183081
XNH3-FCE-S630

Overview | Specifications | Resources

Delivery program
Technical data
Design verification as per IEC/EN 61439
Technical data ETIM 7.0
Dimensions

DELIVERY PROGRAM

Basic function
Fuse control - electronic

Number of poles
3 pole

Mounting type
Busbars of 60 mm

Size
3

Type of connection
Flat connection

Rated operational current [I_e]
630 A

Front degree of protection (XNH installed)
IP20 (Operating status)
IP2XC (Contact protection)

IP10 (Handle cover open)

Rated operational voltage [U_e]
690 V AC

Rated operational voltage [U_e]
440 V DC

Rated conditional short-circuit current
120 (500 V)
100 (690 V) kA

Flammability characteristics
Self-extinguishing as per UL 94

Description
Current paths of electrolytic copper, silver-plated
Cable connection optionally at the top or bottom
With electronic monitoring of fuse-links

TECHNICAL DATA

Electrical

Standards
IEC/EN 60947-3

Rated operational voltage [U_e]
690 V AC

Rated operational voltage [U_e]
440 V DC

Rated operational current [I_e]
630 A

Rated frequency [f]
40 - 60 Hz

Rated insulation voltage [U_i]
800 V AC

Total heat dissipation at I_{th} (without fuses) [P_v]
86 W

Heat dissipation at 80% (without fuses) [P_v]
54.8 W

Rated impulse withstand voltage [U_{imp}]
8 kV

Utilization category AC-23B
Rated operating voltage [U_e]
400 V AC

Utilization category AC-23B
Rated operating current [I_e]
630 A

Utilization category AC22B
Rated operating voltage [U_e]
500 V AC

Utilization category AC22B
Rated operating current [I_e]
630 A

Utilization category AC-21B
Rated operating voltage [U_e]
690 V AC

Utilization category AC-21B
Rated operating current [I_e]
630 A

Utilization category DC-22B
Rated operating voltage [U_e]
440 V DC

Utilization category DC-22B
Rated operating current [I_e]
630 A

Utilization category DC21B
Rated operating voltage [U_e]
250 V DC

Utilization category DC21B
Rated operating current [I_e]

630 A

Rated conditional short-circuit current
120 (500 V)
100 (690 V) kA

Rated short-time withstand current [I_{cw}]
10 kA

Max. fuse
Size according to DIN VDE 0636-2
3 / 2

Max. fuse
Max. permitted power loss per fuse link [P_v]
48 W

Lifespan, electrical [Operations]
200

Mechanical

Front degree of protection (XNH installed)
IP20 (Operating status)
IP2XC (Contact protection)
IP10 (Handle cover open)

Ambient temperature
-25 - +55 °C

Rated operating mode
Permanent operation

Activation
Dependent manual activation

Mounting position
Vertical, horizontal

Altitude
Max. 2000 m

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

Material characteristics
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
125 °C

Terminal capacity

Flange connection
Bolt diameter
M10

Flange connection
Cable lug max. width
56 mm

Flange connection
Flat busbar
50 x 10 mm

Box terminal
Stranded
95 - 300 Cu/Al mm^2

Box terminal
Copper strip [Number of segments x width x thickness]
6 x 16 x 0,8 - 10 x 32 x 1 mm

Box terminal
Stranded
auf Anfrage mm^2

Box terminal
Copper band [Number of segments x width x thickness]
11 x 21 x 1 mm

Clamp-type terminal
Stranded
120 - 300 Cu/Al mm^2

Double clamp-type terminal
Stranded
2x (120 - 240) Cu/Al mm^2

Electronic fuse monitoring

Power supply
Self-supplied

Power consumption
1.5 VA

Overvoltage category
230/400V : III
500V : II

Frequency range
50 - 60

Input resistance
> 1 kOhm/V

Voltage inputs
400 - 500 (+/-10%) V AC

Temperature range
-5 - +55 °C

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

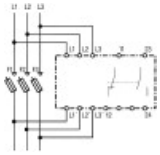
Outputs
Relay output
1 NC
1 NO

Outputs
Max. voltage
250 V AC

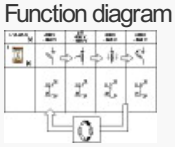
Outputs
Max. voltage
24 V DC

Outputs
Max. switching current
1 A

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]
630 A

Heat dissipation per pole, current-dependent [P_{vid}]
7.3 W

Equipment heat dissipation, current-dependent [P_{vid}]
22 W

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 Strength of materials and parts
10.2.3.1 Verification of thermal stability of enclosures
Meets the product standard's requirements.

10.2 Strength of materials and parts
10.2.3.2 Verification of resistance of insulating

materials to normal heat
Meets the product standard's requirements.

10.2 Strength of materials and parts
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 Strength of materials and parts
10.2.4 Resistance to ultra-violet (UV) radiation
Meets the product standard's requirements.

10.2 Strength of materials and parts
10.2.5 Lifting
Does not apply, since the entire switchgear needs to be evaluated.

10.2 Strength of materials and parts
10.2.6 Mechanical impact
Does not apply, since the entire switchgear needs to be evaluated.

10.2 Strength of materials and parts
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 Insulation properties
10.9.3 Impulse withstand voltage
Is the panel builder's responsibility.

10.9 Insulation properties
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
500 V

Rated permanent current Iu
630 A

Rated operation power at AC-23, 400 V
0 kW

Conditioned rated short-circuit current Iq
120 kA

Rated short-time withstand current Icw
3 kA

Suitable for fuses
NH3

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
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