# Eaton 112013

Eaton Moeller series Power Defense - Molded Case Circuit Breaker. Switch-disconnector, 3 p, 1000A, frame size 4

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| **PRODUCT NAME** | Eaton Moeller series Power Defense molded case switch-disconnector |
| **CATALOG NUMBER** | 112013 |
| **PRODUCT LENGTH/DEPTH** | 401 mm |
| **PRODUCT HEIGHT** | 207 mm |
| **PRODUCT WIDTH** | 210 mm |
| **PRODUCT WEIGHT** | 17 kg |
| **COMPLIANCES** | RoHS conform |
| **CERTIFICATIONS** | IEC |

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| **AMPERAGE RATING** | 1000 A |
| **VOLTAGE RATING** | 690 V - 690 V |
| **CIRCUIT BREAKER FRAME TYPE** | LN4 |
| **FEATURES** | Version as emergency stop installation<br>Motor drive optional<br>Version as maintenance-/service switch<br>Version as main switch |
| **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. |
| **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** | Does not apply, since the |

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| □□ | eaton-circuit-breaker-nzm-mccb-dimensions-022.eps<br><br>eaton-circuit-breaker-switch-nzm-mccb-3d-drawing-003.eps |

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| **IMPACT** | 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. |
| **POLLUTION DEGREE** | 3 |
| **MOUNTING METHOD** | Fixed<br>Built-in device fixed built-in technique<br>Ground mounting<br>Distribution board installation<br>Intermediate mounting |
| **EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT** | 111 W |
| **RATED SHORT-TIME WITHSTAND CURRENT (ICW)** | 25 kA |
| **ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT** | Bolt connection |
| **NUMBER OF AUXILIARY CONTACTS (CHANGE-OVER CONTACTS)** | 0 |
| **NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)** | 0 |
| **NUMBER OF AUXILIARY** | 0 |

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| **CONTACTS (NORMALLY OPEN CONTACTS)** | |
| **RATED INSULATION VOLTAGE (UI)** | 1000 V |
| **RATED OPERATING FREQUENCY** | 50 Hz |
| **RATED OPERATING POWER AT AC-23, 400 V** | 560 kW |
| **RATED OPERATING POWER AT AC-3, 400 V** | 0 kW |
| **SWITCH POSITIONS** | I, +, 0 |
| **LIFESPAN, MECHANICAL** | 10000 operations |
| **OVERVOLTAGE CATEGORY** | III |
| **RATED OPERATIONAL CURRENT** | 1600 A (415 V AC-1, making and breaking capacity)<br>1600 A (690 V AC-22/23A, making and breaking capacity)<br>1600 A (415 V AC-22/23A, making and breaking capacity)<br>1600 A (690 V AC-1, making and breaking capacity) |
| **DEGREE OF PROTECTION (IP), FRONT SIDE** | IP20 |
| **NUMBER OF POLES** | Three-pole |
| **TERMINAL CAPACITY (COPPER STRIP)** | 10 segments of 50 mm x 1 mm (2x) at 1-hole module plate<br>Max. 10 segments of 32 mm x 1 mm (2x) at flat conductor terminal<br>10 segments of 80 mm x 1 mm (2x) at rear-side width extension<br>Max. 10 segments of 50 mm x 1 mm (2x) at rear-side connection (punched)<br><br>Min. 10 segments of 50 mm x 1 mm (2x) at rear-side connection (punched)<br><br>Min. 6 segments of 16 mm x 0.8 mm at flat conductor terminal |
| **HANDLE COLOR** | Gray |
| **LIFESPAN, ELECTRICAL** | 3000 operations at 415 V AC-1<br>2000 operations at 690 V AC-1 |

