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Eaton 278609

Eaton Moeller series xEffect - FAZ MCB.
Miniature circuit breaker (MCB), 4 A, 1p,
characteristic: S

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PRODUCT NAME	Eaton Moeller series xEffect - FAZ MCB
CATALOG NUMBER	278609
PRODUCT LENGTH/DEPTH	80 mm
PRODUCT HEIGHT	75.5 mm
PRODUCT WIDTH	17.7 mm
PRODUCT WEIGHT	0.112 kg
COMPLIANCES	UL CSA09 (with supplementary protector only) RoHS conform
CERTIFICATIONS	CSA-C22.2 No. 235 CSA (File No. 204453) CSA (Class No. 3215-30) UL (Category Control Number QVNU2, QVNU8) IEC/EN 60898 UL 1077 IEC/EN 60947-2 UL (File No. E177451) North America (UL recognized, CSA certified) CE marking EN45545-2 IEC 61373



Powering Business Worldwide

USED WITH	Miniature circuit breaker FAZ
AMPERAGE RATING	4 A
VOLTAGE RATING	240 V AC / 415 V AC
FEATURES	Additional equipment possible
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.

CHARACTERISTIC CURVE

[eaton-mcb-characteristic-xeffect-faz-characteristic-curve-003.eps](#)

[eaton-mcb-current-xeffect-faz-characteristic-curve.eps](#)

[eaton-mcb-tripping-characteristic-xeffect-faz-characteristic-curve-002.eps](#)

[eaton-xeffect-faz-mcb-characteristic-curve-004.jpg](#)

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[eaton-mcb-current-xeffect-faz-characteristic-curve-002.eps](#)

[eaton-mcb-tripping-characteristic-xeffect-faz-characteristic-curve.eps](#)

[eaton-mcb-characteristic-xeffect-faz-characteristic-curve-006.eps](#)

[eaton-mcb-xeffect-faz-characteristic-curve-002.eps](#)

[eaton-xpole-mmc4-6-m-mcb-wiring-diagram-002.jpg](#)

[eaton-mcb-xeffect-faz-wiring-diagram.eps](#)

[eaton-xeffect-faz-mcb-dimensions.jpg](#)

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[eaton-xeffect-faz-mcb-3d-drawing-014.jpg](#)

[eaton-xeffect-faz-mcb-3d-drawing-005.jpg](#)

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.
FRAME	45 mm
FREQUENCY RATING	50 to 60 Hz
POLLUTION DEGREE	2
MOUNTING METHOD	Top-hat rail IEC/EN 60715
DEGREE OF PROTECTION	IP20 UL/CSA Type: - IP40 (when fitted) IP20 (IEC)
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT	1.7 W
RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	4 kV
ADMISSIBLE BACK-UP FUSE - MAX	125 A gL/gG
BUSBAR MATERIAL THICKNESS	0.8 mm - 2 mm
TERMINAL PROTECTION	Finger and hand touch safe, DGUV VS3, EN 50274
TERMINALS (TOP AND BOTTOM)	Twin-purpose terminals
TRIPPING CHARACTERISTIC	S
VOLTAGE RATING (UL CSA 13)	277 V AC; 48 V DC
AMBIENT OPERATING	75 °C

TEMPERATURE - MAX	
AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
BUILT-IN DEPTH	70.5 mm
CONNECTABLE CONDUCTOR CROSS SECTION (MULTI-WIRED) - MAX	25 mm ²
CONNECTABLE CONDUCTOR CROSS SECTION (MULTI-WIRED) - MIN	1 mm ²
CONNECTABLE CONDUCTOR CROSS SECTION (SOLID-CORE) - MAX	25 mm ²
CONNECTABLE CONDUCTOR CROSS SECTION (SOLID-CORE) - MIN	1 mm ²
CURRENT LIMITING CLASS	3
ENCLOSURE WIDTH	80 mm
FREQUENCY RATING - MAX	60 Hz
FREQUENCY RATING - MIN	50 Hz
HEAT DISSIPATION CAPACITY	0 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT	0 W
DIRECTION OF INCOMING SUPPLY	As required
WIDTH IN NUMBER OF MODULAR SPACINGS	1
VOLTAGE RATING AT DC	60 V DC (per pole)
VOLTAGE TYPE	AC
MOUNTING POSITION	As required
OVERVOLTAGE CATEGORY	III
NUMBER OF POLES	Single-pole
LIFESPAN, ELECTRICAL	10000 operations
RELEASE CHARACTERISTIC	Other
TYPE	• FAZ • Miniature circuit breaker
SPECIAL FEATURES	Ambient temperature hint:

	a 1 °C increase results in a 0.5% linear reduction of current carrying capacity
APPLICATION	• Branch circuits, not as BCPD • Switchgear for industrial and advanced commercial applications • xEffect - Switchgear for industrial and advanced commercial applications
MOUNTING WIDTH	17.5 mm
SELECTIVITY CLASS	3
MOUNTING WIDTH PER POLE	17.5 mm
NUMBER OF POLES (PROTECTED)	1
NUMBER OF POLES (TOTAL)	1
OPERATIONAL SWITCHING CAPACITY	7.5 kA
RATED INSULATION VOLTAGE (UI)	440 V
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	4 A
RATED OPERATIONAL VOLTAGE (UE) - MAX	230 V
RATED SHORT-CIRCUIT BREAKING CAPACITY (IEC/EN 60898-1) - ICN AT 230 V	0 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY (IEC/EN 60898-1)- ICN AT 400 V	0 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY (IEC 60947-2)- ICU AT 230 V	10 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY (IEC 60947-2)- ICU AT 400 V	10 kA
RATED SWITCHING CAPACITY (IEC/EN 60947-2)	10 kA
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT	0 W

TERMINAL CAPACITY (CONTROL CABLE)	25 mm² (1x)
TERMINAL CAPACITY OF SCREW TERMINALS FOR MAIN CABLE	10 mm² (2x)
POWER LOSS	1.7 W

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