

# Specifications

Photo is representative

## Eaton 278996

Eaton Moeller series xEffect - FAZ MCB. FAZ, 3-pole+N, tripping characteristic: D, rated current In: 13 A

### General specifications

<b>PRODUCT NAME</b>	Eaton Moeller series xEffect - FAZ MCB
<b>CATALOG NUMBER</b>	278996
<b>MODEL CODE</b>	FAZ-D13/3N
<b>EAN</b>	4015082789961
<b>PRODUCT LENGTH/DEPTH</b>	80 mm
<b>PRODUCT HEIGHT</b>	75.5 mm
<b>PRODUCT WIDTH</b>	72 mm
<b>PRODUCT WEIGHT</b>	0.423 kg
<b>COMPLIANCES</b>	RoHS conform
<b>CERTIFICATIONS</b>	IEC/EN 60898 IEC/EN 60947-2 EN45545-2 IEC 61373

## Delivery Programme

### APPLICATION

- Switchgear for industrial and advanced commercial applications
- xEffect - Switchgear for industrial and advanced commercial applications

NUMBER OF POLES	Three-pole + N
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NUMBER OF POLES (TOTAL)	4
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NUMBER OF POLES (PROTECTED)	3
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TRIPPING CHARACTERISTIC	D
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RELEASE CHARACTERISTIC	D
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AMPERAGE RATING	13 A
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TYPE	<ul style="list-style-type: none"> <li>• FAZ</li> <li>• Miniature circuit breaker</li> </ul>
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## Technical data - electrical

VOLTAGE TYPE	AC
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VOLTAGE RATING	240 V AC / 415 V AC
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VOLTAGE RATING AT DC	60 V DC (per pole)
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RATED OPERATIONAL VOLTAGE (UE) - MAX	400 V
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RATED INSULATION VOLTAGE (UI)	440 V
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RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	4 kV
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FREQUENCY RATING - MIN	50 Hz
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FREQUENCY RATING - MAX	60 Hz
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RATED SWITCHING CAPACITY (IEC/EN 60947-2)	15 kA
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OPERATIONAL SWITCHING CAPACITY	7.5 kA
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RATED SHORT-CIRCUIT BREAKING CAPACITY (EN 60898) AT 230 V	10 kA
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RATED SHORT-CIRCUIT BREAKING CAPACITY (EN 60898) AT 400 V	10 kA
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RATED SHORT-CIRCUIT BREAKING CAPACITY (IEC 60947-2) AT 230 V	15 kA
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RATED SHORT-CIRCUIT BREAKING CAPACITY (IEC 60947-2) AT 400 V	15 kA
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ADMISSIBLE BACK-UP FUSE - MAX	125 A gL/gG
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SELECTIVITY CLASS	3
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OVERVOLTAGE CATEGORY	III
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POLLUTION DEGREE	2
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LIFESPAN, ELECTRICAL	10000 operations
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DIRECTION OF INCOMING SUPPLY	As required
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## Technical data - mechanical

FRAME	45 mm
ENCLOSURE WIDTH	80 mm
WIDTH IN NUMBER OF MODULAR SPACINGS	4
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	IP40 (when fitted) IP20
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 CAPACITY OF SCREW TERMINALS FOR MAIN CABLE	10 mm <sup>2</sup> (2x)
TERMINAL CAPACITY (CONTROL CABLE)	25 mm <sup>2</sup> (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)	13 A
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT	0 W
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT	6.1 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

