

# Specifications



Photo is representative



## Eaton 102098

Eaton Moeller series xEffect - FAZ-NA, FAZ-RT MCB. FAZ-NA, 1-pole, tripping characteristic: D, rated current In: 1 A, Switchgear for export to North America (UL-listed)

### General specifications

<b>PRODUCT NAME</b>	Eaton Moeller series xEffect - FAZ-NA, FAZ-RT MCB
<b>CATALOG NUMBER</b>	102098
<b>EAN</b>	4015081019748
<b>PRODUCT LENGTH/DEPTH</b>	105 mm
<b>PRODUCT HEIGHT</b>	75.5 mm
<b>PRODUCT WIDTH</b>	17.7 mm
<b>PRODUCT WEIGHT</b>	0.122 kg
<b>COMPLIANCES</b>	RoHS conform
<b>CERTIFICATIONS</b>	North America (UL listed, CSA certified) UL (File No. E235139) CSA (File No. 204453) CSA-C22.2 No. 5-09 CE marking CSA (Class No. 1432-01) Specially designed for North America, suitable as BCPD IEC 60947-2 UL 489, CSA C22.2 No. 5 UL 489 UL (Category Control Number DIVQ) IEC/EN 60947-2 EN45545-2 IEC 61373



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## Delivery program

<b>APPLICATION</b>	<ul style="list-style-type: none"> <li>• Feeder circuits, branch circuits</li> <li>• Switchgear for export to North America (UL-listed)</li> </ul>
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<b>NUMBER OF POLES</b>	Single-pole
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<b>NUMBER OF POLES (TOTAL)</b>	1
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<b>NUMBER OF POLES (PROTECTED)</b>	1
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<b>TRIPPING CHARACTERISTIC</b>	D
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<b>RELEASE CHARACTERISTIC</b>	D
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<b>AMPERAGE RATING</b>	1 A
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<b>TYPE</b>	<ul style="list-style-type: none"> <li>• FAZ-NA</li> <li>• Miniature circuit breaker</li> </ul>
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## Technical data - electrical

<b>VOLTAGE TYPE</b>	AC
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<b>VOLTAGE RATING</b>	277 V AC / 480 V AC
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<b>VOLTAGE RATING AT DC</b>	60 V DC
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<b>VOLTAGE RATING (IEC/EN 60947-2)</b>	240 V AC / 415 V AC
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<b>VOLTAGE RATING (UL)</b>	277 V
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<b>RATED OPERATIONAL VOLTAGE (UE) - MAX</b>	240 V
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<b>RATED INSULATION VOLTAGE (UI)</b>	440 V
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<b>RATED IMPULSE WITHSTAND VOLTAGE (UIMP)</b>	4 kV
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<b>FREQUENCY RATING - MIN</b>	50 Hz
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<b>FREQUENCY RATING - MAX</b>	60 Hz
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<b>RATED SWITCHING CAPACITY (IEC/EN 60947-2)</b>	15 kA
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<b>RATED SHORT-CIRCUIT BREAKING CAPACITY (IEC/EN 60898-1) - ICN AT 230 V</b>	0 kA
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<b>RATED SHORT-CIRCUIT BREAKING CAPACITY (IEC/EN 60898-1)- ICN AT 400 V</b>	0 kA
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<b>RATED SHORT-CIRCUIT BREAKING CAPACITY (IEC 60947-2)- ICU AT 230 V</b>	15 kA
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<b>RATED SHORT-CIRCUIT BREAKING CAPACITY (IEC 60947-2)- ICU AT 400 V</b>	15 kA
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<b>SELECTIVITY CLASS</b>	3
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<b>OVERVOLTAGE CATEGORY</b>	III
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<b>POLLUTION DEGREE</b>	2
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<b>LIFESPAN, ELECTRICAL</b>	20000 operations
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<b>DIRECTION OF INCOMING SUPPLY</b>	As required
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## Technical data - mechanical

