

Specifications



Eaton 183053

Eaton xEffect - XNH circuit protection. NH fuse-switch 3p flange connection M10 max. 150 mm², busbar 60 mm, light fuse monitoring, NH1

General specifications

PRODUCT NAME	Eaton xEffect XNH device for busbar system
CATALOG NUMBER	183053
MODEL CODE	XNH1-FCL-S250
EAN	4015081779802
PRODUCT LENGTH/DEPTH	306 mm
PRODUCT HEIGHT	142 mm
PRODUCT WIDTH	184 mm
PRODUCT WEIGHT	2.193 kg
COMPLIANCES	RoHS conform
CERTIFICATIONS	IEC/EN 60947-3

Additional information

FEATURES	Halogen free Standard sealable
FITTED WITH:	Error protection
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 optical signalling of triggered fuse-links
SUITABLE FOR	Busbar mounting Front mounting

Delivery programme

ACTUATOR TYPE	Cover grip
COLOR	Gray
NUMBER OF POLES	Three-pole
TYPE	Fuse control - light

Design verification to IEC/EN 61439

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 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	Does not apply, since the

Design verification to IEC/EN 61439 - technical data

AMBIENT OPERATING TEMPERATURE DETAILS	Ambient temperature range: -25 °C - 70 °C
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT	22 W
HEAT DEFLECTION TEMPERATURE	125 °C
HEAT DISSIPATION AT 80% WITHOUT FUSES	14.1 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT	7.3 W
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	250 A
TOTAL HEAT DISSIPATION WITHOUT FUSES AT ITH	22 W

AGAINST ELECTRIC SHOCK	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	$U_i = 800 \text{ V AC}$
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.

Technical data - electrical

CREEPAGE RESISTANCE	CTI 600
DIRECTION OF INCOMING SUPPLY	As required (FLEX System)
ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT	Screw connection
FREQUENCY RATING	40 Hz - 60 Hz
FREQUENCY RATING OF CONTACTS	40 Hz - 60 Hz
LIFESPAN, ELECTRICAL	200 operations
OPERATING ALTITUDE WITHOUT DERATING - MAX	2000 mm
OVERVOLTAGE CATEGORY	III
PERMITTED POWER LOSS PER FUSE LINK - MAX	23 W
POLLUTION DEGREE	3
POWER RATING AT AC-23, 400 V	0 kW
RATED CONDITIONAL SHORT-CIRCUIT RATING	100 kA (690 V) 120 kA (500 V)
RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	8 kV
RATED INSULATION VOLTAGE (UI)	800 VAC
RATED OPERATING VOLTAGE (UE) AT AC - MAX	690 V
RATED OPERATION CURRENT (IE)	250 A
RATED OPERATIONAL CURRENT	250 A (AC-21B) 250 A (AC-22B) 250 A (DC-21B) 250 A (AC-23B) 250 A (DC-22B)
RATED SHORT-TIME WITHSTAND CURRENT (ICW)	6 kA
RATED UNINTERRUPTED CURRENT (IU)	250 A
VOLTAGE RATING AT AC	• 400 V (AC-23B) • 500 V (AC-22B) • 690 V (AC-21B)
VOLTAGE RATING AT DC	• 250 V (DC-22B)

Technical data - mechanical

ACTIVATION TYPE	Dependent manual activation
ACTUATOR POSITION	Front side
CABLE ENTRY TYPE	Other
DEGREE OF PROTECTION (FRONT SIDE)	Other
LIFESPAN, MECHANICAL	1400 operations
LOCKING FACILITY	Yes, optional
MATERIAL	Polyamide
MOUNTING METHOD	Busbars of 60 mm
MOUNTING POSITION	Vertical or horizontal
SIZE	NH1 fuse
SUITABLE FOR FUSES	NH1
TERMINAL CAPACITY (COPPER BAND)	6 mm x 16 mm x 0.8 mm (6x) at box terminal
TERMINAL CAPACITY (COPPER BUSBAR)	Max. 37 mm cable lug width at flange connection 30 mm x 10 mm Bolt diameter at flange connection: M10
TERMINAL CAPACITY (COPPER STRIP)	16 mm x 0.8 mm (10x) at box terminal
TERMINAL CAPACITY (STRANDED CABLE)	70 mm ² - 95 mm ² (2x) at double clamp-type terminal 10 mm ² - 150 mm ² at clamp-type terminal 25 mm ² - 150 mm ² at box terminal 35 mm ² - 150 mm ² at box terminal
CONNECTION TYPE	Flat connection
DEGREE OF PROTECTION	IP20 (operating status, XNH installed) IP2XC (contact protection, XNH installed) IP10 (handle cover open, XNH installed)

- 440 V (DC-21B)

VOLTAGE TEST	Yes, sliding inspection windows
---------------------	---------------------------------

CONDITIONED RATED SHORT-CIRCUIT CURRENT IQ	120 kA
---	--------

RATED CONDITIONAL SHORT-CIRCUIT CURRENT (IQ)	120 kA
---	--------

Resources

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

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

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

DECLARATIONS OF CONFORMITY	eaton-xnh-device-for-mounting-plate-declaration-of-conformity-eu250264en.pdf
----------------------------	--

DRAWINGS	eaton-circuit-breaker-xeffect-xeffect-xnh-circuit-protection-dimensions-012.eps
----------	---

ECAD MODEL	ETN.XNH1-FCL-S250.edz
------------	---------------------------------------

INSTALLATION INSTRUCTIONS	eaton-xeffect-xnh-fuse-switch-disconnector-installation-leaflet-il0131112z.pdf
---------------------------	--

MCAD MODEL	eaton-fuse-switch-disconnectors-mcad-drawings-xnh1-s250.dwg eaton-XNH1-S250-3d-model.stp
------------	---

PROJECT NAME:
PROJECT NUMBER:
PREPARED BY:
DATE:



Eaton Corporation plc Eaton House
30 Pembroke Road
Dublin 4, Ireland
Eaton.com

© 2026 Eaton. All Rights Reserved.

Follow us on social media to get the latest product and support information.

