

## Circuit-breaker, 3p, 875A 1000V

**Part no.**                    **NZMH4-ME875-S1**  
                                       **290384**  
**EL Number**                **4363161**  
**(Norway)**

General specifications	
Product name	Eaton Moeller series NZM molded case circuit breaker electronic
Part no.	NZMH4-ME875-S1
EAN	4015082903848
Product Length/Depth	401 millimetre
Product height	207 millimetre
Product width	210 millimetre
Product weight	21 kilogram
Compliances	RoHS conform
Certifications	IEC
Product Tradename	NZM
Product Type	Molded case circuit breaker
Product Sub Type	Electronic
Delivery program	
Type	Circuit breaker
Circuit breaker frame type	NZM4
Number of poles	Three-pole
Amperage Rating	875 A
Release system	Electronic release
Special features	Lifespan, mechanical: of which max. 50% trip by shunt/undervoltage release Phase-failure sensitivity IEC/EN 60947-4-1, IEC/EN 60947-2 R.m.s. value measurement and "thermal memory" adjustable time delay setting to overcome current peaks tr: 2 – 20 s at 6 x I <sub>r</sub> also infinity (without overload releases) NZM...S1 terminal type: NZM...XKSA cover required NZM4...S1 terminal type: Insulated busbar connection (NZM4-XKS screw connection) Rated current = rated uninterrupted current: 875 A
Fitted with:	Thermal protection
Technical Data - Electrical	
Voltage rating	1000 V - 1000 V
Rated insulation voltage (U <sub>i</sub> )	1000 V
Rated impulse withstand voltage (U <sub>imp</sub> ) at auxiliary contacts	6000 V
Rated impulse withstand voltage (U <sub>imp</sub> ) at main contacts	8000 V
Rated short-time withstand current (t = 0.3 s)	19.2 kA
Rated short-time withstand current (t = 1 s)	19.2 kA
Instantaneous current setting (I <sub>i</sub> ) - min	875 A
Instantaneous current setting (I <sub>i</sub> ) - max	12250 A
Overload current setting (I <sub>r</sub> ) - min	438 A
Overload current setting (I <sub>r</sub> ) - max	875 A
Short-circuit release non-delayed setting - min	876 A
Short-circuit release non-delayed setting - max	12250 A
Rated short-circuit breaking capacity I <sub>cs</sub> (IEC/EN 60947) at 230 V, 50/60 Hz	63 kA
Rated short-circuit breaking capacity I <sub>cs</sub> (IEC/EN 60947) at 400/415 V, 50/60 Hz	50 kA
Rated short-circuit breaking capacity I <sub>cs</sub> (IEC/EN 60947) at 440 V, 50/60 Hz	50 kA
Rated short-circuit breaking capacity I <sub>cs</sub> (IEC/EN 60947) at 525 V, 50/60 Hz	50 kA
Rated short-circuit breaking capacity I <sub>cs</sub> (IEC/EN 60947) at 690 V, 50/60 Hz	37 kA
Rated short-circuit breaking capacity I <sub>cs</sub> (IEC/EN 60947) at 1000 V, 50/60 Hz	15 kA
Rated short-circuit making capacity I <sub>cm</sub> at 240 V, 50/60 Hz	275 kA
Rated short-circuit making capacity I <sub>cm</sub> at 400/415 V, 50/60 Hz	187 kA

