Circuit-breaker, 3p, 250A, 1000 V

Part no. NZMH3-AE250-S1

119361

EL Number 4363147

(Norway)



(Norway)	
General specifications	
Product name	Eaton Moeller series NZM molded case circuit breaker electronic
Part no.	NZMH3-AE250-S1
EAN	4015081174973
Product Length/Depth	166 millimetre
Product height	275 millimetre
Product width	140 millimetre
Product weight	6.34 kilogram
Compliances	RoHS conform
Certifications	IEC
Product Tradename	NZM
Product Type	Molded case circuit breaker
Product Sub Type	Electronic
Delivery program	
Туре	Circuit breaker
Circuit breaker frame type	NZM3
Number of poles	Three-pole
Amperage Rating	250 A
Release system	Electronic release
Features	Protection unit
	Motor drive optional
Special features	Lifespan, mechanical: of which max. 50 % trip by shunt/undervoltage release R.m.s. value measurement and "thermal memory" NZMS1 terminal type: NZMXKSA cover required Rated current = rated uninterrupted current: 250 A Terminal capacity hint: Up to 240 mm² can be connected depending on the cable manufacturer.
Technical Data - Electrical	
Voltage rating	1000 V - 1000 V
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)	3.3 kA
Rated short-time withstand current (t = 1 s)	3.3 kA
Instantaneous current setting (li) - min	500 A
Instantaneous current setting (li) - max	2750 A
Overload current setting (Ir) - min	125 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	500 A
Short-circuit release non-delayed setting - max	2750 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	33 kA
Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 690 V, 50/60 Hz	9 kA
Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 1000 V, 50/60 Hz	10 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 Icm at 525 V, 50/60 Hz	143 kA
Rated short-circuit making capacity Icm at 690 V, 50/60 Hz	74 kA
Rated short-circuit making capacity Icm at 1000 V, 50/60 Hz	17 kA
Electrical connection type of main circuit	Screw connection
Number of operations per hour - max	60
Handle type	Rocker lever
Utilization category	A
Overvoltage category	III
Pollution degree	3
Lifespan, electrical	1000 operations at 1000 V AC-1
Fechnical Data - Mechanical	
Mounting Method	Built-in device fixed built-in technique Fixed
Degree of protection	IP20
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
Special features	Lifespan, mechanical: of which max. 50 % trip by shunt/undervoltage release R.m.s. value measurement and "thermal memory" NZMS1 terminal type: NZMXKSA cover required Rated current = rated uninterrupted current: 250 A Terminal capacity hint: Up to 240 mm² can be connected depending on the cable manufacturer.
Lifespan, mechanical	15000 operations
Fechnical Data - Mechanical - Terminals	
Standard terminals	Screw terminal
Terminal capacity (control cable)	0.75 mm ² - 1.5 mm ² (2x) 0.75 mm ² - 2.5 mm ² (1x)
Terminal capacity (aluminum solid conductor/cable)	16 mm² (1x) at tunnel terminal
Terminal capacity (aluminum stranded conductor/cable)	50 mm^2 - 240 mm^2 (1x) at 2-hole tunnel terminal 50 mm^2 - 240 mm^2 (2x) at 2-hole tunnel terminal 25 mm^2 - 185 mm^2 (1x) at tunnel terminal
Terminal capacity (copper busbar)	Min. 20 mm x 5 mm direct at switch rear-side connection Max. 30 mm x 10 mm + 30 mm x 5 mm direct at switch rear-side connection M10 at rear-side screw connection Max. 10 mm x 50 mm (2x) at rear-side width extension
Terminal capacity (copper solid conductor/cable)	16 mm² (2x) at box terminal 10 mm² - 16 mm² (2x) direct at switch rear-side connection 16 mm² (1x) direct at switch rear-side connection
Terminal capacity (copper stranded conductor/cable)	25 mm 2 - 120 mm 2 (1x) direct at switch rear-side connection 25 mm 2 - 120 mm 2 (2x) at box terminal 25 mm 2 - 120 mm 2 (2x) direct at switch rear-side connection 35 mm 2 - 240 mm 2 (1x) at box terminal 25 mm 2 - 185 mm 2 (1x) at tunnel terminal
Terminal capacity (copper strip)	10 segments of 50 mm x 1 mm (2x) at rear-side width extension Max. 10 segments of 24 mm x 1 mm + 5 segments of 24 mm x 1 mm Min. 6 segments of 16 mm x 0.8 mm at box terminal Max. 8 segments of 24 mm x 1 mm (2x) at box terminal Max. 10 segments of 32 mm x 1 mm + 5 segments of 32 mm x 1 mm at rear-side connection (punched) Min. 6 segments of 16 mm x 0.8 mm at rear-side connection (punched)
Design verification as per IEC/EN 61439 - technical data	
Rated operational current for specified heat dissipation (In)	250 A
Equipment heat dissipation, current-dependent	18.75 W
Ambient operating temperature - min	-25 °C
Ambient operating temperature - max	70 °C
Ambient storage temperature - min	40 °C
Ambient storage temperature - max	70 °C
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.
10.2.3.1 Verification of tresistance 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.
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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

