Specifications

Eaton 183081

Catalog Number: 183081

Eaton xEffect - XNH circuit protection. NH fuse-switch 3p flange connection M10 max. 300 mm², busbar 60 mm, electronic fuse monitoring, NH3



General specifications

Product Name	**Catalog Number**
Eaton xEffect XNH device for busbar system	183081
	EAN
	4015081780082
Product Length/Depth	**Product Height**
306 mm	198 mm
Product Width	**Product Weight**
250 mm	4.05 kg
Compliances	**Certifications**
RoHS conform	IEC/EN 60947-3

Powering Business Worldwide

Product specifications

Type

Fuse control - electronic

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

Features

Electronic fuse monitoring and EMC (Electromagnetic compatibility) as of IEC 61000-4-4
Standard sealable
Electronic fuse monitoring and EMC (Electromagnetic compatibility) as of IEC 61000-4-5
Halogen free

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.

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

Resources

Brochures

eaton-xeffect-xnh-fuse-switch-disconnector-brochure-br019002en-en-us.pdf

Catalogs

eaton-panel-building-accessories-catalog-ca008008en-en-us.pdf

Certification reports

eaton-xeffect-xnh-fuse-switch-disconnector-declaration-of-conformity-en-us.pdf

Drawings

eaton-circuit-breaker-xeffect-xeffect-xnh-circuit-protection-dimensions-017.eps

eCAD model

ETN.XNH3-FCE-S630.edz

Installation instructions

IL0131112ZU

mCAD model

eaton-XNH3-FCE-S630-3d-model.stp

eaton-XNH3-FCE-S630-drawing.dwg

Wiring diagrams

eaton-switch-xeffect-xeffect-xnh-circuit-protection-wiring-diagram-002.eps

eaton-switch-xeffect-xeffect-xnh-circuit-protection-wiring-diagram.eps

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

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.

Fitted with:

Error protection

Connectors

Frequency rating

40 Hz - 60 Hz

Pollution degree

3

Creepage resistance

CTI 600

Equipment heat dissipation, current-dependent

22 W

Rated uninterrupted current (Iu)

630 A

Switching current of electronic fuse monitoring - max

1 A

Total heat dissipation without fuses at ith

86 W

Voltage rating at AC - max

250 VAC

Voltage rating at DC - max

24 VDC

Ambient operating temperature details

Ambient temperature range:
-25 °C - 55 °C
Operating temperature
range: -5 °C - 55 °C

Voltage rating at AC

400 V (AC-23B)
500 V (AC-22B)
690 V (AC-21B)

Voltage rating at DC

440 V (DC-22B)
250 V (DC-21B)

Conditioned rated short-circuit current Iq

120 kA

Number of poles

Three-pole

Rated operation power at AC-23, 400 V

0 kW

Size

NH3

Rated impulse withstand voltage (Uimp)

8 kV

Color

Gray

Connection type

Flat connection

Degree of protection

IP10 (handle cover open, XNH installed)

IP20 (operating status, XNH installed)

IP2XC (contact protection, XNH installed)

IP3X

Rated short-time withstand current (Icw)

3 kA

Direction of incoming supply

As required (FLEX System)

Electrical connection type of main circuit

Screw connection

Activation type

Dependent manual activation

Actuator position

Front side

Actuator type

Cover grip

Voltage inputs

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

Voltage test

Yes, sliding inspection windows

Heat dissipation at 80% without fuses

54.8 W

Heat dissipation per pole, current-dependent

7.3 W

Mounting position

Vertical or horizontal

Suitable for

Busbar mounting

Rated conditional short-circuit current (Iq)

120 kA

Overvoltage category

II (500 V)

III (230/400 V)

III

Suitable for fuses

NH3

Material

Polyamide

Cable entry type

Other

Frequency rating of contacts

40 Hz - 60 Hz

Mounting method

Busbars of 60 mm

Rated operation current (Ie)

630 A

Locking facility

Yes, optional

Flammability characteristics (UL)

Self-extinguishing (UL 94)

Degree of protection (front side)

Other

Heat deflection temperature

125 °C

Lifespan, electrical

200 operations

Lifespan, mechanical

800 operations

Electronic fuse monitoring

1 NC

1 NO

Self-supplied

Test button for relay + LEDs

1 LED green

1.5 VA

3 LEDs (F1, F2, F3) red

NH with live handle straps

> 1 kOhm/V

Terminal capacity (copper busbar)

Max. 56 mm cable lug width at flange connection

Bolt diameter at flange connection: M10

50 mm x 10 mm

Terminal capacity (copper band)

21 mm x 1 mm (11x) at box terminal

Terminal capacity (stranded cable)

120 mm² - 300 mm² at clamp-type terminal

120 mm² - 240 mm² (2x) at double clamp-type terminal

95 mm² - 300 mm² (1x) at box terminal

On demand

Frequency rating (electronic fuse monitoring)

50 - 60 Hz

Rated operational current

630 A (AC-22B)

630 A (AC-23B)

630 A (AC-21B)

630 A (DC-22B)

630 A (DC-21B)

Operating altitude without derating - max

2000 mm

Permitted power loss per fuse link - max

48 W

Power rating at AC-23, 400 V

0 kW

Rated insulation voltage (Ui)

800 VAC

Rated operating voltage (Ue) at AC - max

500 V

Rated operational current for specified heat dissipation (In)

630 A

Rated conditional short-circuit rating

100 kA (690 V)

120 kA (500 V)

Terminal capacity (copper strip)

16 mm x 0.8 mm (6x) - 32 mm x 1 mm (10x) at box terminal



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