Miniature circuit breaker (MCB), 20 A, 1p, characteristic: Z



FAZ-Z20/1 Part no. 278627 1695255

EL Number

(Norway)	
General specifications	
Product name	Eaton Moeller series xEffect - FAZ MCB
Part no.	FAZ-Z20/1
EAN	4015082786274
Product Length/Depth	80 millimetre
Product height	75.5 millimetre
Product width	17.7 millimetre
Product weight	0.111 kilogram
Compliances	UL CSA09 (with supplementary protector only) ROHS conform
Certifications	CSA (File No. 204453) CE marking UL (File No. E177451) CSA-C22.2 No. 235 CSA (Class No. 3215-30) UL (Category Control Number QVNU2, QVNU8) UL 1077 IEC/EN 60947-2 North America (UL recognized, CSA certified) IEC/EN 60898 EN45545-2 IEC 61373
Product Tradename	xEffect - FAZ
Product Type	MCB
Product Sub Type	None
Delivery program	
Application	Branch circuits, not as BCPD Switchgear for industrial and advanced commercial applications xEffect - Switchgear for industrial and advanced commercial applications
Number of poles	Single-pole
Number of poles (total)	2
Number of poles (protected)	1
Tripping characteristic	Z
Release characteristic	Z D
Amperage Rating	2 A
Туре	FAZ Miniature circuit breaker
Technical Data - Electrical	
Voltage type	AC AC/DC
Voltage rating	240 V AC / 415 V AC
Voltage rating at DC	60 V DC (per pole)
Voltage rating (UL CSA 13)	277 V AC; 48 V DC
Rated operational voltage (Ue) - max	400 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)	10 kA
Operational switching capacity	7.5 kA
Rated short-circuit breaking capacity (EN 60898) at 230 V	6 kA
Rated short-circuit breaking capacity (EN 60898) at 400 V	6 kA
Rated short-circuit breaking capacity (IEC 60947-2) at 230 V	0 kA
Rated short-circuit breaking capacity (IEC 60947-2) at 400 V	0 kA

Admissible back-up fuse - max	125 A gL/gG
Selectivity class	3
Lifespan, electrical	10000 operations
Overvoltage category	III
Pollution degree	2
Direction of incoming supply	As required
Technical Data - Mechanical	
Frame	45 mm
Enclosure width	80 mm
Width in number of modular spacings	2
Built-in depth	70.5 mm
Mounting width per pole	17.5 mm
Mounting width	17.5 mm
Mounting Method	Top-hat rail IEC/EN 60715
Mounting position	As required
Degree of protection	UL/CSA Type: - IP20 IP20 (IEC) IP40 (when fitted)
Terminals (top and bottom)	Twin-purpose terminals
Connectable conductor cross section (solid-core) - min	1 mm²
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 capacity of screw terminals for main cable	10 mm² (2x)
Terminal capacity (control cable)	25 mm² (1x)
Terminal protection	Finger and hand touch safe, DGUV VS3, EN 50274
Busbar material thickness	0.8 mm - 2 mm
Design verification as per IEC/EN 61439 - 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	4.4 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. Mosts the product standard's requirements.
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. Mosts the product standard's requirements.
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.
Additional information	
Current limiting class	3
Features	Additional equipment possible
Special features	Ambient temperature hint: a 1 °C increase results in a 0.5% linear reduction of current carrying capacity
Used with	FAZ Miniature circuit breaker

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])