Technical data ETIM 9.0

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 (ec/@ss13-27-37-04-09 [A.17716018])

Rated parmanent current lu A 29 Rated voltage V 100-1000 Rated voltage KA 100-1000 Novel oad release current setting capacity lou at 400 V, 50 Hz KA 150-20 Vorload release current setting capacity lou at 400 V, 50 Hz A 150-20 Adjustment range short-eircuit release A 90-275 Adjustment range undelayed short-circuit release A 80-275 Vewer loss A 80-275 Power loss Bull-in device fixed built-in technique Power loss at construction No. No. Proper cleetrical connection of main circuit No. No. Suitable for DIN rail (top hat rail) mounting optional No. No. Number of auxiliary contacts as normally closed contact No. No. Number of auxiliary contacts as normally open contact No. No. With switched-off indicator No. No. With switched-off indicator No. No. With switched-off indicator No. No. Power office in term in current circuit No. </th <th>protection (ecl@ss13-27-37-04-09 [AJZ716018])</th> <th></th> <th></th> <th></th>	protection (ecl@ss13-27-37-04-09 [AJZ716018])			
Rated short-circuit breaking capacity Icu at 400 V, 50 Hz KA 150 Overload release current setting A 125 - 250 Adjustment range short-term delayed short-circuit release A 0 - 0 Adjustment range undelayed short-circuit release A 500 - 2750 Power loss W W Device construction W W Integrated earth fault protection No Screw connection Type of electrical connection of main circuit Screw connection No Suitable for DIN rail (top hat rail) mounting optional No No Number of auxiliary contacts as normally closed contact No No Number of auxiliary contacts as normally cone contact No No With switched-off indicator No No With switched-off indicator No No With integrated under voltage release No No Number of poles No No Position of connection for main current circuit Yo You side Type of control element No No Complete device with protecti	Rated permanent current lu	А	A	250
Overload release current setting A 125 - 250 Adjustment range short-term delayed short-circuit release A 0 - 0 Adjustment range undelayed short-circuit release A 500 - 2750 Power loss W W Device construction Built-in device fixed built-in technique Integrated earth fault protection No Screw connection Type of electrical connection of main circuit No No Suitable for DIN rail (top hat rail) mounting No No Number of auxiliary contacts as normally closed contact No No Number of auxiliary contacts as change-over contact No No With switched-off indicator No No With integrated under voltage release No No Number of poles 3 No 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 No	Rated voltage	V	/	1000 - 1000
Adjustment range short-term delayed short-circuit release A 0 - 0 Adjustment range undelayed short-circuit release A 500 - 2750 Power loss W W Device construction Built-in device fixed built-in technique Integrated earth fault protection No Type of electrical connection of main circuit Screw connection Suitable for DIN rail (top hat rail) mounting No DIN rail (top hat rail) mounting optional No Number of auxiliary contacts as normally closed 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 Rocker lever Motor drive integrated No Motor drive integrated No	Rated short-circuit breaking capacity Icu at 400 V, 50 Hz	k	κA	150
Adjustment range undelayed short-circuit release Power loss WW Device construction Integrated earth fault protection Integrated earth fault protection Type of electrical connection of main circuit Suitable for DIN rail (top hat rail) mounting DIN rail (top hat rail) mounting putional Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact With switched-off indicator With integrated under voltage release Number of poles Position of connection for main current circuit Type of control element Complete device with protection unit Motor drive integrated Motor drive integrated Motor drive potpional	Overload release current setting	А	Ą	125 - 250
Power loss Device construction Integrated earth fault protection Type of electrical connection of main circuit Suitable for DIN rail (top hat rail) mounting SUN No Serw connection Sunday of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as change-over contact Number of policia of indicator Number of policia of connection for main current circuit Type of electrical connection for main current circuit Type of control element Complete device with protection unit Motor drive integrated Motor drive integrated Motor drive integrated Motor drive optional	Adjustment range short-term delayed short-circuit release	А	Ą	0 - 0
