

Specificații



Eaton 116437

Eaton Moeller series Power Defense - Molded Case Circuit Breaker. Circuit-breaker LZM, 4 p, 250A, C2-4-A250-I

General specifications

PRODUCT NAME	Eaton Moeller series Power Defense molded case circuit-breaker
CATALOG NUMBER	116437
EAN	4015081161799
PRODUCT LENGTH/DEPTH	142 mm
PRODUCT HEIGHT	185 mm
PRODUCT WIDTH	140 mm
PRODUCT WEIGHT	3.5 kg
COMPLIANCES	RoHS conform
CERTIFICATIONS	IEC/EN 60947 VDE 0660 IEC
MODEL CODE	LZMC2-4-A250-I



Powering Business Worldwide

Delivery program

APPLICATION	Use in unearthed supply systems at 690 V
TYPE	Circuit breaker
CIRCUIT BREAKER FRAME TYPE	LZM2
NUMBER OF POLES	Four-pole
AMPERAGE RATING	250 A
RELEASE SYSTEM	Thermomagnetic release
FEATURES	Motor drive optional Protection unit

SPECIAL FEATURES

- Maximum back-up fuse, if the expected short-circuit currents at the installation location exceed the switching capacity of the circuit breaker (Rated short-circuit breaking capacity I_{cn})
- Rated current = rated uninterrupted current: 250 A
- Set value in neutral conductor is synchronous with set value I_r of main pole.

Technical Data - Electrical

VOLTAGE RATING	690 V - 690 V
RATED IMPULSE WITHSTAND VOLTAGE (UIMP) AT AUXILIARY CONTACTS	6000 V
RATED IMPULSE WITHSTAND VOLTAGE (UIMP) AT MAIN CONTACTS	8000 V
CURRENT RATING OF NEUTRAL CONDUCTOR	200% of phase conductor
RATED OPERATIONAL CURRENT	300 A (380/400 V AC-1, making and breaking capacity) 250 A (660-690 V AC-3, making and breaking capacity) 250 A (690 V AC-1, making and breaking capacity) 250 A (415 V AC-3, making and breaking capacity) 300 A (415 V AC-1, making and breaking capacity)
AMPERAGE RATING	250 A
INSTANTANEOUS CURRENT SETTING (II) - MIN	1500 A
INSTANTANEOUS CURRENT SETTING (II) - MAX	2500 A
OVERLOAD CURRENT SETTING (IR)	200 A - 250 A
OVERLOAD CURRENT SETTING (IR) - MIN	200 A
OVERLOAD CURRENT SETTING (IR) - MAX	250 A
SHORT DELAY CURRENT SETTING (ISD) - MIN	0 A
SHORT DELAY CURRENT SETTING (ISD) - MAX	0 A
SHORT-CIRCUIT RELEASE NON-DELAYED SETTING - MIN	1500 A
SHORT-CIRCUIT RELEASE NON-DELAYED SETTING - MAX	2500 A
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 230 V, 50/60 HZ	55 kA
RATED SHORT-CIRCUIT	36 kA

BREAKING CAPACITY ICS (IEC/EN 60947) AT 400/415 V, 50/60 HZ	
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 440 V, 50/60 HZ	22.5 kA
RATED SHORT-CIRCUIT BREAKING CAPACITY ICS (IEC/EN 60947) AT 525 V, 50/60 HZ	6 kA
RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 240 V, 50/60 HZ	121 kA
RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 400/415 V, 50/60 HZ	76 kA
RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 440 V, 50/60 HZ	63 kA
RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 525 V, 50/60 HZ	24 kA
RATED SHORT-CIRCUIT MAKING CAPACITY ICM AT 690 V, 50/60 HZ	14 kA
SHORT-CIRCUIT TOTAL BREAKTIME	< 10 ms
ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT	Screw connection
ISOLATION	500 V AC (between auxiliary contacts and main contacts) 300 V AC (between the auxiliary contacts)
NUMBER OF OPERATIONS PER HOUR - MAX	120
HANDLE TYPE	Rocker lever
UTILIZATION CATEGORY	A (IEC/EN 60947-2)
OVERVOLTAGE CATEGORY	III
POLLUTION DEGREE	3
LIFESPAN, ELECTRICAL	10000 operations at 400 V AC-1 7500 operations at 690 V AC-1 5000 operations at 690 V AC-3 6500 operations at 415 V AC-3 10000 operations at 415 V

AC-1

**DIRECTION OF
INCOMING SUPPLY**

As required

Technical Data - Mechanical

MOUNTING METHOD	DIN rail (top hat rail) mounting optional Built-in device fixed built-in technique Fixed
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DEGREE OF PROTECTION	In the area of the HMI devices: IP20 (basic protection type) IP20
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DEGREE OF PROTECTION (IP), FRONT SIDE	IP40 (with insulating surround) IP66 (with door coupling rotary handle)
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DEGREE OF PROTECTION (TERMINATIONS)	IP00 (terminations, phase isolator and band terminal) IP10 (tunnel terminal)
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PROTECTION AGAINST DIRECT CONTACT	Finger and back-of-hand proof to DIN EN 50274/VDE 0106 part 110
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SHOCK RESISTANCE	20 g (half-sinusoidal shock 20 ms)
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NUMBER OF AUXILIARY CONTACTS (CHANGE-OVER CONTACTS)	0
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NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)	0
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NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)	0
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POSITION OF CONNECTION FOR MAIN CURRENT CIRCUIT	Front side
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CLIMATIC PROOFING	Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
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SPECIAL FEATURES	<ul style="list-style-type: none"> Maximum back-up fuse, if the expected short-circuit currents at the installation location exceed the switching capacity of the circuit
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Technical Data - Mechanical - Terminals

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

- Rated current = rated uninterrupted current: 250 A
- Set value in neutral conductor is synchronous with set value Ir of main pole.

LIFESPAN, MECHANICAL 20000 operations

Design verification as per IEC/EN 61439 - technical data

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

EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT 58.13 W

Design verification as per IEC/EN 61439

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.

Additional information

FUNCTIONS	System and cable protection
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Resurse

	eaton-circuit-breaker-nzm-mccb-characteristic-curve-050.eps
CHARACTERISTIC CURVE	eaton-circuit-breaker-characteristic-power-defense-mccb-characteristic-curve-035.eps
	eaton-circuit-breaker-characteristic-power-defense-mccb-characteristic-curve-031.eps
DESENE	eaton-circuit-breaker-nzm-mccb-dimensions-035.eps

DENUMIREA PROIECTULUI:

NUMĂRUL PROIECTULUI:

PREGĂTIT DE:

DATA:



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