Release characteristic 2 Number of poles (total) 2 Number of protected poles 1 Rated current A 2 Rated oxlotage V 400 Rated insulation voltage Ui V 440 Rated insulation voltage Uimp kV 4 Rated short-circuit breaking capacity Icn according to EN 60898 at 220 V kA 6 Voltage type KA 6 Rated short-circuit breaking capacity Icu according to EN 60898 at 400 V kA 6 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V kA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V kA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V kA 0 Frequency H2 50 - 60 Power loss No 0 Current limiting class S 3 Flush-mounted installation No No Concurrently switching neutral conductor No No Power loss 2 Additional equipmen			
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Rated impulse withstand voltage Ulimp kV 4 Rated short-circuit breaking capacity Icn according to EN 60898 at 230 V kA 6 Rated short-circuit breaking capacity Icn according to EN 60898 at 400 V kA 6 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V kA 0 Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V kA 0 Frequency HZ 50 - 60 Power loss W 4.4 Current limiting class W 4.4 Flush-mounted installation No No Concurrently switching neutral conductor No No Over voltage category Yes 2 Pollution degree Yes Yes Additional equipment possible Yes Pollution mumber of modular spacings Yes Degree of protection (IP) IP20 Arbient temperature during operating Yes Connectable conductor cross section multi-wired mm² 1 - 25 Connectable conductor cross section solid-core mm² 1 - 25	Rated voltage	V	400
Rated short-circuit breaking capacity Icn according to EN 60898 at 230 V Voltage type Rated short-circuit breaking capacity Icn according to EN 60898 at 400 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 2400 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 2400 V Rated short-circuit breaking capacity Icu according to IEC 60	Rated insulation voltage Ui	V	440
Voltage type Rated short-circuit breaking capacity Icu according to EN 60898 at 400 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 20 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 20 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 20 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 20 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 20 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 20 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 20 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 20 V Rated short-circuit breaking capacity Icu	Rated impulse withstand voltage Uimp	kV	4
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Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V	Voltage type		AC
Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V	Rated short-circuit breaking capacity Icn according to EN 60898 at 400 V	kA	6
Frequency Power loss Power loss Current limiting class Flush-mounted installation Concurrently switching neutral conductor Over voltage category Pollution degree Additional equipment possible Width in number of modular spacings Degree of protection (IP) Ambient temperature during operating Connectable conductor cross section multi-wired Connectable conductor cross section solid-core Hz 50 - 60 W 44 Ab Ab Ab Ab Ab Ab Ab Ab Ab	Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V	kA	0
Power loss Current limiting class Flush-mounted installation Concurrently switching neutral conductor Over voltage category Pollution degree Additional equipment possible Width in number of modular spacings Degree of protection (IP) Ambient temperature during operating Connectable conductor cross section multi-wired Connectable conductor cross section solid-core Width in mm² 1-25 Connectable conductor cross section solid-core Width in mm² 4.4 4.4 4.5 4.6 4.6 4.0 4.0 4.0 4.0 4.0 4.0	Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V	kA	0
Current limiting class Flush-mounted installation Concurrently switching neutral conductor Over voltage category Over voltage category Pollution degree Additional equipment possible Width in number of modular spacings Degree of protection (IP) Ambient temperature during operating Connectable conductor cross section multi-wired Connectable conductor cross section solid-core To No No No Over voltage category Section Solid-core Tyes Sec	Frequency	Hz	50 - 60
Flush-mounted installation Concurrently switching neutral conductor Over voltage category Pollution degree Additional equipment possible Width in number of modular spacings Degree of protection (IP) Ambient temperature during operating Connectable conductor cross section multi-wired Connectable conductor cross section solid-core No No No Pollution Yes 2 Pollution degree 1 P20 TP20 TP20	Power loss	W	4.4
Concurrently switching neutral conductor Over voltage category Pollution degree Additional equipment possible Width in number of modular spacings Pegree of protection (IP) Ambient temperature during operating Connectable conductor cross section multi-wired Connectable conductor cross section solid-core No Yes 2 2 Pegree of protection (IP) IP20 Ambient temperature during operating Connectable conductor cross section multi-wired mm² 1 - 25 Connectable conductor cross section solid-core mm² 1 - 25	Current limiting class		3
Over voltage category Pollution degree Additional equipment possible Width in number of modular spacings Degree of protection (IP) Ambient temperature during operating Connectable conductor cross section multi-wired Connectable conductor cross section solid-core Page 3 Yes Yes P2 P2 P20 P20 -25 - 75 Connectable conductor cross section multi-wired mm² 1 - 25 Connectable conductor cross section solid-core mm² 1 - 25	Flush-mounted installation		No
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	Concurrently switching neutral conductor		No
Additional equipment possible Width in number of modular spacings Degree of protection (IP) 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	Over voltage category		3
Width in number of modular spacings Degree of protection (IP) 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	Pollution degree		2
Degree of protection (IP) 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	Additional equipment possible		Yes
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	Width in number of modular spacings		2
Connectable conductor cross section multi-wired mm² 1 - 25 Connectable conductor cross section solid-core mm² 1 - 25	Degree of protection (IP)		IP20
Connectable conductor cross section solid-core mm² 1 - 25	Ambient temperature during operating	°C	-25 - 75
	Connectable conductor cross section multi-wired	mm²	1 - 25
Explosion-proof No	Connectable conductor cross section solid-core	mm²	1 - 25
	Explosion-proof		No