## Miniature circuit breaker (MCB), 2 A, 1p, characteristic: D

Powering Business Worldwide™

Part no. FAZ-D2/1 278572

**EL Number** 1691160 (Norway)

(Norway) General specifications	
Product name	Eaton Moeller series xEffect - FAZ MCB
Part no.	FAZ-D2/1
EAN	4015082785727
	80 millimetre
Product Length/Depth	
Product height	75.5 millimetre
Product width	17.7 millimetre
Product weight	0.113 kilogram
Compliances	UL CSA09 (with supplementary protector only) RoHS conform
Certifications	IEC/EN 60898 IEC/EN 60947-2 North America (UL recognized, CSA certified) UL 1077 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) 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)	1
Number of poles (protected)	1
Tripping characteristic	D
Release characteristic	D
Amperage Rating	2 A
Туре	FAZ Miniature circuit breaker
Technical Data - Electrical	
Voltage type	AC
Voltage rating	240 V AC / 415 V AC
Voltage rating (UL CSA 13)	277 V AC; 48 V DC
Rated operational voltage (Ue) - max	230 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	10 kA
Rated short-circuit breaking capacity (EN 60898) at 400 V	10 kA
Rated short-circuit breaking capacity (IEC 60947-2) at 230 V	15 kA
Rated short-circuit breaking capacity (IEC 60947-2) at 250 V	15 kA
Overvoltage category	III
Pollution degree	2
Technical Data - Mechanical	<u></u>

Wideh in number of modules engines	1
Width in number of modular spacings	
Built-in depth	70.5 mm
Degree of protection	UL/CSA Type: - IP20 (IEC) IP20
Connectable conductor cross section (solid-core) - min	1 mm²
Connectable conductor cross section (solid-core) - max	25 mm <sup>2</sup>
Connectable conductor cross section (multi-wired) - min	1 mm²
Connectable conductor cross section (multi-wired) - max	25 mm <sup>2</sup>
Design verification as per IEC/EN 61439 - technical data	
Rated operational current for specified heat dissipation (In)	2 A
Heat dissipation per pole, current-dependent	0 W
Equipment heat dissipation, current-dependent	1 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 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])

[1.0.0000.01]		
Built-in depth	mm	70.5
Release characteristic		D
Number of poles (total)		1