<b>10.2.2 CORROSION RESISTANCE</b>	Meets the product standard's requirements.
<b>10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES</b>	Meets the product standard's requirements.
<b>10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT</b>	Meets the product standard's requirements.
<b>10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS</b>	Meets the product standard's requirements.
<b>10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION</b>	Meets the product standard's requirements.
<b>10.2.5 LIFTING</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.2.6 MECHANICAL IMPACT</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.2.7 INSCRIPTIONS</b>	Meets the product standard's requirements.
<b>10.3 DEGREE OF PROTECTION OF ASSEMBLIES</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.4 CLEARANCES AND CREEPAGE DISTANCES</b>	Meets the product standard's requirements.
<b>10.5 PROTECTION AGAINST ELECTRIC SHOCK</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.6 INCORPORATION OF SWITCHING DEVICES AND COMPONENTS</b>	Does not apply, since the entire switchgear needs to be evaluated.
<b>10.7 INTERNAL ELECTRICAL CIRCUITS AND CONNECTIONS</b>	Is the panel builder's responsibility.
<b>10.8 CONNECTIONS FOR EXTERNAL CONDUCTORS</b>	Is the panel builder's responsibility.
<b>10.9.2 POWER-FREQUENCY ELECTRIC STRENGTH</b>	Is the panel builder's responsibility.
<b>10.9.3 IMPULSE WITHSTAND VOLTAGE</b>	Is the panel builder's responsibility.
<b>10.9.4 TESTING OF ENCLOSURES MADE OF</b>	Is the panel builder's responsibility.

## Additional information

<b>CURRENT LIMITING CLASS</b>	3
<b>FEATURES</b>	Additional equipment possible Concurrently switching N-neutral
<b>SPECIAL FEATURES</b>	Ambient temperature hint: a 1 °C increase results in a 0.5% linear reduction of current carrying capacity
<b>USED WITH</b>	Miniature circuit breaker FAZ

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**INSULATING MATERIAL**

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**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.

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## Resources

<b>CATALOGUES</b>	<a href="#">eaton-xeffect-industrial-switchgear-range-catalog-ca003002en-en-us.pdf</a>
<b>CHARACTERISTIC CURVE</b>	<a href="#">eaton-mcb-xeffect-faz-characteristic-curve.eps</a> <a href="#">eaton-mcb-tripping-characteristic-xeffect-faz-characteristic-curve-002.eps</a> <a href="#">eaton-mcb-current-xeffect-faz-characteristic-curve-002.eps</a> <a href="#">eaton-mcb-current-xeffect-faz-characteristic-curve.eps</a> <a href="#">eaton-mcb-xeffect-faz-characteristic-curve-002.eps</a> <a href="#">eaton-xeffect-faz-mcb-characteristic-curve.jpg</a>
<b>DECLARATIONS OF CONFORMITY</b>	<a href="#">DA-DC-03 FAZ-B-C-D</a> <a href="#">DA-DC-03 FAZ-DU</a>
<b>DRAWINGS</b>	<a href="#">eaton-xeffect-faz-mcb-dimensions-004.jpg</a> <a href="#">eaton-mcb-xeffect-faz-dimensions-004.eps</a> <a href="#">eaton-xeffect-faz-mcb-3d-drawing-011.jpg</a> <a href="#">eaton-mcb-faz-xeffect-faz-3d-drawing-004.eps</a> <a href="#">eaton-xeffect-faz-mcb-3d-drawing-012.jpg</a> <a href="#">eaton-xeffect-faz-mcb-3d-drawing-003.jpg</a>
<b>ECAD MODEL</b>	<a href="#">DA-CE-ETN.FAZ-D13 3N</a>
<b>INSTALLATION INSTRUCTIONS</b>	<a href="#">eaton-rccb-rcbo-g9-il019140zu.pdf</a>
<b>MCAD MODEL</b>	<a href="#">faz 3pn 4p.stp</a> <a href="#">faz 3pn 4p.dwg</a>
<b>PEP ECO-PASSPORT</b>	<a href="#">EATO-00047-V01.01-EN</a>
<b>WIRING DIAGRAMS</b>	<a href="#">eaton-mcb-xeffect-faz-wiring-diagram-006.eps</a>

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

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**PROJECT NAME:**

**PROJECT NUMBER:**

**PREPARED BY:**

**DATE:**

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