## Circuit-breaker, 3p, 80A



## Part no. NZMB2-A80-NA 269212

Product name	Eaton Moeller series NZM molded case circuit breaker thermo-magnetic
Part no.	NZMB2-A80-NA
EAN	4015082692124
Product Length/Depth	149 millimetre
Product height	195 millimetre
Product width	105 millimetre
Product weight Compliance	2.395 kilogram RoHS conform
Compliances Certifications	
Cerunications	UL listed CE marking CSA certified Specially designed for North America CSA (Class No. 1432-01) UL 489 UL (File No. E31593) UL/CSA CSA-C22.2 No. 5-09 IEC/EN 60947 IEC 60947-2 UL (Category Control Number DIVQ) IEC CSA (File No. 22086)
Product Tradename	NZM
Product Type	Molded case circuit breaker
Product Sub Type	Thermo-magnetic
Application	Branch circuits, feeder circuits Use in unearthed supply systems at 440 V
Туре	Circuit breaker
Circuit breaker frame type	NZM2
Number of poles	Three-pole
Amperage Rating	80 A
Release system	Thermomagnetic release
Features	Motor drive optional Protection unit
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-circu breaking capacity Icn) Rated current = rated uninterrupted current: 80 A Switches conform to UL/CSA as well as the IEC regulations. IEC switching performance values are contained on the rating plate. Adjustable overload releases Ir
Voltage rating	440 V - 440 V
Rated operating voltage Ue (UL) - max	600Y/347 V, 480 V
Rated insulation voltage (Ui)	690 V AC
Rated impulse withstand voltage (Uimp) at auxiliary contacts	6000 V
Rated impulse withstand voltage (Uimp) at main contacts	8000 V
Rated operational current	300 A (380/400 V AC-1, making and breaking capacity) 300 A (415 V AC-1, making and breaking capacity)
Instantaneous current setting (li) - min	480 A
Instantaneous current setting (li) - max	800 A
Overload current setting (Ir) - min	63 A
Overload current setting (Ir) - max	80 A
Short delay current setting (Isd) - min	0 A
Short delay current setting (Isd) - max	0 A
Short-circuit release non-delayed setting - min	480 A