Rated current Rated voltage Rated insulation voltage Ui Rated insulation voltage Uin Rated insulation voltage Uin Rated insulation voltage Uinp 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 Icn 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 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 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 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			
Rated voltage Rated insulation voltage Ui Rated insulation voltage Uimp Rated impulse withstand voltage Uimp 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 Icn according to EN 60898 at 400 V Rated short-circuit breaking capacity Icn 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 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 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 200 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V Rated short-circuit breaking capa	Number of protected poles		1
Rated insulation voltage Ui         V         440           Rated insulation voltage Uimp         kV         4           Rated short-circuit breaking capacity Icn according to EN 60898 at 230 V         kA         10           Voltage type         AC         AC           Rated short-circuit breaking capacity Icn according to EN 60898 at 400 V         kA         10           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         kA         15           Power loss         V         1.1           Current limiting class         V         1.1           Flush-mounted installation         No         No           Concurrently switching neutral conductor         No         No           Over voltage category         3         3           Pollution degree         2         2           Additional equipment possible         Yes           Width in number of modular spacings         1         1           Degree of protection (IP)         IP20         25-75           Ambient temperature during operating         C         25-75           Connectable conductor cro	Rated current	А	2
Rated impulse withstand voltage Uimp 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 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 breaki	Rated voltage	V	230
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 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 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 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 6094	Rated insulation voltage Ui	V	440
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 400 V  Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V  Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V  Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V  Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V  Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V  Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V  Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V  Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V  Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V  Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V  Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V  Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V  Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V  Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V  Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V  Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V  Rated short-circuit breaking capa	Rated impulse withstand voltage Uimp	kV	4
Rated short-circuit breaking capacity Icn 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 200 V RA 15 Frequency Power loss W 1.1 Current limiting class Flush-mounted installation Concurrently switching neutral conductor Over voltage category Pollution degree Additional equipment possible Width in number of modular spacings Width in number of modular spacings Width in number of modular spacings Connectable conductor cross section multi-wired  No Connectable conductor cross section multi-wired  Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V RA 15  15  16  17  17  17  17  17  17  17  17  17	Rated short-circuit breaking capacity Icn according to EN 60898 at 230 V	kA	10
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 $$	kA	10
Frequency Power loss W 1.1 Current limiting class Flush-mounted installation Concurrently switching neutral conductor Over voltage category Pollution degree Additional equipment possible Width in number of modular spacings Degree of protection (IP) Ambient temperature during operating Connectable conductor cross section multi-wired  Hz 50 - 60  W 1.1  No  No  Pollution No  Ves  Yes  1  1  P20  Connectable conductor cross section multi-wired  mm² 1 - 25	Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V $$	kA	15
Power loss  W 1.1 Current limiting class Flush-mounted installation Concurrently switching neutral conductor Over voltage category Pollution degree Additional equipment possible Width in number of modular spacings The protection (IP) Ambient temperature during operating Connectable conductor cross section multi-wired  W 1.1  1.  1.  1.  1.  1.  1.  1.  1.  1.	Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V $$	kA	15
Current limiting class Flush-mounted installation Concurrently switching neutral conductor Over voltage category Over voltage category 3 Pollution degree Additional equipment possible Width in number of modular spacings Under temperature during operating Connectable conductor cross section multi-wired  3  3  8  8  8  8  8  8  8  8  8  8  8	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  Width in number of protection (IP)  Ambient temperature during operating  Connectable conductor cross section multi-wired  No  No  No  1  2  About 1  1  1  1  1  1  1  1  1  1  1  1  1	Power loss	W	1.1
Concurrently switching neutral conductor  Over voltage category  Pollution degree  Additional equipment possible  Width in number of modular spacings  Width in number of protection (IP)  Ambient temperature during operating  Connectable conductor cross section multi-wired  No  2  4  Pollution degree  Pves  1  1  1  1  1  1  1  1  1  1  1  1  1	Current limiting class		3
Over voltage category  Over voltage category  3  Pollution degree  2  Additional equipment possible  Width in number of modular spacings  Ves  Width in number of protection (IP)  Degree of protection (IP)  Ambient temperature during operating  Connectable conductor cross section multi-wired  3  Pollution degree  Yes  1  IP20  Arbient temperature during operating  C -25 - 75  Connectable conductor cross section multi-wired  mm²  1 - 25	Flush-mounted installation		No
Pollution degree 2 Additional equipment possible Yes Width in number of modular spacings 1 Degree of protection (IP) IP20 Ambient temperature during operating °C -25 -75 Connectable conductor cross section multi-wired 2  2  Yes  1  1  1  1  1  1  1  1  2  1  1  1  1	Concurrently switching neutral conductor		No
Additional equipment possible  Width in number of modular spacings  Degree of protection (IP)  Ambient temperature during operating  Connectable conductor cross section multi-wired  Yes  1  1  1  1  1  1  1  1  1  1  1  1  1	Over voltage category		3
Width in number of modular spacings  1 Degree of protection (IP)  Ambient temperature during operating  °C  -25 - 75  Connectable conductor cross section multi-wired  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	Additional equipment possible		Yes
Ambient temperature during operating  °C -25 - 75  Connectable conductor cross section multi-wired  mm² 1 - 25	Width in number of modular spacings		1
Connectable conductor cross section multi-wired mm <sup>2</sup> 1 - 25	Degree of protection (IP)		IP20
	Ambient temperature during operating	°C	-25 - 75
2 4 05	Connectable conductor cross section multi-wired	mm²	1 - 25
Connectable conductor cross section solid-core mm 1 - 25	Connectable conductor cross section solid-core	mm²	1 - 25
Explosion-proof No	Explosion-proof		No