## Circuit-breaker, 3p, 125A





General specifications	
Product name	Eaton Moeller series NZM molded case circuit breaker thermo-magnetic
Part no.	NZMH2-A125
EAN	4015082591007
Product Length/Depth	149 millimetre
Product height	184 millimetre
Product width	105 millimetre
Product weight	2.357 kilogram
Compliances	RoHS conform
Certifications	IEC
	IEC/EN 60947
Product Tradename	NZM
Product Type	Molded case circuit breaker
Product Sub Type	Thermo-magnetic
Delivery program	
Application	Use in unearthed supply systems at 690 V
Туре	Circuit breaker
Circuit breaker frame type	NZM2
Number of poles	Three-pole
Amperage Rating	125 A
Release system	Thermomagnetic release
Features	Protection unit Motor drive optional
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 Icn) Rated current = rated uninterrupted current: 125 A
Technical Data - Electrical	
Voltage rating	690 V - 690 V
Voltage rating (DC)	750 V DC
Rated insulation voltage (Ui)	1000 V AC
Rated impulse withstand voltage (Uimp) at auxiliary contacts	6000 V
Rated impulse withstand voltage (Uimp) at main contacts	8000 V
Rated short-time withstand current (t = 0.3 s)	1.9 kA
Rated short-time withstand current (t = 1 s)	1.9 kA
Instantaneous current setting (li) - min	750 A
Instantaneous current setting (li) - max	1250 A
Overload current setting (Ir) - min	100 A
Overload current setting (Ir) - max	125 A
Short delay current setting (Isd) - min	0 A
Short delay current setting (Isd) - max	0 A
Short-circuit release non-delayed setting - min	750 A
Short-circuit release non-delayed setting - max	1250 A
Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 230 V, 50/60 Hz	150 kA
Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 400/415 V, 50/60 Hz	150 kA
Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 440 V, 50/60 Hz	130 kA
Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 525 V, 50/60 Hz	37.5 kA
Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 690 V, 50/60 Hz	5 kA
Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 500 V DC	15 kA
Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 750 V DC	15 kA

Rated short-circuit making capacity Icm at 240 V, 50/60 Hz	330 kA
Rated short-circuit making capacity Icm at 400/415 V, 50/60 Hz	330 kA
Rated short-circuit making capacity Icm at 440 V, 50/60 Hz	286 kA
Rated short-circuit making capacity lcm at 525 V, 50/60 Hz	105 kA
Rated short-circuit making capacity Icm at 690 V, 50/60 Hz	40 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	7500 operations at 750 V DC-1 6500 operations at 400 V AC-3 10000 operations at 415 V AC-1 7500 operations at 690 V AC-1 6500 operations at 650 V AC-3 5000 operations at 690 V AC-3 7500 operations at 500 V DC-1 10000 operations at 400 V AC-1 3000 operations at 500 V DC-3 3000 operations at 750 V DC-3
Direction of incoming supply	As required
Technical Data - Mechanical	
Mounting Method	DIN rail (top hat rail) mounting optional
	Fixed Built-in device fixed built-in technique
Degree of protection	IP20 (basic degree of protection, in the operating controls area) IP20
Degree of protection (IP), front side	IP66 (with door coupling rotary handle) IP40 (with insulating surround)
Degree of protection (terminations)	IP00 (terminations, phase isolator and strip terminal) IP10 (tunnel terminal)
Protection against direct contact	Finger and back-of-hand proof to DIN EN 50274/VDE 0106 part 110
Shock resistance	20 g (half-sinusoidal shock 20 ms)
Number of auxiliary contacts (change-over contacts)	0
Number of auxiliary contacts (normally closed contacts)	0
Number of auxiliary contacts (normally open contacts)	0
Position of connection for main current circuit	Front side
Climatic proofing	Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
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 Icn)  Rated current = rated uninterrupted current: 125 A
Lifespan, mechanical	20000 operations
Technical Data - Mechanical - Terminals	
Standard terminals	Screw terminal
Optional terminals	Box terminal. Connection on rear. Tunnel terminal
Terminal capacity (control cable)	0.75 mm <sup>2</sup> - 2.5 mm <sup>2</sup> (1x) 0.75 mm <sup>2</sup> - 1.5 mm <sup>2</sup> (2x)
Terminal capacity (aluminum solid conductor/cable)	10 mm <sup>2</sup> - 16 mm <sup>2</sup> (1x) direct at switch rear-side connection 10 mm <sup>2</sup> - 16 mm <sup>2</sup> (2x) direct at switch rear-side connection 16 mm <sup>2</sup> (1x) at tunnel terminal
Terminal capacity (aluminum stranded conductor/cable)	$25~\text{mm}^2$ - $50~\text{mm}^2$ (1x) direct at switch rear-side connection $25~\text{mm}^2$ - $50~\text{mm}^2$ (2x) direct at switch rear-side connection $25~\text{mm}^2$ - $185~\text{mm}^2$ (1x) at tunnel terminal
Terminal capacity (copper busbar)	Max. 24 mm x 8 mm direct at switch rear-side connection M8 at rear-side screw connection Min. 16 mm x 5 mm direct at switch rear-side connection
Terminal capacity (copper solid conductor/cable)	10 mm <sup>2</sup> - 16 mm <sup>2</sup> (1x) at box terminal 10 mm <sup>2</sup> - 16 mm <sup>2</sup> (1x) direct at switch rear-side connection 6 mm <sup>2</sup> - 16 mm <sup>2</sup> (2x) at box terminal 16 mm <sup>2</sup> (1x) at tunnel terminal 6 mm <sup>2</sup> - 16 mm <sup>2</sup> (2x) direct at switch rear-side connection
Terminal capacity (copper stranded conductor/cable)	25 mm <sup>2</sup> - 70 mm <sup>2</sup> (2x) at box terminal

