

# Specifications



## Eaton 120659

Eaton Moeller series xPole - mRB4/6 RCBO - residual-current circuit breaker with overcurrent protection. RCD/MCB, 13A, 30mA, C-LS-Char, 3N pole, FI-Char: A

### General specifications

<b>PRODUCT NAME</b>	Eaton Moeller series xPole - mRB4/6 RCBO - residual-current circuit breaker with overcurrent protection
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<b>CATALOG NUMBER</b>	120659
<b>MODEL CODE</b>	mRB6-13/3N/C/003-A
<b>EAN</b>	4015081184897

<b>PRODUCT LENGTH/DEPTH</b>	80 mm
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<b>PRODUCT HEIGHT</b>	75.5 mm
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<b>PRODUCT WIDTH</b>	70 mm
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<b>PRODUCT WEIGHT</b>	0.445 kg
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<b>COMPLIANCES</b>	CE Marked RoHS conform
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<b>CERTIFICATIONS</b>	CE
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<b>GLOBAL CATALOG</b>	120659
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## Product specifications

<b>VOLTAGE RATING</b>	400 V
<b>SURGE CURRENT CAPACITY</b>	0.25 kA
<b>VOLTAGE TYPE</b>	AC
<b>WIDTH IN NUMBER OF MODULAR SPACINGS</b>	4
<b>FEATURES</b>	Concurrently switching N-neutral
<b>10.10 TEMPERATURE RISE</b>	The panel builder is responsible for the 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.
<b>DEVICE HEIGHT</b>	80 mm
<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

## Resources

<b>CATALOGS</b>	<a href="#">eaton-xpole-mrb4-rcbo-catalog-ca019058en-en-us.pdf</a> <a href="#">eaton-xpole-mrb6-rcbo-catalog-ca019057en-en-us.pdf</a>
<b>CHARACTERISTIC CURVE</b>	<a href="#">eaton-mcb-xpole-mrb4-6-characteristic-curve.eps</a> <a href="#">Characteristics xPole mRB4/mRB6 3N</a>
<b>DECLARATIONS OF CONFORMITY</b>	<a href="#">eaton-rcbo-residual-current-circuit-breaker-with-overcurrent-protection-declaration-of-conformity-eu250077en.pdf</a>
<b>DRAWINGS</b>	<a href="#">eaton-xeffect-frbm6m-dimensions-004.jpg</a> <a href="#">eaton-xeffect-frbm6m-characteristic-curve-002.jpg</a> <a href="#">eaton-mcb-xpole-mrb4-6-dimensions.eps</a> <a href="#">Dimensions xPole mRB4/mRB6 3N</a> <a href="#">3D Drawing xPole mRB4/mRB6 3N</a>
<b>ECAD MODEL</b>	<a href="#">ETN.mRB6-13 3N C 003-A.edz</a>
<b>INSTALLATION INSTRUCTIONS</b>	<a href="#">eaton-xpole-combined-mcb-rcd-device-rcbo-packaging-manual-multilingual.pdf</a> <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="#">eaton-rcd-with-overcurrent-protection-pep-eato-00113-v0101-en.pdf</a>
<b>WIRING DIAGRAMS</b>	<a href="#">mRB</a> <a href="#">Contact Sequence xPole mRB4/mRB6 3N</a>

	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>MOUNTING STYLE</b>	Tri-stable slide catch - enables removal from existing busbar combination
<b>OPERATING AMBIENT TEMPERATURE - MAX</b>	40 °C
<b>OPERATING AMBIENT TEMPERATURE - MIN</b>	-25 °C
<b>PRODUCT APPLICATION</b>	Switchgear for industrial and advanced commercial applications
<b>PRODUCT RANGE</b>	mRB6
<b>RATED CURRENT</b>	13 A
<b>RATED CURRENT OF PRODUCT RANGE</b>	6 - 25 Ampere
<b>RATED FAULT CURRENTS OF PRODUCT RANGE</b>	30, 100, 300 MilliAmpere
<b>RATED OPERATIONAL</b>	13 A