Rated short-circuit making capacity I <sub>cm</sub> at 440 V, 50/60 Hz		187 kA
Rated short-circuit making capacity I <sub>cm</sub> at 525 V, 50/60 Hz		143 kA
Rated short-circuit making capacity I <sub>cm</sub> at 690 V, 50/60 Hz		100 kA
Rated short-circuit making capacity I <sub>cm</sub> at 1000 V, 50/60 Hz		40 kA
Rated operating power at AC-3, 230 V		250 kW
Rated operating power at AC-3, 400 V		500 kW
Electrical connection type of main circuit		Screw connection
Number of operations per hour - max		60
Handle type		Rocker lever
Utilization category		B
Overvoltage category		III
Pollution degree		3
Lifespan, electrical		500 operations at 1000 V AC-1
Direction of incoming supply		As required
<b>Technical Data - Mechanical</b>		
Mounting Method		Fixed Built-in device fixed built-in technique
Degree of protection		IP20
Switch off technique		Electronic
Special features		Lifespan, mechanical: of which max. 50% trip by shunt/undervoltage release Phase-failure sensitivity IEC/EN 60947-4-1, IEC/EN 60947-2 R.m.s. value measurement and "thermal memory" adjustable time delay setting to overcome current peaks tr: 2 – 20 s at 6 x I <sub>r</sub> also infinity (without overload releases) NZM...S1 terminal type: NZM...XKSA cover required NZM4...S1 terminal type: Insulated busbar connection (NZM4-XKS screw connection) Rated current = rated uninterrupted current: 875 A
Lifespan, mechanical		10000 operations
<b>Technical Data - Mechanical - Terminals</b>		
Standard terminals		Screw 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 stranded conductor/cable)		50 mm <sup>2</sup> - 240 mm <sup>2</sup> (4x) at 4-hole tunnel terminal
Terminal capacity (copper busbar)		Max. 80 mm x 10 mm (2x) direct at switch rear-side connection Max. 50 mm x 10 mm (2x) at rear-side 1-hole module plate Min. 25 mm x 5 mm at rear-side 1-hole module plate Max. 80 mm x 10 mm (2x) at rear-side width extension Min. 25 mm x 5 mm direct at switch rear-side connection 50 mm x 10 mm (2x) at rear-side 2-hole module plate Max. 50 mm x 10 mm (2x) direct at switch rear-side connection M10 at rear-side screw connection Min. 60 mm x 10 mm at rear-side width extension
Terminal capacity (copper solid conductor/cable)		185 mm <sup>2</sup> - 240 mm <sup>2</sup> (1x) at rear-side 1-hole module plate 50 mm <sup>2</sup> (4x) at rear-side 2-hole module plate 35 mm <sup>2</sup> - 185 mm <sup>2</sup> (4x) at rear-side 2-hole module plate 50 mm <sup>2</sup> - 240 mm <sup>2</sup> (4x) at 4-hole tunnel terminal 70 mm <sup>2</sup> - 185 mm <sup>2</sup> (2x) at rear-side 1-hole module plate 240 mm <sup>2</sup> (2x) at rear-side width extension 70 mm <sup>2</sup> - 240 mm <sup>2</sup> (6x) at rear-side width extension
Terminal capacity (copper strip)		Min. 6 segments of 16 mm x 0.8 mm at flat conductor terminal 10 segments of 50 mm x 1 mm (2x) at 1-hole module plate 10 segments of 80 mm x 1 mm (2x) at rear-side width extension Min. 10 segments of 50 mm x 1 mm (2x) at rear-side connection (punched) Max. 10 segments of 50 mm x 1 mm (2x) at rear-side connection (punched) Max. 10 segments of 32 mm x 1 mm (2x) at flat conductor terminal
<b>Design verification as per IEC/EN 61439 - technical data</b>		
Rated operational current for specified heat dissipation (I <sub>n</sub> )		875 A
Equipment heat dissipation, current-dependent		84.98 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
<b>Design verification as per IEC/EN 61439</b>		
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.
<b>Additional information</b>		
Functions		Motor protection Phase failure sensitive

## Technical data ETIM 9.0

Low-voltage industrial components (EG000017) / Motor protection circuit-breaker (EC000074)			
Electric engineering, automation, process control engineering / Low-voltage switch technology / Circuit breaker (LV < 1 kV) / Motor protection circuit-breaker (ecl@ss13-27-37-04-01 [AGZ529021])			
Overload release current setting	A		438 - 875
Adjustment range undelayed short-circuit release	A		875 - 12250
With thermal overload protection			Yes
Phase failure sensitive			Yes
Switch off technique			Electronic
Rated operating voltage	V		1000 - 1000
Rated permanent current I <sub>u</sub>	A		875
Rated operation power at AC-3, 230 V	kW		250
Rated operation power at AC-3, 400 V	kW		500
Power loss	W		
Type of electrical connection of main circuit			Screw connection
Type of control element			Rocker lever
Device construction			Built-in device fixed built-in technique
With integrated auxiliary switch			No
With integrated under voltage release			No
Number of poles			3
Rated short-circuit breaking capacity I <sub>cu</sub> at 400 V, AC	kA		50
Degree of protection (IP)			IP20
Height	mm		207
Width	mm		210
Depth	mm		401