Additional information	
10.13 Mechanical function	The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.
10.12 Electromagnetic compatibility	Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.11 Short-circuit rating	Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.10 Temperature rise	The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.
10.9.4 Testing of enclosures made of insulating material	Is the panel builder's responsibility.
10.9.3 Impulse withstand voltage	Is the panel builder's responsibility.
10.9.2 Power-frequency electric strength	Is the panel builder's responsibility.
10.8 Connections for external conductors	Is the panel builder's responsibility.
10.7 Internal electrical circuits and connections	Is the panel builder's responsibility.
10.6 Incorporation of switching devices and components	Does not apply, since the entire switchgear needs to be evaluated.
10.5 Protection against electric shock	Does not apply, since the entire switchgear needs to be evaluated.
10.4 Clearances and creepage distances	Meets the product standard's requirements.
10.3 Degree of protection of assemblies	Does not apply, since the entire switchgear needs to be evaluated.
10.2.7 Inscriptions	Meets the product standard's requirements.
10.2.6 Mechanical impact	Does not apply, since the entire switchgear needs to be evaluated.
10.2.5 Lifting	Does not apply, since the entire switchgear needs to be evaluated.
10.2.4 Resistance to ultra-violet (UV) radiation	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.
10.2.3.2 Verification of resistance of insulating materials to normal heat	Meets the product standard's requirements.
10.2.3.1 Verification of thermal stability of enclosures	Meets the product standard's requirements.
10.2.2 Corrosion resistance	Meets the product standard's requirements.
Design verification as per IEC/EN 61439	
Ambient storage temperature - max	70 °C
Ambient storage temperature - min	40 °C
Ambient operating temperature - max	70 °C
Ambient operating temperature - min	-25 °C
Equipment heat dissipation, current-dependent	27.61 W
Rated operational current for specified heat dissipation (In)	125 A
Design verification as per IEC/EN 61439 - technical data	
Terminal capacity (copper strip)	Max. 10 segments of 9 mm x 0.8 mm at box terminal  Max. 10 segments of 16 mm x 0.8 mm at box terminal  Max. 8 segments of 24 mm x 1 mm (2x) at box terminal  Min. 2 segements of 16 mm x 0.8 mm at rear-side connection (punched)  Max. 10 segments of 24 mm x 0.8 mm at rear-side connection (punched)
Terminal capacity (copper strip)	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 1-hole tunnel terminal 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) direct at switch rear-side connection  Min. 2 segments of 9 mm x 0.8 mm at box terminal

## **Technical data ETIM 9.0**

Functions

Low-voltage industrial components (EG000017) / Power circuit-breaker for trafo/generator/installation protection (EC000228)

Electric engineering, automation, process control engineering / Low-voltage switch technology / Circuit breaker (LV < 1 kV) / Circuit breaker for power transformer, generator and system protection (eci@ss13-27-37-04-09 [AJZ716018])

System and cable protection

Α	125
V	690 - 690
kA	150
Α	100 - 125
Α	0 - 0
Α	750 - 1250
W	27.6
	Built-in device fixed built-in technique
	No
	Screw connection
	No
	V kA A A

DIN rail (top hat rail) mounting optional	Yes
Number of auxiliary contacts as normally closed contact	0
Number of auxiliary contacts as normally open contact	0
Number of auxiliary contacts as change-over contact	0
With switched-off indicator	No
With integrated under voltage release	No
Number of poles	3
Position of connection for main current circuit	Front side
Type of control element	Rocker lever
Complete device with protection unit	Yes
Motor drive integrated	No
Motor drive optional	Yes
Degree of protection (IP)	IP20