

Specifications



Photo is representative

Eaton 102178

Eaton Moeller series xEffect - FAZ-NA, FAZ-RT MCB. FAZ-NA, 2-pole, tripping characteristic: D, rated current In: 1 A, Switchgear for export to North America (UL-listed)

General specifications

PRODUCT NAME	Eaton Moeller series xEffect - FAZ-NA, FAZ-RT MCB
CATALOG NUMBER	102178
MODEL CODE	FAZ-D1/2-NA
EAN	4015081020546
PRODUCT LENGTH/DEPTH	105 mm
PRODUCT HEIGHT	75.5 mm
PRODUCT WIDTH	35.4 mm
PRODUCT WEIGHT	0.244 kg
COMPLIANCES	RoHS conform
CERTIFICATIONS	CE marking Specially designed for North America, suitable as BCPD IEC 60947-2 North America (UL listed, CSA certified) UL (Category Control Number DIVQ) CSA (File No. 204453) UL (File No. E235139) UL 489 CSA-C22.2 No. 5-09 CSA (Class No. 1432-01) IEC/EN 60947-2 UL 489, CSA C22.2 No. 5 EN45545-2 IEC 61373

Delivery program

APPLICATION

- Feeder circuits, branch circuits
- Switchgear for export to North America (UL-listed)

NUMBER OF POLES Two-pole

NUMBER OF POLES (TOTAL) 2

NUMBER OF POLES (PROTECTED) 2

TRIPPING CHARACTERISTIC D

RELEASE CHARACTERISTIC D

AMPERAGE RATING 1 A

TYPE

- FAZ-NA
- Miniature circuit breaker

Technical data - electrical

VOLTAGE TYPE AC

VOLTAGE RATING 277 V AC / 480 V AC

VOLTAGE RATING AT DC 60 V DC

VOLTAGE RATING (IEC/EN 60947-2) 415 V

VOLTAGE RATING (UL) 480Y/277 V

RATED OPERATIONAL VOLTAGE (UE) - MAX 415 V

RATED INSULATION VOLTAGE (UI) 440 V

RATED IMPULSE WITHSTAND VOLTAGE (UIMP) 4 kV

FREQUENCY RATING - MIN 50 Hz

FREQUENCY RATING - MAX 60 Hz

RATED SWITCHING CAPACITY (IEC/EN 60947-2) 15 kA

RATED SHORT-CIRCUIT BREAKING CAPACITY (EN 60898) AT 230 V 0 kA

RATED SHORT-CIRCUIT BREAKING CAPACITY (EN 60898) AT 400 V 0 kA

RATED SHORT-CIRCUIT BREAKING CAPACITY (IEC 60947-2) AT 230 V 15 kA

RATED SHORT-CIRCUIT BREAKING CAPACITY (IEC 60947-2) AT 400 V 15 kA

SELECTIVITY CLASS 3

OVERVOLTAGE CATEGORY III

POLLUTION DEGREE 2

LIFESPAN, ELECTRICAL 20000 operations

DIRECTION OF INCOMING SUPPLY As required

Technical data - mechanical

FRAME	45 mm
ENCLOSURE WIDTH	105 mm
WIDTH IN NUMBER OF MODULAR SPACINGS	2
BUILT-IN DEPTH	70.5 mm
MOUNTING WIDTH PER POLE	17.7 mm
MOUNTING WIDTH	17.7 mm
MOUNTING METHOD	Top-hat rail IEC/EN 60715
MOUNTING POSITION	As required
DEGREE OF PROTECTION	IP40 (when fitted) UL/CSA Type: - IP20 (IEC) IP20
TERMINALS (TOP AND BOTTOM)	Twin-purpose terminals
CONNECTABLE CONDUCTOR CROSS SECTION (SOLID-CORE) - MIN	1 mm ²
CONNECTABLE CONDUCTOR CROSS SECTION (SOLID-CORE) - MAX	25 mm ²
CONNECTABLE CONDUCTOR CROSS SECTION (MULTI-WIRED) - MIN	1 mm ²
CONNECTABLE CONDUCTOR CROSS SECTION (MULTI-WIRED) - MAX	25 mm ²
TERMINAL PROTECTION	Finger and hand touch safe, DGUV VS3, EN 50274
TIGHTENING TORQUE	UL: 2.4 Nm (21 lb-in) for AWG 18 - AWG 12 UL: 4 Nm (36 lb-in) for AWG 6 Max. 2.4 Nm UL: 2.8 Nm (25 lb-in) for AWG 10 - AWG 8

Design verification as per IEC/EN - technical data

RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	1 A
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT	0 W
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT	1.5 W
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT	0 W
HEAT DISSIPATION CAPACITY	0 W
AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
AMBIENT OPERATING TEMPERATURE - MAX	75 °C

Design verification as per IEC/EN 61439

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	Meets the product standard's requirements.
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	Is the panel builder's responsibility.
10.9.3 IMPULSE WITHSTAND VOLTAGE	Is the panel builder's responsibility.
10.9.4 TESTING OF ENCLOSURES MADE OF	Is the panel builder's responsibility.

Additional information

CURRENT LIMITING CLASS	3
FEATURES	Additional equipment possible
FUNCTIONS	Current limiting circuit breaker
SPECIAL FEATURES	Ambient temperature hint: a 1 °C increase results in a 0.5% linear reduction of current carrying capacity
USED WITH	FAZ-NA Miniature circuit breaker

INSULATING MATERIAL

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.

Resources

BROCHURES	eaton-pdd-railrolling-stock-brochure-br011002en-en-us.pdf
CATALOGUES	eaton-xeffect-faz-na-rt-mcb-catalog-ca003032en-en-us.pdf
	eaton-xeffect-faz-na,-mcb-3d-drawing-010.jpg
	eaton-xeffect-faz-na,-mcb-characteristic-curve-002.jpg
	eaton-xeffect-faz-na,-mcb-3d-drawing-009.jpg
CHARACTERISTIC CURVE	eaton-xeffect-faz-na,-mcb-dimensions-005.jpg
	eaton-xeffect-faz-na,-mcb-characteristic-curve.jpg
	eaton-mcb-xeffect-faz-na,-characteristic-curve-004.eps
	eaton-mcb-xeffect-faz-na,-characteristic-curve-003.eps
DECLARATIONS OF CONFORMITY	DA-DC-03 FAZ-DU
	DA-DC-03 FAZ-NA
	DA-DC-03 FAZ-B-C-D
DRAWINGS	eaton-xeffect-faz-na,-mcb-dimensions.jpg
	eaton-mcb-xeffect-faz-na,-3d-drawing-003.eps
ECAD MODEL	DA-CE-ETN.FAZ-D1_2-NA
INSTALLATION INSTRUCTIONS	IL019133ZU
MCAD MODEL	faz_na_2p.stp
	faz_na_2p.dwg
WIRING DIAGRAMS	eaton-xpole-mmc4-6-m-mcb-wiring-diagram-003.jpg
	eaton-mcb-xeffect-faz-na,-wiring-diagram-003.eps

PROJECT NAME:
PROJECT NUMBER:
PREPARED BY:
DATE:



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

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