

# Specyfikacje



## Eaton 112004

Eaton Moeller series Power Defense - Molded Case Circuit Breaker. Switch-disconnector, 3 p, 250A, frame size 2

### General specifications

<b>PRODUCT NAME</b>	Eaton Moeller series Power Defense molded case switch-disconnector
<b>CATALOG NUMBER</b>	112004
<b>EAN</b>	4015081115525
<b>PRODUCT LENGTH/DEPTH</b>	142 mm
<b>PRODUCT HEIGHT</b>	185 mm
<b>PRODUCT WIDTH</b>	105 mm
<b>PRODUCT WEIGHT</b>	2.15 kg
<b>COMPLIANCES</b>	RoHS conform
<b>CERTIFICATIONS</b>	IEC
<b>MODEL CODE</b>	LN2-250-I



Powering Business Worldwide

## Delivery program

<b>APPLICATION</b>	Use in unearthed supply systems at 690 V
<b>TYPE</b>	Switch-disconnector
<b>CIRCUIT BREAKER FRAME TYPE</b>	LN2
<b>NUMBER OF POLES</b>	Three-pole
<b>AMPERAGE RATING</b>	250 A
<b>FEATURES</b>	Version as emergency stop installation Version as main switch Motor drive optional Version as maintenance-/service switch
<b>SPECIAL FEATURES</b>	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: 250 A

## Technical Data - Electrical

<b>VOLTAGE RATING</b>	690 V - 690 V
<b>RATED OPERATING VOLTAGE (UE) AT AC - MAX</b>	400 V
<b>RATED INSULATION VOLTAGE (UI)</b>	690 V
<b>RATED IMPULSE WITHSTAND VOLTAGE (UIMP) AT AUXILIARY CONTACTS</b>	6000 V
<b>RATED IMPULSE WITHSTAND VOLTAGE (UIMP) AT MAIN CONTACTS</b>	8000 V
<b>RATED OPERATIONAL CURRENT</b>	250 A (690 V AC-22/23A, making and breaking capacity) 250 A (415 V AC-1, making and breaking capacity) 250 A (690 V AC-1, making and breaking capacity) 250 A (415 V AC-22/23A, making and breaking capacity)
<b>RATED PERMANENT CURRENT AT AC-21, 400 V</b>	0 A
<b>RATED CONDITIONAL SHORT-CIRCUIT CURRENT WITH BACK-UP FUSE</b>	100 kA at 400/415 V PN2(N2)-160...250: 250 AgGgL 80 kA at 690 V
<b>RATED CONDITIONAL SHORT-CIRCUIT CURRENT WITH DOWNSTREAM FUSE</b>	80 kA at 690 V PN2(N2)-160...250: 250 AgGgL 100 kA at 400/415 V
<b>RATED SHORT-TIME WITHSTAND CURRENT (ICW)</b>	3.5 kA
<b>RATED SHORT-TIME WITHSTAND CURRENT (T = 0.3 S)</b>	3.5 kA
<b>RATED SHORT-TIME WITHSTAND CURRENT (T = 1 S)</b>	3.5 kA
<b>AMPERAGE RATING</b>	250 A
<b>RATED OPERATING FREQUENCY</b>	50 Hz
<b>RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 690 V, 50/60 HZ</b>	5.5 kA
<b>RATED OPERATING POWER AT AC-3, 400 V</b>	0 kW

<b>RATED OPERATING POWER AT AC-23, 400 V</b>	132 kW
<b>SWITCHING POWER AT 400 V</b>	0 kW
<b>SHORT-CIRCUIT TOTAL BREAKTIME</b>	< 10 ms
<b>SHORT-CIRCUIT PROTECTIVE DEVICE FUSES - MAX</b>	250 A gL
<b>ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT</b>	Screw connection
<b>NUMBER OF OPERATIONS PER HOUR - MAX</b>	120
<b>HANDLE TYPE</b>	Rocker lever
<b>OVERVOLTAGE CATEGORY</b>	III
<b>POLLUTION DEGREE</b>	3
<b>LIFESPAN, ELECTRICAL</b>	5000 operations at 690 V AC-3 10000 operations at 400 V AC-1 7500 operations at 690 V AC-1 10000 operations at 415 V AC-1 7500 operations at 400 V AC-3 7500 operations at 415 V AC-3

