## Miniature circuit breaker (MCB), 4 A, 3p, characteristic: D



Part no. FAZ-D4/3 278888

278888 EL Number 1691196 (Norway)

(INUI Way)	
General specifications	
Product name	Eaton Moeller series xEffect - FAZ MCB
Part no.	FAZ-D4/3
EAN	4015082788889
Product Length/Depth	80 millimetre
Product height	75.5 millimetre
Product width	54 millimetre
Product weight	0.338 kilogram
Compliances	UL CSA09 (with supplementary protector only) RoHS conform
Certifications	CSA-C22.2 No. 235 CE marking North America (UL recognized, CSA certified) UL (Category Control Number QVNU2, QVNU8) CSA (File No. 204453) IEC/EN 60898 UL (File No. E177451) IEC/EN 60947-2 UL 1077 CSA (Class No. 3215-30) IEC 61373 EN45545-2
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	Three-pole
Number of poles (total)	3
Number of poles (protected)	3
Tripping characteristic	D
Release characteristic	D
Amperage Rating	4 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)	480 Y/277 V AC
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)	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 230 V	15 kA
	III
Overvoltage category	III
Overvoltage category  Pollution degree	2

Width in number of modular spacings	3
Built-in depth	70.5 mm
Degree of protection	IP20 (IEC) UL/CSA Type: - IP20
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>
Design verification as per IEC/EN 61439 - technical data	
Rated operational current for specified heat dissipation (In)	4 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.
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  Additional information	The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.
Current limiting class	Additional actionment assaille
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	Miniature circuit breaker FAZ

## **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])

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Built-in depth	mm	70.5
Release characteristic		D
Number of poles (total)		3

Number of protected poles Rated current A A 4 Rated voltage V 400 Rated insulation voltage Ui Rated insulation 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 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 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 b			
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Rated insulation voltage Uimp Rated short-circuit breaking capacity Icn according to EN 60898 at 230 V	t	А	4
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 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 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 break	÷	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  Frequency  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)  Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V  RA  10  AC  AC  AC  AC  AC  AC  AC  AC  AC  A	ion voltage Ui	V	440
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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 RA 15  Frequency Requency Regular Substituting Class Current limiting class 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)  Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V RA 15  Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V RA 15  Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V RA 15  Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V RA 15  Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V RA 15  Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V RA 15  Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V RA 15  Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 230 V RA 15  Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V RA 15  Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V RA 15  Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 200 V RA 15  Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V RA 15  Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V RA 15  Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V RA 15  Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V RA 15  Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V RA 15  Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V RA 15  Rated short-circuit breaking capacity Icu according to IEC 60947-2 at 400 V RA 15  Rated short-circuit breaking	ircuit breaking capacity Icn according to EN 60898 at 230 V	o EN 60898 at 230 V k/	A 10
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 RA 15 Frequency Hz 50 - 60 Power loss W 4.5 Current limiting class 3 Flush-mounted installation No Concurrently switching neutral conductor Nover voltage category Over voltage category Pollution degree Additional equipment possible Width in number of modular spacings Degree of protection (IP)  RA 15  15  16  17  18  18  18  18  18  18  18  18  18			AC
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Frequency Power loss W 4.5  Current limiting class Currently switching neutral conductor Concurrently switching neutral conductor Over voltage category Pollution degree Additional equipment possible Width in number of modular spacings Degree of protection (IP)  Hz 50 - 60  No 4.5  No  No  2  No  No  Ves  1  2  Additional equipment possible Yes  IP20	ircuit breaking capacity Icu according to IEC 60947-2 at 230 V	o IEC 60947-2 at 230 V k/	A 15
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)  Wasses  4.5  No  No  No  Pollution  Yes  1  1  1  1  1  1  1  1  1  1  1  1  1	ircuit breaking capacity Icu according to IEC 60947-2 at 400 V	:o IEC 60947-2 at 400 V	A 15
Current limiting class  Flush-mounted installation  No  Concurrently switching neutral conductor  No  Over voltage category  Pollution degree  Additional equipment possible  Width in number of modular spacings  Degree of protection (IP)  Solution of the space of space of protection (IP)  Solution of the space of spac		н	z 50 - 60
Flush-mounted installation  Concurrently switching neutral conductor  No  Over voltage category  3  Pollution degree  Additional equipment possible  Width in number of modular spacings  Degree of protection (IP)  No  No  No  190  190  190  190  190  190  190  19		V	4.5
Concurrently switching neutral conductor  Over voltage category  Pollution degree  Additional equipment possible  Width in number of modular spacings  Degree of protection (IP)  No  Yes  1P20	ng class		3
Over voltage category  3 Pollution degree 2 Additional equipment possible Yes Width in number of modular spacings 3 Degree of protection (IP) IP20	ed installation		No
Pollution degree 2 Additional equipment possible Yes Width in number of modular spacings 3 Degree of protection (IP) IP20	switching neutral conductor		No
Additional equipment possible Yes Width in number of modular spacings 3 Degree of protection (IP) IP20	category		3
Width in number of modular spacings 3  Degree of protection (IP) IP20	ree		2
Degree of protection (IP)	uipment possible		Yes
	ber of modular spacings		3
	otection (IP)		IP20
Ambient temperature during operating °C -25 - 75	perature during operating	°(	-25 - 75
Connectable conductor cross section multi-wired mm² 1 - 25	conductor cross section multi-wired	m	nm² 1 - 25
Connectable conductor cross section solid-core mm² 1 - 25	conductor cross section solid-core	m	nm² 1 - 25
Explosion-proof No	oof		No