

Specifications



Photo is representative



Eaton 102311

Eaton Moeller series xEffect - FAZ-NA, FAZ-RT MCB. FAZ-RT, 3-pole, tripping characteristic: D, rated current In: 20 A

General specifications

PRODUCT NAME	Eaton Moeller series xEffect - FAZ-NA, FAZ-RT MCB
CATALOG NUMBER	102311
MODEL CODE	FAZ-D20/3-RT
EAN	4015081021871
PRODUCT LENGTH/DEPTH	105 mm
PRODUCT HEIGHT	75.5 mm
PRODUCT WIDTH	53.1 mm
PRODUCT WEIGHT	0.371 kg
COMPLIANCES	RoHS conform
CERTIFICATIONS	IEC 60947-2 UL 1077 CSA Std. C22.2 No.235 UL 489, CSA C22.2 No. 5 UL 489 CSA-C22.2 No. 5-09 North America (UL listed, CSA certified) IEC/EN 60947-2 UL (Category Control Number DIVQ) Specially designed for North America, suitable as BCPD CE marking UL (File No. E235139) CSA (File No. 204453) CSA (Class No. 1432-01) EN45545-2 IEC 61373
CATALOG NOTES	Magnetic range for higher startup inrush levels that are usually seen in motors and transformers, and other high inductive

Delivery program

APPLICATION

- Feeder circuits, branch circuits
- Switchgear for industrial and advanced commercial applications
- xEffect - Switchgear for industrial and advanced commercial applications

NUMBER OF POLES	Three-pole
NUMBER OF POLES (TOTAL)	3
NUMBER OF POLES (PROTECTED)	3
TRIPPING CHARACTERISTIC	D
RELEASE CHARACTERISTIC	D
AMPERAGE RATING	20 A
TYPE	• FAZ-RT • Miniature circuit breaker

systems.

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	3
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	UL/CSA Type: - IP40 (when fitted) IP20 IP20 (IEC)
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: 4 Nm (36 lb-in) for AWG 6 Max. 2.4 Nm UL: 2.4 Nm (21 lb-in) for AWG 18 - AWG 12 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)	20 A
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT	0 W
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT	5.5 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-RT 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-characteristic-curve-002.jpg
	eaton-xeffect-faz-na,-mcb-3d-drawing-010.jpg
	eaton-xeffect-faz-na,-mcb-characteristic-curve.jpg
CHARACTERISTIC CURVE	eaton-xeffect-faz-na,-mcb-dimensions-003.jpg
	eaton-xeffect-faz-na,-mcb-3d-drawing-009.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-B-C-D
	03 faz-du 111017.pdf
	DA-DC-03 FAZ-RT
DRAWINGS	eaton-xeffect-faz-na,-mcb-dimensions.jpg
	eaton-mcb-xeffect-faz-na,-3d-drawing-002.eps
ECAD MODEL	ETN.FAZ-D20_3-RT
INSTALLATION INSTRUCTIONS	IL019133ZU
MCAD MODEL	eaton-non-selective-universal-mcb-3d-models-faz-na-3p.stp
	eaton-non-selective-universal-mcb-drawings-faz-na-3p.dwg
WIRING DIAGRAMS	eaton-xpole-mmc4-6-m-mcb-wiring-diagram-005.jpg

[eaton-mcb-xeffect-faz-na-
wiring-diagram-002.eps](#)

PROJECT NAME:

PROJECT NUMBER:

PREPARED BY:

DATE:



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