## Technical Data - Mechanical

<b>MOUNTING METHOD</b>	Built-in device fixed built-in technique Ground mounting Fixed Distribution board installation Intermediate mounting
<b>MOUNTING METHOD</b>	Built-in device fixed built-in technique Ground mounting Fixed Distribution board installation Intermediate mounting
<b>DEGREE OF PROTECTION (IP), FRONT SIDE</b>	IP20
<b>NUMBER OF AUXILIARY CONTACTS (CHANGE-OVER CONTACTS)</b>	0
<b>NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)</b>	0
<b>NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)</b>	0
<b>HANDLE COLOR</b>	Gray
<b>SWITCH POSITIONS</b>	I, +, 0
<b>SPECIAL FEATURES</b>	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: 250 A
<b>LIFESPAN, MECHANICAL</b>	20000 operations

## Technical Data - Mechanical - Terminals

<b>STANDARD TERMINALS</b>	Screw terminal
<b>TERMINAL CAPACITY (CONTROL CABLE)</b>	0.75 mm <sup>2</sup> - 1.5 mm <sup>2</sup> (2x) 0.75 mm <sup>2</sup> - 2.5 mm <sup>2</sup> (1x)
<b>TERMINAL CAPACITY (ALUMINUM SOLID CONDUCTOR/CABLE)</b>	16 mm <sup>2</sup> (1x) at tunnel terminal
<b>TERMINAL CAPACITY (ALUMINUM STRANDED CONDUCTOR/CABLE)</b>	25 mm <sup>2</sup> - 185 mm <sup>2</sup> (1x) at tunnel terminal
<b>TERMINAL CAPACITY (COPPER BUSBAR)</b>	Min. 16 mm x 5 mm direct at switch rear-side connection M8 at rear-side screw connection Max. 20 mm x 5 mm direct at switch rear-side connection
<b>TERMINAL CAPACITY (COPPER SOLID CONDUCTOR/CABLE)</b>	4 mm <sup>2</sup> - 16 mm <sup>2</sup> (2x) direct at switch rear-side connection 16 mm <sup>2</sup> - 185 mm <sup>2</sup> (1x) at tunnel terminal 4 mm <sup>2</sup> - 16 mm <sup>2</sup> (1x) at box terminal 4 mm <sup>2</sup> - 16 mm <sup>2</sup> (2x) at box terminal 4 mm <sup>2</sup> - 16 mm <sup>2</sup> (1x) direct at switch rear-side connection
<b>TERMINAL CAPACITY (COPPER STRANDED CONDUCTOR/CABLE)</b>	25 mm <sup>2</sup> - 185 mm <sup>2</sup> (1x) direct at switch rear-side connection 25 mm <sup>2</sup> - 70 mm <sup>2</sup> (2x) direct at switch rear-side connection 25 mm <sup>2</sup> - 185 mm <sup>2</sup> (1x) at box terminal 25 mm <sup>2</sup> - 185 mm <sup>2</sup> (1x) at tunnel terminal 25 mm <sup>2</sup> - 70 mm <sup>2</sup> (2x) at box terminal
<b>TERMINAL CAPACITY (COPPER STRIP)</b>	Min. 2 segments of 16 mm x 0.8 mm at rear-side connection (punched) Max. 10 segments of 16 mm x 0.8 mm at box terminal Max. 10 segments of 16 mm x 0.8 mm at rear-side connection (punched) Min. 2 segments of 9 mm x 0.8 mm at box terminal

## Design verification as per IEC/EN 61439 - technical data

**RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)** 250 A

**EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT** 48 W

## Design verification as per IEC/EN 61439

<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 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>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.

## Additional information

### FUNCTIONS

Disconnectors/main switches  
Interlockable  
Voltage release optional

## Do pobrania

### DEKLARACJE ZGODNOŚCI

[eaton-molded-case-switch-disconnector-declaration-of-conformity-eu250138en.pdf](#)

### INSTRUKCJE MONTAŻU

[eaton-circuit-breaker-basic-unit-lzm2-il01206012z.pdf](#)

### MODELE MCAD

[DA-CD-nzm2\\_3p](#)  
[DA-CS-nzm2\\_3p](#)

### RYSUNKI

[eaton-circuit-breaker-nzm-mccb-dimensions-019.eps](#)

NAZWA PROJEKTU:

NUMER PROJEKTU:

PRZYGOTOWANE PRZEZ:

DATA:



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