15 x 0,8 - 10 x 32 x 1           Copper band         Number of segments width x w	Direction of incoming supply			as required
Material Colour         Polyamide           Flammability characteristics         Grey           Halogen-free         Yes           Voltage test         Self-extinguishing as per UL 94           Halogen-free         Yes, sliding inspection windows           Voltage test         800           Lifespan, mechanical         20 ct 16 600           Heat deflection temperature         "C"         125           Terminal capacity           Bolt diameter         M10         M10           Gable lug max. width         mm         40 x 10           Box terminal         mm         40 x 10           Stranded         mm         55 - 300 Cu/Al           Copper strip         Number of segments widths wi	Lockable			Yes, optional
Material         Polyamide           Colour         Grey           Flammability characteristics         Self-extinguishing as per UL 94           Hallogen-free         Yes           Voltage test         Yes           Voltage test         800           Track resistance         CTI 600           Heat deflection temperature         °C         125           Termizal Capacity           Flange connection         M10           Bolt diameter         M10         M10           Cable lug max width         mm         48 A 10           Box terminal         mm         40 x 10           Box terminal         mm         95 - 300 Cu/Al           Copper strip         segments widths withchess         mm         95 - 300 Cu/Al           Stranded         mm         25 - 240 Cu           Copper band         segments widths withchess         mm         10 x 16 x 0.8 s           Clamp-type terminal         mm         10 x 16 x 0.8 s           Stranded         mm         25 - 240 Cu           Clamp-type terminal         mm         10 x 16 x 0.8 s           Clamp-type terminal         mm         20 - 240 Cu/Al	Sealable			Yes, Standard
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         CT 1600           Heat deflection temperature         °C 125           Terminal capacity         M10           Flat disameter         M10           Cable lug max. width         mm         48 a           Flat busbar         March         42 v 10           Sox terminal         March         42 v 10           Stranded         mm²         95 -300 Cul/Al           Copper strip         Summer         95 -300 Cul/Al           Stranded         mm²         25 -240 Cu           Copper band         Width x trickness         mm²         25 -240 Cu           Clamp-type terminal         Terminal         Terminal         Terminal         Terminal           Stranded         Months of segments x width x trickness         Terminal         Terminal         Terminal           Clamp-type terminal         Terminal         Terminal         Terminal         Terminal         Terminal         Terminal <t< td=""><td>Material characteristics</td><td></td><td></td><td></td></t<>	Material characteristics			
Flammability characteristics Halogen-free  Voltage test  Ves  Ves, sliding inspection windows  Vestor to the Oo  To teo  Vestor to the Oo  To teo  Vestor to the Oo  To teo  Vestor to the Oo  Vestor	Material			Polyamide
Yes   Yes   Yes   Siding inspection windows   Yes   Siding inspection   Yes   Siding inspection windows   Yes   Siding inspection windows   Yes   Siding inspection   Yes   Siding inspect	Colour			Grey
Voltage test  Lifespan, mechanical  Operations  Track resistance  Heat deflection temperature  Terminal capacity  Flange connection  Bolt diameter  Cable lug max. width  Flat busbar  Box terminal  Stranded  Operations  Number of segments x width x thickness  Titranded  Onerations  Number of segments x width x thickness  Stranded  Obuble clamp-type terminal  Stranded  Obuble clamp-type terminal  Operations  Yes, sliding inspection windows  100  10	Flammability characteristics			Self-extinguishing as per UL 94
