

## Miniature circuit breaker (MCB), 20 A, 2p, characteristic: D



**Part no.** **FAZ-D20/2-NA**  
**102191**  
**EL Number** **1691656**  
**(Norway)**

General specifications		
Product name		Eaton Moeller series xEffect - FAZ-NA, FAZ-RT MCB
Part no.		FAZ-D20/2-NA
EAN		4015081020676
Product Length/Depth		105 millimetre
Product height		75.5 millimetre
Product width		35.4 millimetre
Product weight		0.243 kilogram
Compliances		RoHS conform
Certifications		UL 489 CSA-C22.2 No. 5-09 CSA (Class No. 1432-01) Specially designed for North America, suitable as BCPD CSA (File No. 204453) UL (Category Control Number DIVQ) UL 489, CSA C22.2 No. 5 UL (File No. E235139) IEC/EN 60947-2 IEC 60947-2 CE marking North America (UL listed, CSA certified) IEC 61373 EN45545-2
Product Tradename		xEffect - FAZ-NA, FAZ-RT
Product Type		MCB
Product Sub Type		None
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		20 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

Lifespan, electrical		20000 operations
Overvoltage category		III
Pollution degree		2
Direction of incoming supply		As required
<b>Technical Data - Mechanical</b>		
Frame		45 mm
Enclosure width		105 mm
Width in number of modular spacings		2
Built-in depth		70.5 mm
Mounting width		17.7 mm
Mounting width per pole		17.7 mm
Mounting Method		Top-hat rail IEC/EN 60715
Mounting position		As required
Degree of protection		IP20 UL/CSA Type: - IP20 (IEC) IP40 (when fitted)
Terminals (top and bottom)		Twin-purpose terminals
Connectable conductor cross section (solid-core) - min		1 mm <sup>2</sup>
Connectable conductor cross section (solid-core) - max		25 mm <sup>2</sup>
Connectable conductor cross section (multi-wired) - min		1 mm <sup>2</sup>
Connectable conductor cross section (multi-wired) - max		25 mm <sup>2</sup>
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
<b>Design verification as per IEC/EN 61439 - technical data</b>		
Rated operational current for specified heat dissipation (I <sub>n</sub> )		20 A
Heat dissipation per pole, current-dependent		0 W
Equipment heat dissipation, current-dependent		3.7 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
<b>Design verification as per IEC/EN 61439</b>		
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 insulating material		Is the panel builder's responsibility.
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.
<b>Additional information</b>		
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		Miniature circuit breaker FAZ-NA

## Technical data ETIM 9.0

Circuit breakers and fuses (EG000020) / Miniature circuit breaker (MCB) (EC000042)			
Electric engineering, automation, process control engineering / Electrical installation, device / Miniature circuit breaker system (MCB) / Miniature circuit breaker (MCB) (ecl@ss13-27-14-19-01 [AAB905019])			
Built-in depth	mm		70.5
Release characteristic			D
Number of poles (total)			2
Number of protected poles			2
Rated current	A		20
Rated voltage	V		415
Rated insulation voltage Ui	V		440
Rated impulse withstand voltage Uimp	kV		4
Rated short-circuit breaking capacity Icn according to EN 60898 at 230 V	kA		0
Voltage type			AC
Rated short-circuit breaking capacity Icn according to EN 60898 at 400 V	kA		0
Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V	kA		15
Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V	kA		15
Frequency	Hz		50 - 60
Power loss	W		4.4
Current limiting class			3
Flush-mounted installation			No
Concurrently switching neutral conductor			No
Over voltage category			3
Pollution degree			2
Additional equipment possible			Yes
Width in number of modular spacings			2
Degree of protection (IP)			IP20
Ambient temperature during operating	°C		-25 - 75
Connectable conductor cross section multi-wired	mm²		1 - 25
Connectable conductor cross section solid-core	mm²		1 - 25
Explosion-proof			No