DATASHEET - NZMH4-ME875-S1

Circuit-breaker, 3p, 875A 1000V

Part no. NZMH4-ME875-S1
290384

EL Number (Norway) 4363161

Powering Business Worldwide™

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 Ir 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 (Ui)	1000 V
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)	19.2 kA
Rated short-time withstand current (t = 1 s)	19.2 kA
Instantaneous current setting (Ii) - min	875 A
Instantaneous current setting (Ii) - max	12250 A
Overload current setting (Ir) - min	438 A
Overload current setting (Ir) - 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 Ics (IEC/EN 60947) at 230 V, 50/60 Hz	63 kA
Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 400/415 V, 50/60 Hz	50 kA
Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 440 V, 50/60 Hz	50 kA
Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 525 V, 50/60 Hz	50 kA
Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 690 V, 50/60 Hz	37 kA
Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 1000 V, 50/60 Hz	15 kA
Rated short-circuit making capacity Icm at 240 V, 50/60 Hz	275 kA
Rated short-circuit making capacity Icm at 400/415 V, 50/60 Hz	187 kA

Rated short-circuit making capacity Icm at 440 V, 50/60 Hz	187 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	100 kA
Rated short-circuit making capacity Icm 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

Technical Data - Mechanical

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 Ir 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

Technical Data - Mechanical - Terminals

Standard terminals	Screw terminal
Terminal capacity (control cable)	0.75 mm^2 - 2.5 mm^2 (1x) 0.75 mm^2 - 1.5 mm^2 (2x)
Terminal capacity (aluminum stranded conductor/cable)	50 mm^2 - 240 mm^2 (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^2 - 240 mm^2 (1x) at rear-side 1-hole module plate 50 mm^2 (4x) at rear-side 2-hole module plate 35 mm^2 - 185 mm^2 (4x) at rear-side 2-hole module plate 50 mm^2 - 240 mm^2 (4x) at 4-hole tunnel terminal 70 mm^2 - 185 mm^2 (2x) at rear-side 1-hole module plate 240 mm^2 (2x) at rear-side width extension 70 mm^2 - 240 mm^2 (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

Design verification as per IEC/EN 61439 - technical data

Rated operational current for specified heat dissipation (In)	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

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			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 Iu	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 Icu at 400 V, AC	kA	50
Degree of protection (IP)		IP20
Height	mm	207
Width	mm	210
Depth	mm	401