Lifespan, mechanical         Operations         800           Track resistance         CT 600           Heat deflection temperature         *C         125           Terminal capacity           Flange connection         MID         MID           Bolt diameter         MID         48           Cable lug max width         mm         48           Flat busbar         mm         40 × 10           Box terminal         mm²         95 - 300 Cu/Al           Stranded         segments x width x thickness         mm²         6x 16 × 0.8 - 10 x 32 x 1           Box terminal         mm²         25 - 240 Cu           Stranded         Number of segments x width x thickness width x thickness width x thickness         mm²         25 - 240 Cu           Clamp-type terminal         Number of segments x width x thickness         mm²         120 - 240 Cu/Al           Stranded         mm²         120 - 240 Cu/Al	Halogen-free			
Track resistance Heat deflection temperature  Terminal capacity Flange connection  Bolt diameter Cable lug max. width Flat busbar Box terminal Stranded  Stranded  Stranded  Stranded  Capper strip  Stranded	Voltage test			Yes, sliding inspection windows
Heat deflection temperature  Forminal capacity Flange connection  Bolt diameter Cable lug max. width Flat busbar Box terminal Stranded  Copper strip Stranded Stranded  Copper band  Clamp-type terminal Stranded  Clamp-type terminal  Stranded  Clamp-type terminal  Stranded  Clamp-type terminal  Stranded  Clamp-type terminal  Stranded  Clamp-type terminal  Stranded  Clamp-type terminal  Stranded  Clamp-type terminal	Lifespan, mechanical	Operations		800
Flange connection  Bolt diameter Cable lug max width Flat bushar Box terminal  Stranded  Copper strip  Stranded  Copper strip  Stranded  Number of segments x width x thickness  Mm 2 25 - 240 Cu  Double clamp-type terminal  Stranded  Number of segments x width x thickness  Mm 2 25 - 240 Cu  Double clamp-type terminal	Track resistance			CTI 600
Flange connection  Bott diameter  Cable lug max width  Flat busbar  Box terminal  Copper strip  Copper strip  Stranded  Copper strip  Stranded  Number of segments xwidth x thickness xw	Heat deflection temperature		°C	125
Bolt diameter   MIO   Cable lug max. width   MIO   Flat busbar   M				
Cable lug max. width				M10
Flat busbar  Box terminal  Stranded  Copper strip  Stranded  Number of segments x width x thickness  Stranded  Number of segments x width x thickness  Stranded  Number of segments x width x thickness  Number of segments x width x thickness width			mm	
Box terminal Stranded  Copper strip  Copper strip  Box terminal  Stranded  Number of segments x width x thickness  Copper band  Copper band  Copper band  Stranded  Number of segments x width x thickness  Number of segments x width x thickness w w	•			
Stranded  Copper strip  Number of segments x width x thickness  Box terminal  Stranded  Copper band  Copper band  Clamp-type terminal  Stranded  Double clamp-type terminal			111111	40 X 10
Copper strip  Number of segments x width x thickness  Box terminal  Stranded  Copper band  Number of segments x width x thickness  Number of x width x th			2	95 - 300 Cu/Al
Segments x width x thickness  Box terminal  Stranded  Copper band  Number of segments x width x thickness  Number of segments x width x thickness  Clamp-type terminal  Stranded  Double clamp-type terminal				
Stranded  Copper band  Number of segments x width x thickness  Clamp-type terminal  Stranded  Double clamp-type terminal	Copper strip	segments x width x	mm	6 x 16 x 0,8 - 10 x 32 x 1
Number of segments x width x thickness  Clamp-type terminal  Stranded  Double clamp-type terminal	Box terminal			
Segments x width x thickness  Clamp-type terminal  Stranded  Double clamp-type terminal	Stranded		$\text{mm}^2$	25 - 240 Cu
Stranded mm² 120 - 240 Cu/AI  Double clamp-type terminal	Copper band	segments x width x	mm	10 x 16 x 0,8
Double clamp-type terminal	Clamp-type terminal			
			mm <sup>2</sup>	120 - 240 Cu/Al
			2	2~/120 150\C+/AI

# Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	$I_n$	Α	400
Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	7.3
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	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 <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 lobserved.
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 (pc)@ss10.01-27-37-14-01 [AKF058013])

(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	690
Rated permanent current lu	Α	400
Rated operation power at AC-23, 400 V	kW	0
Conditioned rated short-circuit current Iq	kA	120
Rated short-time withstand current lcw	kA	3
Suitable for fuses		NH2
Number of poles		3
With error protection		No
Type of electrical connection of main circuit		Screw connection
Cable entry		Other
Equipped with connectors		No
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

