

Earth-fault release, 0.03-3A, 4p, right



**Part no. NZM1-4-XFIR  
104608**

<b>General specifications</b>		
Product name		Eaton Moeller series NZM - Molded Case Circuit Breaker
Part no.		NZM1-4-XFIR
EAN		4015081044184
Product Length/Depth		220 millimetre
Product height		80 millimetre
Product width		135 millimetre
Product weight		1.659 kilogram
Compliances		IEC RoHS conform
Certifications		IEC/EN 60947-2 annex B IEC/EN 60947-2
Product Tradename		NZM
Product Type		Molded Case Circuit Breaker
Product Sub Type		None
<b>Delivery program</b>		
Application		In three-phase systems
Type		Accessory Earth-fault releases
Number of poles		Four-pole
Features		Sealable, setting buttons
Special features		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 <sub>e</sub> = 200 – 415 V 50/60 Hz Control knobs, sealable. Fitted on the right side up to I <sub>n</sub> = 160 A at I <sub>Cu</sub> = 50 kA
Frame		45 mm NZM1
Used with		N1-4 Four-pole NZM1-4
<b>Technical Data - Electrical</b>		
Sensitivity type		Pulse-current sensitive as per core-balance principle (type A)
Voltage rating		200 - 415 V AC, min. 80 V AC for detection of fault currents type A/AC (dependent on mains voltage)
Rated operating voltage (U <sub>e</sub> ) - max		415 V
Rated control supply voltage (U <sub>s</sub> ) at AC, 50 Hz - min		200 V
Rated control supply voltage (U <sub>s</sub> ) at AC, 50 Hz - max		415 V
Rated control supply voltage (U <sub>s</sub> ) at AC, 60 Hz - min		200 V
Rated control supply voltage (U <sub>s</sub> ) at AC, 60 Hz - max		415 V
Rated control supply voltage (U <sub>s</sub> ) at DC - min		0 V
Rated control supply voltage (U <sub>s</sub> ) at DC - max		0 V
Current rating - min		15 A
Current rating - max		160 A
Rated fault current - min		0.03 A
Rated fault current - max		3 A
Fault current detection range		50/60 Hz
Frequency rating		50 Hz / 60 Hz
Power on-delay time - min		30 ms
Power on-delay time - max		30 ms
<b>Technical Data - Mechanical</b>		
Mounting Method		On the right side
Mounting position		Vertical and 90° in all directions

Degree of protection		IP20 (operating component area)
Shock resistance		20 g (half-sinusoidal shock 20 ms)
Special features		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 $I_{Cu} = 50 \text{ kA}$
Lifespan, mechanical		20000 operations
<b>Technical Data - Mechanical - Terminals</b>		
Terminal capacity (solid/flexible conductor)		As NZM1 standard terminal with ferrules As NZM1 standard terminal without ferrules
<b>Design verification as per IEC/EN 61439 - technical data</b>		
Ambient operating temperature - min		-5 °C
Ambient operating temperature - max		40 °C
<b>Design verification as per IEC/EN 61439</b>		
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.
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.
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.
<b>Additional information</b>		
Functions		Delay adjustable

## Technical data ETIM 9.0

Low-voltage industrial components (EG000017) / Residual current release for power circuit breaker (EC001021)			
Electric engineering, automation, process control engineering / Low-voltage switch technology / Circuit breaker (LV < 1 kV) / Fault current switch for circuit breakers (ecl@ss13-27-37-04-11 [AKF009018])			
Rated control supply voltage AC 50 Hz	V	200 - 415	
Rated control supply voltage AC 60 Hz	V	200 - 415	
Rated control supply voltage DC	V	0 - 0	
Rated fault current	A	0.03 - 3	
Max. power on-delay time	ms	30	
Delay adjustable		Yes	
Max. rated operation voltage $U_e$	V	415	