Number of operations per hour - max  Handle type  Utilization category  Overvoltage category  III  Pollution degree  Lifespan, electrical  Direction of incoming supply  Mounting Method  Degree of protection  Degree of protection  Degree of protection (Iterminations)  Degree of protection (Iterminations)  Protection against direct contact  Shock resistance  Number of auxiliary contacts (change-over contacts)  Number of auxiliary contacts (normally open contacts)  Position of connection for main current circuit  Climatic proofing  Special features  Special features  Terminal capacity (control cable)  Terminal capacity (control cable)  A (IEC/EN 66  Rocker leve  A (IEC/EN 66  Bocker leve  A (IEC/EN 66  A (IEC/EN 66  Bocker leve  A (IEC/EN 66  Boch a (IEC/EN 66	ween the auxiliary contacts) ween auxiliary contacts and main contacts)
Rated short-circuit breaking capacity Ics (IEC/EN 60947) at 440 V, 50/60 Hz Rated short-circuit making capacity Icm at 240 V, 50/60 Hz Rated short-circuit making capacity Icm at 400/415 V, 50/60 Hz S3 kA Rated short-circuit making capacity Icm at 440 V, 50/60 Hz S3 kA Short-circuit total breaktime C10 ms Low-voltage HBC fuse - max S55 Ag G/gL Electrical connection type of main circuit Screw conn Isolation S00 V AC (br 500 V AC (br	ween the auxiliary contacts) ween auxiliary contacts and main contacts)  47-2)  ns at 400 V AC-1
Rated short-circuit making capacity Icm at 240 V, 50/60 Hz Rated short-circuit making capacity Icm at 400/415 V, 50/60 Hz S3 kA Rated short-circuit making capacity Icm at 440 V, 50/60 Hz S3 kA Short-circuit total breaktime Low-voltage HBC fuse - max Low-voltage date for - max Low-voltage category Lifespan, electrical Lifespan, electrical Lifespan, electrical Low-voltage category Lifespan, mechanical	ween the auxiliary contacts) ween auxiliary contacts and main contacts)  47-2)  ns at 400 V AC-1
Rated short-circuit making capacity Icm at 400/415 V, 50/60 Hz  Rated short-circuit making capacity Icm at 440 V, 50/60 Hz  Short-circuit total breaktime  Low-voltage HBC fuse - max  S55 A gG/gL  Electrical connection type of main circuit  Isolation  S00 V AC (but 500	ween the auxiliary contacts) ween auxiliary contacts and main contacts)  47-2)  ns at 400 V AC-1
Rated short-circuit making capacity Icm at 440 V, 50/60 Hz  Short-circuit total breaktime  Low-voltage HBC fuse - max  Electrical connection type of main circuit  Screw conn Isolation  300 V AC (be 500 V AC (be 500 V AC (be 500 V AC (be 700 V AC (be 70	ween the auxiliary contacts) ween auxiliary contacts and main contacts)  47-2)  ns at 400 V AC-1
Short-circuit total breaktime  Low-voltage HBC fuse - max  235 A gG/gL Electrical connection type of main circuit  Screw conn Isolation  300 V AC (be 500 V AC (be 500 V AC (be 500 V AC (be 700 V AC (b	ween the auxiliary contacts) ween auxiliary contacts and main contacts)  47-2)  ns at 400 V AC-1
Low-voltage HBC fuse - max  Electrical connection type of main circuit  Screw conn  Isolation  300 V AC (be 500 V AC (be 5	ween the auxiliary contacts) ween auxiliary contacts and main contacts)  47-2)  ns at 400 V AC-1
Electrical connection type of main circuit  Solation  Solation  Solation  Solation  Solot AC (be 500 V AC (be	ween the auxiliary contacts) ween auxiliary contacts and main contacts)  47-2)  ns at 400 V AC-1
Isolation  Number of operations per hour - max  Handle type  Utilization category  Overvoltage category  Pollution degree  Lifespan, electrical  Direction of incoming supply  Mounting Method  Degree of protection  Degree of protection (IP), front side  Degree of protection (IP), front side  Degree of protection (terminations)  Protection against direct contact  Shock resistance  Number of auxiliary contacts (change-over contacts)  Number of auxiliary contacts (normally closed contacts)  Number of auxiliary contacts (normally open contacts)  Position of connection for main current circuit  Climatic proofing  Special features  Special features  Standard terminals  Terminal capacity (control cable)  120  Rocker leve  A (IEC/EN 60  Bocker leve  Bocker leve  A (IEC/EN 60  Bocker leve  Bocker	ween the auxiliary contacts) ween auxiliary contacts and main contacts)  47-2)  ns at 400 V AC-1
Number of operations per hour - max  Handle type Utilization category Overvoltage category III Pollution degree Lifespan, electrical Orection of incoming supply Mounting Method Degree of protection Degree of protection Degree of protection (IP), front side Degree of protection (terminations) Protection against direct contact Shock resistance Number of auxiliary contacts (change-over contacts) Number of auxiliary contacts (normally closed contacts) Number of auxiliary contacts (normally open contacts) Position of connection for main current circuit Climatic proofing Special features  Lifespan, mechanical Screw terminal Lifespan, mechanical Screw terminal Terminal capacity (control cable)  120	ween auxiliary contacts and main contacts)  47-2)  ns at 400 V AC-1
Handle type  Utilization category  A (IEC/EN 60 of Dervoltage category  Pollution degree  Lifespan, electrical  Proportion of incoming supply  Mounting Method  Diny rail (top Fixed Built-in devil proportion)  Degree of protection  Degree of protection (IP), front side  Degree of protection (IP), front side  Protection against direct contact  Shock resistance  Number of auxiliary contacts (change-over contacts)  Number of auxiliary contacts (normally open contacts)  Number of auxiliary contacts (normally open contacts)  Number of auxiliary contacts (normally open contacts)  Position of connection for main current circuit  Climatic proofing  Damp heat, Damp heat, Damp heat, Damp heat, Lifespan, mechanical  Screw termi  Standard terminals  Screw termi  Terminal capacity (control cable)  14 mm² - 18 16 mm² - 18	ns at 400 V AC-1
Utilization category  Overvoltage category  Pollution degree  Lifespan, electrical  Direction of incoming supply  Mounting Method  Dany read Built-in devident Begree of protection  Degree of protection  Degree of protection (IP), front side  Posterion against direct contact  Finger and to Shock resistance  Number of auxiliary contacts (change-over contacts)  O  Number of auxiliary contacts (normally closed contacts)  O  Number of auxiliary contacts (normally open contacts)  O  Position of connection for main current circuit  Climatic proofing  Damp heat, Damp	ns at 400 V AC-1
