Specifications

Eaton 278874

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

General specifications	
PRODUCT NAME	Eaton Moeller series xEffect - FAZ MCB
CATALOG NUMBER	278874
MODEL CODE	FAZ-C20/3
EAN	4015082788742
PRODUCT LENGTH/DEPTH	80 mm
PRODUCT HEIGHT	75.5 mm
PRODUCT WIDTH	54 mm
PRODUCT WEIGHT	0.334 kg
COMPLIANCES	RoHS compliant
CERTIFICATIONS	IEC/EN 60898 UL 1077 IEC/EN 60947-2 EN45545-2 IEC 61373 CSA certified UL 60335-1 UL 60335-2-40 (A2L)
CATALOG NOTES	C CURVE

Additional information

CURRENT LIMITING CLASS	3
FEATURES	Can be fitted with auxiliary accessories Suitable for IT systems Suitable for Rolling Stock applications
FUNCTIONAL GROUP	Overcurrent protection
FUNCTIONS	Overload protection Short Circuit protection
INTERNAL RESISTANCE AT ROOM TEMPERATURE (SINGLE-POLE, 50 HZ)	6.9 mΩ
USED WITH	Miniature circuit breaker FAZ

Delivery program

AMPERAGE RATING	20 A
APPLICATION	• Industrial and commercial applications • Utilities and OEM control panels • Renewable energy installations • IT and data centre auxiliary circuits • Railway and transportation systems • A2L refrigerant environments, etc.
NOMINAL CURRENT	20 A
NUMBER OF POLES	Three-pole
NUMBER OF POLES (PROTECTED)	3
NUMBER OF POLES (TOTAL)	3
RELEASE CHARACTERISTIC	C
TRIPPING CHARACTERISTIC	C
TYPE	• FAZ • Miniature circuit breaker

Design verification as per 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	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.

Design verification as per IEC/EN 61439 - technical data

AMBIENT OPERATING TEMPERATURE - MAX	75 °C
AMBIENT OPERATING TEMPERATURE - MIN	-40 °C
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	20 A

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 INSULATING MATERIAL	Is the panel builder's responsibility.

Technical data - electrical

DIRECTION OF INCOMING SUPPLY	Bidirectional
FREQUENCY RATING - MAX	60 Hz
FREQUENCY RATING - MIN	50 Hz
LIFESPAN, ELECTRICAL	>4000 operating cycles
OPERATIONAL VOLTAGE (IEC/EN 60947-2) - MAX	440 VAC
OVERVOLTAGE CATEGORY	III
POLLUTION DEGREE	2
RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	4 kV
RATED INSULATION VOLTAGE (UI)	440 V
RATED OPERATIONAL VOLTAGE (UE) - MAX	415 VAC
RATED SERVICE SHORT-CIRCUIT BREAKING CAPACITY (IEC/EN 60898-1) - ICS	7.5 kA
RATED SERVICE SHORT-CIRCUIT BREAKING CAPACITY (IEC/EN 60947-2) - ICS	7.5 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY (IEC/EN 60898-1) - ICN AT 230 V	10 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY (IEC/EN 60898-1)- ICN AT 400 V	10 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY (IEC 60947-2)- ICU AT 230 V	15 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY (IEC 60947-2)- ICU AT 400 V	15 kA
RATED SWITCHING CAPACITY (IEC/EN 60898-1)	10 kA
RATED SWITCHING CAPACITY (IEC/EN 60947-2)	15 kA
SELECTIVITY CLASS	3
VOLTAGE RATING	240 V AC / 415 V AC
VOLTAGE RATING (IEC/EN 60898-1)	415 VAC
VOLTAGE RATING (IEC/EN 60947-2)	240/415 V AC
VOLTAGE RATING (UL CSA 13)	480 Y/277 V AC

Technical data - mechanical

BUILT-IN DEPTH	65.5 mm
BUSBAR MATERIAL THICKNESS	0.8 mm - 2 mm
CONNECTABLE CONDUCTOR CROSS SECTION (MULTI-WIRED) - MAX	25 mm²
CONNECTABLE CONDUCTOR CROSS SECTION (MULTI-WIRED) - MIN	1 mm²
CONNECTABLE CONDUCTOR CROSS SECTION (SOLID-CORE) - MAX	25 mm²
CONNECTABLE CONDUCTOR CROSS SECTION (SOLID-CORE) - MIN	1 mm²
CONTACT POSITION INDICATOR COLOR	Red = ON Green = OFF
DEGREE OF PROTECTION	IP20 (device) IP40 (when installed in enclosure)
ENCLOSURE WIDTH	80 mm
FRAME	45 mm
LIFESPAN, MECHANICAL	>10000 operating cycles
MOUNTING METHOD	Two lock-in position on DIN rail (EN 50022)
MOUNTING POSITION	As required
MOUNTING WIDTH	53.1 mm
MOUNTING WIDTH PER POLE	17.7 mm
TERMINAL CAPACITY	1 mm² - 25 mm²
TERMINAL PROTECTION	Touch-safe (VBG 4, ÖVE EN-6)
TERMINALS (TOP AND BOTTOM)	Screw-type with pressure plate
TIGHTENING TORQUE	Max. 2.4 Nm
WIDTH IN NUMBER OF MODULAR SPACINGS	3

VOLTAGE RATING (UL)	• ! • 480 Y/277 V AC
VOLTAGE TYPE	AC

Resources

CATALOGUES	eaton-xeffect-industrial-switchgear-range-catalog-ca003002en-en-us.pdf
CHARACTERISTIC CURVE	eaton-mcb-current-xeffect-faz-characteristic-curve-002.eps eaton-mcb-current-xeffect-faz-characteristic-curve.eps eaton-mcb-xeffect-faz-characteristic-curve-002.eps eaton-mcb-tripping-characteristic-xeffect-faz-characteristic-curve-002.eps eaton-mcb-xeffect-faz-characteristic-curve.eps
DECLARATIONS OF CONFORMITY	eaton-mcb-declaration-of-conformity-eu250395en.pdf eaton-mcb-declaration-of-conformity-uk251436en.pdf
DRAWINGS	eaton-mcb-xeffect-faz-dimensions-003.eps eaton-mcb-faz-xeffect-faz-3d-drawing-003.eps
ECAD MODEL	ETN.FAZ-C20_3
INSTALLATION INSTRUCTIONS	eaton-xeffect-iec-mcb-faz-az-il019148zu.pdf
MCAD MODEL	eaton-non-selective-universal-mcb-mcad-3d-models-faz-xxx-3p.stp faz_3p.stp
PEP ECO-PASSPORT	eaton-non-selective-universal-mcb-pep-eato-00047-v0101-en.pdf
WIRING DIAGRAMS	eaton-mcb-xeffect-faz-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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