Device construction Integrated earth fault protection Type of electrical connection of main circuit Suitable for DIN rail (top hat rail) mounting DIN rail (top hat rail) mounting optional Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as normally open contact	Adjustment range undelayed short-circuit release	А	Ą	500 - 2750
Integrated earth fault protection Type of electrical connection of main circuit Suitable for DIN rail (top hat rail) mounting DIN rail (top hat rail) mounting optional Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as change-over contact Number of poles Number of	Power loss	V	N	
Type of electrical connection of main circuit Suitable for DIN rail (top hat rail) mounting DIN rail (top hat rail) mounting optional Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact No No With switched-off indicator No No No Number of poles Position of connection for main current circuit Type of control element Complete device with protection unit Motor drive integrated Motor drive optional	Device construction			Built-in device fixed built-in technique
Suitable for DIN rail (top hat rail) mounting DIN rail (top hat rail) mounting optional Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Number of pauxiliary contacts as change-over contact No	Integrated earth fault protection			No
DIN rail (top hat rail) mounting optional Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as change-over contact No With switched-off indicator With integrated under voltage release Noith integrated under voltage release Noith of connection for main current circuit Type of control element Complete device with protection unit Motor drive integrated Motor drive optional	Type of electrical connection of main circuit			Screw connection
Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as change-over contact With switched-off indicator With switched-off indicator With integrated under voltage release No Number of poles Position of connection for main current circuit Type of control element Complete device with protection unit Motor drive integrated Motor drive optional O O O O O O O O O O O O O	Suitable for DIN rail (top hat rail) mounting			No
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Number of auxiliary contacts as change-over contact With switched-off indicator With integrated under voltage release No Number of poles Position of connection for main current circuit Type of control element Complete device with protection unit Motor drive integrated Motor drive optional	Number of auxiliary contacts as normally closed contact			0
With switched-off indicator With integrated under voltage release No Number of poles Position of connection for main current circuit Type of control element Complete device with protection unit Motor drive integrated Motor drive optional No	Number of auxiliary contacts as normally open contact			0
With integrated under voltage release No Number of poles Position of connection for main current circuit Type of control element Complete device with protection unit Motor drive optional No No No No No No No No No N	Number of auxiliary contacts as change-over contact			0
Number of poles Position of connection for main current circuit Type of control element Complete device with protection unit Motor drive optional 3 Front side Rocker lever Rocker lever Yes No Yes Motor drive optional	With switched-off indicator			No
Position of connection for main current circuit Type of control element Complete device with protection unit Motor drive optional Front side Rocker lever Yes No Yes Yes	With integrated under voltage release			No
Type of control element Rocker lever Complete device with protection unit Yes Motor drive integrated No Motor drive optional Yes	Number of poles			3
Complete device with protection unit Notor drive integrated Motor drive optional Yes Yes Yes	Position of connection for main current circuit			Front side
Motor drive integrated No Yes	Type of control element			Rocker lever
Motor drive optional Yes	Complete device with protection unit			Yes
·	Motor drive integrated			No
Degree of protection (IP) IP20	Motor drive optional			Yes
	Degree of protection (IP)			IP20