Direction of incoming supply  Mounting Method  Direction of incoming supply  Degree of protection  Degree of protection (IP), front side  Degree of protection (terminations)  Degree of protection (terminations)  Protection against direct contact  Shock resistance  Number of auxiliary contacts (change-over contacts)  Number of auxiliary contacts (normally closed contacts)  Number of auxiliary contacts (normally open contacts)  Position of connection for main current circuit  Climatic proofing  Special features  Lifespan, mechanical  Standard terminals  Terminal capacity (control cable)  III  7500 operation 7500 operation 7500 operation 7500 operation 100 operation 10	ns at 400 V AC-1
Pollution degree   3   7500 operating 5500 operat	
Lifespan, electrical  Direction of incoming supply  As required  Mounting Method  DIN rail (top Fixed Built-in devi PF20 IP20 IP20 IP20 IP20 IP20 IP20 IP20 IP	
Direction of incoming supply  As required  Mounting Method  DIN rail (top Fixed Pixed Pixe	
Mounting Method  Dily rail top Fixed Built-in devil Degree of protection  Degree of protection (IP), front side  Degree of protection (IP), front side  Degree of protection (terminations)  Degree of protection (terminations)  IP10 (tunnel IP00 (termin	
Exed Built-in devi  Degree of protection  Degree of protection (IP), front side  Degree of protection (IP), front side  Degree of protection (terminations)  IP10 (tunnel IP00 (termin Protection against direct contact  Shock resistance  Shock resistance  Number of auxiliary contacts (change-over contacts)  Number of auxiliary contacts (normally closed contacts)  Number of auxiliary contacts (normally open contacts)  Position of connection for main current circuit  Climatic proofing  Damp heat, Damp heat, Damp heat, Damp heat, Damp heat, Special features  Lifespan, mechanical  Standard terminals  Terminal capacity (control cable)  Fixed Built-in devi IP20 (basic of IP20 (bas	
Exed Built-in devi  Degree of protection  Degree of protection (IP), front side  Degree of protection (IP), front side  Degree of protection (terminations)  IP10 (tunnel IP00 (termin Protection against direct contact  Shock resistance  Shock resistance  Number of auxiliary contacts (change-over contacts)  Number of auxiliary contacts (normally closed contacts)  Number of auxiliary contacts (normally open contacts)  Position of connection for main current circuit  Climatic proofing  Special features  Damp heat, D	
Degree of protection (IP), front side  Degree of protection (terminations)  Degree of protection (terminations)  Protection against direct contact  Shock resistance  Shock resistance  Number of auxiliary contacts (change-over contacts)  Number of auxiliary contacts (normally closed contacts)  Number of auxiliary contacts (normally open contacts)  Position of connection for main current circuit  Climatic proofing  Damp heat, Damp heat, Damp heat, Damp heat, Capacity contacts  Special features  Lifespan, mechanical  Standard terminals  Terminal capacity (control cable)  In the protection (IP), front side in Plo6 (with direction in Proof (IP4)	at rail) mounting optional e fixed built-in technique
Degree of protection (IP), front side  IP66 (with direct (with in IP40 (	
P40 (with in   IP10 (tunnel   IP00 (terminations)   IP00 (terminati	egree of protection, in the operating controls area) or coupling rotary handle)
Protection against direct contact  Shock resistance  20 g (half-size)  Number of auxiliary contacts (change-over contacts)  Number of auxiliary contacts (normally closed contacts)  Number of auxiliary contacts (normally open contacts)  Position of connection for main current circuit  Climatic proofing  Damp heat, Damp	ulating surround)
Shock resistance  Number of auxiliary contacts (change-over contacts)  Number of auxiliary contacts (normally closed contacts)  Number of auxiliary contacts (normally open contacts)  Position of connection for main current circuit  Climatic proofing  Damp heat, Da	tions, phase isolator and strip terminal)
Number of auxiliary contacts (change-over contacts)  Number of auxiliary contacts (normally closed contacts)  Number of auxiliary contacts (normally open contacts)  Position of connection for main current circuit  Climatic proofing  Damp heat, Damp heat	ck-of-hand proof to DIN EN 50274/VDE 0106 part 110
Number of auxiliary contacts (normally closed contacts)  O  Number of auxiliary contacts (normally open contacts)  Position of connection for main current circuit  Climatic proofing  Damp heat, Damp	ısoidal shock 20 ms)
Number of auxiliary contacts (normally open contacts)  Position of connection for main current circuit  Climatic proofing  Damp heat, Damp heat	
Position of connection for main current circuit  Climatic proofing  Damp heat, Damp heat	
Climatic proofing  Damp heat, Damp heat, Damp heat, Damp heat, Damp heat, Special features  Maximum be location exc breaking car Rated curre Switches coperformance Adjustable of Adjustable of Standard terminals  Standard terminals  Screw terminal capacity (control cable)  14 mm² - 18 16 mm² - 18	
Special features  Maximum by location exception and present and pr	valio to IEC 60069 2 20
Lifespan, mechanical  Lifespan, mechanical  Standard terminals  Terminal capacity (control cable)  Liocation exceptration and capacity (control cable)  Lifespan, mechanical  20000 opera  Standard terminals  Screw terminal capacity (control cable)	onstant, to IEC 60068-2-78
Standard terminals Screw terminals Terminal capacity (control cable) 14 mm² - 18 16 mm² - 18	ck-up fuse, if the expected short-circuit currents at the installation ed the switching capacity of the circuit breaker (Rated short-circuit acity Icn) to the circuit acity Icn) to the current: 80 A form to UL/CSA as well as the IEC regulations. IEC switching values are contained on the rating plate. erload releases Ir
Terminal capacity (control cable)  14 mm² - 18  16 mm² - 18	ons
Terminal capacity (control cable)  14 mm² - 18  16 mm² - 18	
16 mm² - 18	al
Terminal capacity (aluminum solid conductor/cable) 16 mm² (1x)	
M8 at rear-s	tunnel terminal
6 mm² - 11 m	tunnel terminal 5 mm direct at switch rear-side connection de screw connection 5 mm direct at switch rear-side connection
4 mm² - 350	5 mm direct at switch rear-side connection de screw connection
Terminal capacity (copper strip)  Max. 10 seg Max. 10 seg Min. 2 segm Min. 2 segen	5 mm direct at switch rear-side connection de screw connection 5 mm direct at switch rear-side connection tunnel terminal n² (1x) direct at switch rear-side connection