<b>FRAME</b>	45 mm
<b>ENCLOSURE WIDTH</b>	105 mm
<b>WIDTH IN NUMBER OF MODULAR SPACINGS</b>	1
<b>BUILT-IN DEPTH</b>	70.5 mm
<b>MOUNTING WIDTH PER POLE</b>	17.7 mm
<b>MOUNTING WIDTH</b>	17.7 mm
<b>MOUNTING METHOD</b>	Top-hat rail IEC/EN 60715
<b>MOUNTING POSITION</b>	As required
<b>DEGREE OF PROTECTION</b>	IP40 (when fitted) UL/CSA Type: - IP20 IP20 (IEC)
<b>TERMINALS (TOP AND BOTTOM)</b>	Twin-purpose terminals
<b>CONNECTABLE CONDUCTOR CROSS SECTION (SOLID-CORE) - MIN</b>	1 mm <sup>2</sup>
<b>CONNECTABLE CONDUCTOR CROSS SECTION (SOLID-CORE) - MAX</b>	25 mm <sup>2</sup>
<b>CONNECTABLE CONDUCTOR CROSS SECTION (MULTI-WIRED) - MIN</b>	1 mm <sup>2</sup>
<b>CONNECTABLE CONDUCTOR CROSS SECTION (MULTI-WIRED) - MAX</b>	25 mm <sup>2</sup>
<b>TERMINAL PROTECTION</b>	Finger and hand touch safe, DGUV VS3, EN 50274
<b>TIGHTENING TORQUE</b>	Max. 2.4 Nm UL: 4 Nm (36 lb-in) for AWG 6 UL: 2.4 Nm (21 lb-in) for AWG 18 - AWG 12 UL: 2.8 Nm (25 lb-in) for AWG 10 - AWG 8

## Design verification as per IEC/EN - technical data

<b>RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)</b>	1 A
<b>HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT</b>	0 W
<b>EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT</b>	0.8 W
<b>STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT</b>	0 W
<b>HEAT DISSIPATION CAPACITY</b>	0 W
<b>AMBIENT OPERATING TEMPERATURE - MIN</b>	-25 °C
<b>AMBIENT OPERATING TEMPERATURE - MAX</b>	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 INSULATING MATERIAL</b>	Is the panel builder's responsibility.
<b>10.10 TEMPERATURE RISE</b>	The panel builder is responsible for the

## Additional information

<b>CURRENT LIMITING CLASS</b>	3
<b>FEATURES</b>	Additional equipment possible
<b>FUNCTIONS</b>	Current limiting circuit breaker
<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>	FAZ-NA Miniature circuit breaker

	temperature rise calculation. Eaton will provide heat dissipation data for the devices.
<b>10.11 SHORT-CIRCUIT RATING</b>	Is the panel builder's responsibility. The specifications for the switchgear must be observed.
<b>10.12 ELECTROMAGNETIC COMPATIBILITY</b>	Is the panel builder's responsibility. The specifications for the switchgear must be observed.
<b>10.13 MECHANICAL FUNCTION</b>	The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

## Resources

BROCHURES	<a href="#">eaton-pdd-railrolling-stock-brochure-br011002en-en-us.pdf</a>
CATALOGS	<a href="#">eaton-xeffect-faz-na-rt-mcb-catalog-ca003032en-en-us.pdf</a>
	<a href="#">eaton-mcb-xeffect-faz-na,-characteristic-curve-004.eps</a>
	<a href="#">eaton-xeffect-faz-na,-mcb-dimensions-002.jpg</a>
	<a href="#">eaton-xeffect-faz-na,-mcb-3d-drawing-010.jpg</a>
CHARACTERISTIC CURVE	<a href="#">eaton-mcb-xeffect-faz-na,-characteristic-curve-003.eps</a>
	<a href="#">eaton-xeffect-faz-na,-mcb-characteristic-curve-002.jpg</a>
	<a href="#">eaton-xeffect-faz-na,-mcb-characteristic-curve.jpg</a>
	<a href="#">eaton-xeffect-faz-na,-mcb-3d-drawing-009.jpg</a>
DECLARATIONS OF CONFORMITY	<a href="#">eaton-mcb-declaration-of-conformity-eu250394en.pdf</a>
DRAWINGS	<a href="#">eaton-xeffect-faz-na,-mcb-dimensions.jpg</a>
	<a href="#">eaton-mcb-xeffect-faz-na,-3d-drawing.eps</a>
ECAD MODEL	<a href="#">ETN.FAZ-D1_1-NA</a>
INSTALLATION INSTRUCTIONS	<a href="#">IL019133ZU</a>
MCAD MODEL	<a href="#">faz_na_1p.dwg</a>
	<a href="#">eaton-non-selective-universal-mcb-mcad-3d-models-faz-na-rt-1p.stp</a>
	<a href="#">faz_na_1p.stp</a>
WIRING DIAGRAMS	<a href="#">eaton-mcb-xeffect-faz-na,-wiring-diagram.eps</a>
	<a href="#">eaton-xpole-mmc4-6-m-mcb-wiring-diagram-002.jpg</a>

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**PROJECT NAME:**

**PROJECT NUMBER:**

**PREPARED BY:**

**DATE:**

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