

Circuit-breaker, 3p, 40A

Part no. **NZMB1-M40**
265710
EL Number **4315559**
(Norway)

Product name	Eaton Moeller series NZM molded case circuit breaker thermo-magnetic
Part no.	NZMB1-M40
EAN	4015082657109
Product Length/Depth	88 millimetre
Product height	145 millimetre
Product width	90 millimetre
Product weight	1.028 kilogram
Compliances	RoHS conform
Certifications	IEC/EN 60947 IEC
Product Tradename	NZM
Product Type	Molded case circuit breaker
Product Sub Type	Thermo-magnetic
Application	Use in unearthed supply systems at 440 V
Type	Circuit breaker
Circuit breaker frame type	NZM1
Number of poles	Three-pole
Amperage Rating	40 A
Release system	Thermomagnetic release
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: 40 A Terminal capacity hint: Up to 95 mm ² can be connected depending on the cable manufacturer. With phase-failure sensitivity Tripping class 10 A IEC/EN 60947-4-1, IEC/EN 60947-2 The circuit-breaker fulfills all requirements for AC-3 switching category.
Fitted with:	Thermal protection
Voltage rating	440 V - 440 V
Rated insulation voltage (U _i)	690 V
Rated impulse withstand voltage (U _{imp}) at auxiliary contacts	6000 V
Rated impulse withstand voltage (U _{imp}) at main contacts	6000 V
Rated operational current	36 A (400 V AC-3)
Instantaneous current setting (I _i) - min	320 A
Instantaneous current setting (I _i) - max	560 A
Overload current setting (I _r) - min	32 A
Overload current setting (I _r) - max	40 A
Short-circuit release non-delayed setting - min	320 A
Short-circuit release non-delayed setting - max	560 A
Rated short-circuit breaking capacity I _{cs} (IEC/EN 60947) at 230 V, 50/60 Hz	30 kA
Rated short-circuit breaking capacity I _{cs} (IEC/EN 60947) at 400/415 V, 50/60 Hz	18.5 kA
Rated short-circuit breaking capacity I _{cs} (IEC/EN 60947) at 440 V, 50/60 Hz	18.5 kA
Rated short-circuit making capacity I _{cm} at 240 V, 50/60 Hz	63 kA
Rated short-circuit making capacity I _{cm} at 400/415 V, 50/60 Hz	53 kA
Rated short-circuit making capacity I _{cm} at 440 V, 50/60 Hz	53 kA
Rated operating power at AC-3, 230 V	11 kW
Rated operating power at AC-3, 400 V	18.5 kW
Short-circuit total breaktime	< 10 ms
Electrical connection type of main circuit	Other

Isolation			300 V AC (between the auxiliary contacts) 500 V AC (between auxiliary contacts and main 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 415 V AC-1 7500 operations at 400 V AC-1
Direction of incoming supply			As required
Mounting Method			Fixed Built-in device fixed built-in technique
Degree of protection			IP20 IP20 (basic degree of protection, in the operating controls area)
Degree of protection (IP), front side			IP40 (with insulating surround) IP66 (with door coupling rotary handle)
Degree of protection (terminations)			IP10 (tunnel terminal) IP00 (terminations, phase isolator and strip terminal)
Protection against direct contact			Finger and back-of-hand proof to VDE 0106 part 100
Shock resistance			20 g (half-sinusoidal shock 20 ms)
Switch off technique			Thermomagnetic
Climatic proofing			Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78
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: 40 A Terminal capacity hint: Up to 95 mm ² can be connected depending on the cable manufacturer. With phase-failure sensitivity Tripping class 10 A IEC/EN 60947-4-1, IEC/EN 60947-2 The circuit-breaker fulfills all requirements for AC-3 switching category.
Lifespan, mechanical			20000 operations
Standard terminals			Box terminal
Optional terminals			Connection on rear. Screw terminal. Tunnel 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 solid conductor/cable)			10 mm ² - 16 mm ² (1x) direct at switch rear-side connection 10 mm ² - 16 mm ² (2x) direct at switch rear-side connection 16 mm ² (1x) at tunnel terminal
Terminal capacity (aluminum stranded conductor/cable)			25 mm ² - 35 mm ² (1x) direct at switch rear-side connection 25 mm ² - 35 mm ² (2x) direct at switch rear-side connection 25 mm ² - 95 mm ² (1x) at tunnel terminal
Terminal capacity (copper busbar)			M6 at rear-side screw connection Min. 12 mm x 5 mm direct at switch rear-side connection Max. 16 mm x 5 mm direct at switch rear-side connection
Terminal capacity (copper solid conductor/cable)			16 mm ² (1x) at tunnel terminal 10 mm ² - 16 mm ² (1x) at box terminal 10 mm ² - 16 mm ² (1x) direct at switch rear-side connection 6 mm ² - 16 mm ² (2x) direct at switch rear-side connection 6 mm ² - 16 mm ² (2x) at box terminal
Terminal capacity (copper stranded conductor/cable)			10 mm ² - 70 mm ² (1x) at box terminal 10 mm ² - 70 mm ² (1x) direct at switch rear-side connection 25 mm ² - 95 mm ² (1x) at 1-hole tunnel terminal 25 mm ² (2x) direct at switch rear-side connection 6 mm ² - 25 mm ² (2x) at box terminal
Terminal capacity (copper strip)			Max. 9 segments of 9 mm x 0.8 mm at box terminal Min. 2 segments of 9 mm x 0.8 mm at box terminal
Rated operational current for specified heat dissipation (In)			40 A
Equipment heat dissipation, current-dependent			13.49 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
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.
Functions			Motor protection Phase failure sensitive

Technical data ETIM 8.0

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@ss10.0.1-27-37-04-01 [AGZ529016])			
Overload release current setting	A		32 - 40
Adjustment range undelayed short-circuit release	A		320 - 560
With thermal protection			Yes
Phase failure sensitive			Yes
Switch off technique			Thermomagnetic
Rated operating voltage	V		440 - 440
Rated permanent current Iu	A		40
Rated operation power at AC-3, 230 V	kW		11
Rated operation power at AC-3, 400 V	kW		18.5
Type of electrical connection of main circuit			Other
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		18.5
Degree of protection (IP)			IP20
Height	mm		145
Width	mm		90
Depth	mm		88