Rated operational current for specified heat dissipation (In)	80 A
Equipment heat dissipation, current-dependent	20.54 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 observed.
10.12 Electromagnetic compatibility	Is the panel builder's responsibility. The specifications for the switchgear must observed.
10.13 Mechanical function	The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.
Functions	System and cable protection Current limiting circuit breaker

## **Technical data ETIM 8.0**

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

Electric engineering, automation, process control engineering / Low-voltage switch technology / Circuit breaker (LV < 1 kV) / Circuit breaker for power transformer, generator and system protection (ecl@ss10.0.1-27-37-04-09 [AJZ716013])

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Rated permanent current lu	Α	80
Rated voltage	V	440 - 440
Rated short-circuit breaking capacity Icu at 400 V, 50 Hz	kA	25
Overload release current setting	Α	63 - 80
Adjustment range short-term delayed short-circuit release	А	0 - 0
Adjustment range undelayed short-circuit release	Α	480 - 800
Integrated earth fault protection		No
Type of electrical connection of main circuit		Screw connection
Device construction		Built-in device fixed built-in technique
Suitable for DIN rail (top hat rail) mounting		No
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	F	Rocker lever
Complete device with protection unit	Y	Yes
Motor drive integrated	N	No
Motor drive optional	Y	Yes
Degree of protection (IP)	I	IP20