

# Specifications



## Eaton 104608

Eaton Moeller series NZM - Molded Case Circuit Breaker. Earth-fault release, 0.03-3A, 4p, right

### General specifications

<b>PRODUCT NAME</b>	Eaton Moeller series NZM - Molded case circuit breaker
<b>CATALOG NUMBER</b>	104608
<b>MODEL CODE</b>	NZM1-4-XFIR
<b>EAN</b>	4015081044184
<b>PRODUCT LENGTH/DEPTH</b>	220 mm
<b>PRODUCT HEIGHT</b>	80 mm
<b>PRODUCT WIDTH</b>	135 mm
<b>PRODUCT WEIGHT</b>	1.659 kg
<b>COMPLIANCES</b>	IEC RoHS conform
<b>CERTIFICATIONS</b>	IEC/EN 60947-2 annex B IEC/EN 60947-2



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## Product specifications

<b>USED WITH</b>	N1-4 Four-pole NZM1-4
<b>TYPE</b>	Accessory Earth-fault releases
<b>SPECIAL FEATURES</b>	Earth-fault release to IEC/EN 60947-2 Not UL/CSA approved Suitable for use in three-phase systems Pulse-current sensitive type A according to core-balance principle For 4 pole NZM1-4 circuit-breakers and N1-4 switch-disconnectors Supply voltage-dependent $U_e = 200 - 415 \text{ V } 50/60 \text{ Hz}$ Control knobs, sealable. Fitted on the right side up to $I_n = 160 \text{ A}$ at $I_{Cu} = 50 \text{ kA}$
<b>APPLICATION</b>	In three-phase systems
<b>VOLTAGE RATING</b>	200 - 415 V AC, min. 80 V AC for detection of fault currents type A/AC (dependent on mains voltage)
<b>FEATURES</b>	Sealable, setting buttons
<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>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

## Resources

<b>BROCHURES</b>	<a href="#">eaton-feerum-the-whole-grain-solution-success-story-en-us.pdf</a>  <a href="#">eaton-digital-nzm-brochure-br013003en-en-us.pdf</a>
<b>CATALOGS</b>	<a href="#">eaton-digital-nzm-catalog-ca013003en-en-us.pdf</a>  <a href="#">eaton-circuit-breaker-release-dimensions.eps</a>  <a href="#">eaton-circuit-breaker-release-nzm-earth-fault-release-3d-drawing.eps</a>  <a href="#">eaton-circuit-breaker-symbol-nzm-earth-fault-release-symbol.eps</a>
<b>ECAD MODEL</b>	<a href="#">ETN.104608.edz</a>
<b>INSTALLATION INSTRUCTIONS</b>	<a href="#">eaton-residual-current-module-mount-right-nzm1-il01219028z.pdf</a>
<b>INSTALLATION VIDEOS</b>	<a href="#">Introduction of the new digital circuit breaker NZM</a>  <a href="#">The new digital NZM Range</a>
<b>MCAD MODEL</b>	<a href="#">DA-CD-nzm1_4_xfi</a>  <a href="#">DA-CS-nzm1_4_xfi</a>
<b>TECHNICAL DATA SHEETS</b>	<a href="#">eaton-nzm-technical-information-sheet</a>

	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>FRAME</b>	45 mm NZM1
<b>FREQUENCY RATING</b>	50 Hz / 60 Hz
<b>MOUNTING METHOD</b>	On the right side
<b>AMBIENT OPERATING TEMPERATURE - MAX</b>	40 °C
<b>AMBIENT OPERATING TEMPERATURE - MIN</b>	-5 °C
<b>CURRENT RATING - MAX</b>	160 A
<b>POWER ON-DELAY TIME - MAX</b>	30 ms
<b>POWER ON-DELAY TIME - MIN</b>	30 ms
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MAX</b>	415 V
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN</b>	200 V
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MAX</b>	415 V
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MIN</b>	200 V
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MAX</b>	0 V

<b>CURRENT RATING - MIN</b>	15 A
<b>DEGREE OF PROTECTION</b>	IP20 (operating component area)
<b>MOUNTING POSITION</b>	Vertical and 90° in all directions
<b>LIFESPAN, MECHANICAL</b>	20000 operations
<b>FAULT CURRENT DETECTION RANGE</b>	50/60 Hz
<b>NUMBER OF POLES</b>	Four-pole
<b>FUNCTIONS</b>	Delay adjustable
<b>TERMINAL CAPACITY (SOLID/FLEXIBLE CONDUCTOR)</b>	As NZM1 standard terminal with ferrules As NZM1 standard terminal without ferrules
<b>SHOCK RESISTANCE</b>	20 g (half-sinusoidal shock 20 ms)
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MIN</b>	0 V
<b>RATED FAULT CURRENT - MAX</b>	3 A
<b>RATED FAULT CURRENT - MIN</b>	0.03 A
<b>RATED OPERATING VOLTAGE (UE) - MAX</b>	415 V
<b>SENSITIVITY TYPE</b>	Pulse-current sensitive as per core-balance principle (type A)

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**PROJECT NAME:**

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**PROJECT NUMBER:**

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**PREPARED BY:**

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**DATE:**

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