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| | 1000 operations at 690 V AC-3<br>2000 operations at 400 V AC-3<br>2000 operations at 415 V AC-3<br>3000 operations at 400 V AC-1 |
| **FUNCTIONS** | Voltage release optional<br>Disconnectors/main switches<br>Interlockable |
| **TYPE** | Switch-disconnector |
| **SPECIAL FEATURES** | Main switch characteristics including positive drive to IEC/EN 60204 and VDE 0113. Isolating characteristics to IEC/EN 60947-3 and VDE 0660. Busbar tag shroud to VDE 0160 Part 100. Rated current = rated uninterrupted current: 1000 A |
| **APPLICATION** | Use in unearthed supply systems at 525 V |
| **RATED CONDITIONAL SHORT-CIRCUIT CURRENT (IQ)** | 100 kA |
| **RATED CONDITIONAL SHORT-CIRCUIT CURRENT WITH BACK-UP FUSE** | 100 kA at 400/415 V<br>N4-630...1600: 2 x 800 AgGgL<br>80 kA at 690 V |
| **RATED CONDITIONAL SHORT-CIRCUIT CURRENT WITH DOWNSTREAM FUSE** | 100 kA at 400/415 V<br>80 kA at 690 V<br>N4-630...1600: 2 x 800 AgGgL |
| **SHORT-CIRCUIT TOTAL BREAKTIME** | < 10 ms |
| **RATED OPERATING VOLTAGE (UE) AT AC - MAX** | 400 V |
| **RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)** | 1000 A |
| **RATED PERMANENT CURRENT AT AC-21, 400 V** | 0 A |
| **RATED SHORT-TIME WITHSTAND CURRENT (T = 0.3 S)** | 25 kA |
| **RATED SHORT-TIME WITHSTAND CURRENT (T = 1 S)** | 25 kA |
| **SWITCHING POWER AT** | 0 kW |

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| **400 V** | |
| **HANDLE TYPE** | Rocker lever |
| **NUMBER OF OPERATIONS PER HOUR - MAX** | 60 |
| **RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 690 V, 50/60 HZ** | 53 kA |
| **RATED IMPULSE WITHSTAND VOLTAGE (UIMP) AT AUXILIARY CONTACTS** | 6000 V |
| **RATED IMPULSE WITHSTAND VOLTAGE (UIMP) AT MAIN CONTACTS** | 8000 V |
| **STANDARD TERMINALS** | Screw terminal |
| **TERMINAL CAPACITY (CONTROL CABLE)** | 0.75 mm² - 1.5 mm² (2x)<br>0.75 mm² - 2.5 mm² (1x) |
| **SHORT-CIRCUIT PROTECTIVE DEVICE FUSES - MAX** | 1600 A gL |
| **TERMINAL CAPACITY (COPPER BUSBAR)** | Max. 80 mm x 10 mm (2x) at rear-side width extension<br>Max. 80 mm x 10 mm (2x) direct at switch rear-side connection<br>50 mm x 10 mm (2x) at rear-side 2-hole module plate<br>Min. 60 mm x 10 mm at rear-side width extension<br>Min. 25 mm x 5 mm at rear-side 1-hole module plate<br>Min. 25 mm x 5 mm direct at switch rear-side connection<br>Max. 50 mm x 10 mm (2x) at rear-side 1-hole module plate<br>Max. 50 mm x 10 mm (2x) direct at switch rear-side connection<br>M10 at rear-side screw connection |
| **TERMINAL CAPACITY (COPPER SOLID CONDUCTOR/CABLE)** | 35 mm² - 185 mm² (4x) at rear-side 2-hole module plate<br>95 mm² - 185 mm² (2x) at rear-side 2-hole module plate<br>95 mm² - 240 mm² (6x) at rear-side width extension<br>300 mm² (4x) at rear-side |

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| | width extension<br>120 mm² - 300 mm² (1x) at rear-side 1-hole module plate<br>95 mm² - 300 mm² (2x) at rear-side 1-hole module plate<br>50 mm² - 240 mm² (4x) at 4-hole tunnel terminal |
| **TERMINAL CAPACITY (COPPER STRANDED CONDUCTOR/CABLE)** | 120 mm² - 185 mm² (1x) direct at switch rear-side connection<br>50 mm² - 185 mm² (4x) direct at switch rear-side connection |
| **TERMINAL CAPACITY (ALUMINUM STRANDED CONDUCTOR/CABLE)** | 50 mm² - 240 mm² (4x) at 4-hole tunnel terminal |

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| **PROJECT NAME:** |
| **PROJECT NUMBER:** |
| **PREPARED BY:** |
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