[eaton-mcb-xpole-mrb4-6-wiring-diagram.eps](#)

<b>CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)</b>	
<b>RATED SWITCHING CAPACITY (IEC/EN 60947- 2)</b>	6 kA
<b>RATED SWITCHING CAPACITY (IEC/EN 61009)</b>	6 kA
<b>TRIPPING CHARACTERISTIC</b>	C
<b>BUILT-IN DEPTH</b>	70 mm
<b>CURRENT LIMITING CLASS</b>	3
<b>RATED SHORT-CIRCUIT BREAKING CAPACITY (EN 60947-2)</b>	0 kA
<b>FRAME</b>	45 mm
<b>TERMINAL PROTECTION</b>	Busbar tag shroud to VBG4
<b>TERMINALS (TOP AND BOTTOM)</b>	Twin-purpose
<b>AMBIENT OPERATING TEMPERATURE - MAX</b>	40 °C
<b>AMBIENT OPERATING TEMPERATURE - MIN</b>	-25 °C
<b>FAULT CURRENT RATING</b>	0.03 A
<b>HEAT DISSIPATION CAPACITY</b>	0 W
<b>HEAT DISSIPATION PER POLE, CURRENT- DEPENDENT</b>	0 W
<b>NUMBER OF POLES (PROTECTED)</b>	4
<b>NUMBER OF POLES (TOTAL)</b>	4
<b>RATED OPERATIONAL VOLTAGE (UE) - MAX</b>	400 V
<b>RATED SHORT-CIRCUIT BREAKING CAPACITY (IEC 60947-2)</b>	0 kA
<b>RATED SWITCHING CAPACITY</b>	6 kA
<b>BACK-UP FUSE</b>	100 Ampere gL
<b>BASIC FUNCTION</b>	Combined RCD/MCB devices
<b>MOUNTING METHOD</b>	DIN rail
<b>CLIMATIC PROOFING</b>	IEC 68-2: 25 °C - 55 °C at 90 % - 95 % humidity

<b>EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT</b>	9.4 W
<b>RATED IMPULSE WITHSTAND VOLTAGE (UIMP)</b>	4 kV
<b>DEGREE OF PROTECTION (BUILT IN)</b>	IP40
<b>DEGREE OF PROTECTION</b>	IP20
<b>OPERATING AMBIENT TEMPERATURE HINT</b>	Keep in mind the derating at temperatures higher than 40 °C
<b>SOLID TERMINAL CAPACITIES</b>	1 - 25 Square Millimeter
<b>STANDARDS</b>	IEC/EN 61009
<b>TRIPPING</b>	Non-delayed
<b>OVERVOLTAGE CATEGORY</b>	III
<b>POLLUTION DEGREE</b>	2
<b>MATERIAL THICKNESS</b>	2 mm
<b>RATED NON-TRIPPING CURRENT</b>	$0.5 \times I_{\Delta n}$
<b>IMPULSE WITHSTAND CURRENT</b>	Partly surge-proof, 250 A
<b>LEAKAGE CURRENT TYPE</b>	A
<b>RELEASE CHARACTERISTIC</b>	C
<b>SENSITIVITY TYPE</b>	Type A, pulse-current sensitive
<b>FREQUENCY RATING</b>	50 Hz
<b>RATED INSULATION VOLTAGE (UI)</b>	500 V
<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>RATED SHORT-CIRCUIT BREAKING CAPACITY (EN 61009)</b>	6 kA
<b>RATED SHORT-CIRCUIT BREAKING CAPACITY (EN 61009-1)</b>	6 kA
<b>VOLTAGE RATING AT AC</b>	230 V / 400 V
<b>NUMBER OF POLES</b>	Three-pole + N
<b>DISCONNECTION CHARACTERISTIC</b>	Undelayed
<b>TYPE</b>	RCBO
<b>APPLICATION</b>	Switchgear for residential and commercial applications
<b>SELECTIVITY CLASS</b>	3

<b>PROJECT NAME:</b>
<b>PROJECT NUMBER:</b>
<b>PREPARED BY:</b>
<b>DATE:</b>



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