

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



**Part no.**                    **NZM1-XFIR**  
**104605**

| <b>General specifications</b>                        |  |
|--|--|
| Product name   | Eaton Moeller series NZM release   |
| Part no.   | NZM1-XFIR  |
| EAN  | 4015081044153  |
| Product Length/Depth                                 | 220 millimetre   |
| Product height                                       | 80 millimetre  |
| Product width  | 105 millimetre   |
| Product weight                                       | 1.6 kilogram   |
| Compliances  | IEC<br>RoHS conform  |
| Certifications                                       | IEC/EN 60947-2<br>IEC/EN 60947-2 annex B   |
| Product Tradename                                    | NZM  |
| Product Type   | Accessories  |
| Product Sub Type                                     | Release  |
| <b>Delivery program</b>                              |  |
| Application  | In three-phase systems   |
| Type   | Accessory Earth-fault releases   |
| Number of poles                                      | Three-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 3 pole NZM1 circuit-breakers and N1 switch-disconnectors Supply voltage-dependent Ue = 200 – 415 V 50/60 Hz Control knobs, sealable. Fitted on the right side up to In = 160 A at ICu = 50 kA |
| Frame  | 45 mm<br>NZM1  |
| Used with  | N(S)1<br>Three-pole<br>NZM1  |
| <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 (Ue) - max                   | 415 V  |
| Rated control supply voltage (Us) at AC, 50 Hz - min | 200 V  |
| Rated control supply voltage (Us) at AC, 50 Hz - max | 415 V  |
| Rated control supply voltage (Us) at AC, 60 Hz - min | 200 V  |
| Rated control supply voltage (Us) at AC, 60 Hz - max | 415 V  |
| Rated control supply voltage (Us) at DC - min        | 0 V  |
| Rated control supply voltage (Us) 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   |

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| 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 3 pole NZM1 circuit-breakers and N1 switch-disconnectors Supply voltage-dependent Ue = 200 – 415 V 50/60 Hz Control knobs, sealable. Fitted on the right side up to In = 160 A at ICu = 50 kA |
| Lifespan, mechanical   |  | 20000 operations   |
| <b>Technical Data - Mechanical - Terminals</b>                                   |  |  |
| Terminal capacity (solid/flexible conductor)                                     |  | As NZM1 standard terminal with ferrules<br>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

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| 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 Ue  | V  | 415       |  |