DATASHEET - NZMC1-4-A125



Similar to illustration

Circuit-breaker, 4p	, 125A
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NZMC1-4-A125

271418

Part no.

Catalog No.



Delivery program			
Product range			Circuit-breaker
Protective function			System and cable protection
Standard/Approval			IEC
Installation type			Fixed
Release system			Thermomagnetic release
Construction size			NZM1
Description			Set value in neutral conductor is synchronous with set value Ir of main pole.
Number of poles			4 pole
Standard equipment			Box terminal
Switching capacity			
400/415 V 50 Hz	I _{cu}	kA	36
Rated current = rated uninterrupted current			
Rated current = rated uninterrupted current	$I_n = I_u$	A	125
Neutral conductor	% of phase conductor	CSA	100
Setting range			
Overload trip			
¢.	I _r	A	100 - 125
Main pole	l _r	A	100 - 125
Short-circuit releases			
Non-delayed	$I_i = I_n \times \dots$		6 - 10
Short-circuit releases	I _{rm}	A	750 - 1250

Technical data

General		
Standards		IEC/EN 60947
Protection against direct contact		Finger and back of hand proof to VDE 0106 Part 100
Climatic proofing		Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
Ambient temperature		
Ambient temperature, storage	°C	- 40 - + 70
Operation	°C	-25 - +70
Mechanical shock resistance (10 ms half-sinusoidal shock) according to IEC 60068-2-27	g	20 (half-sinusoidal shock 20 ms)
Safe isolation to EN 61140		
Between auxiliary contacts and main contacts	V AC	500
between the auxiliary contacts	V AC	300

InterderInterderInterderInterderDirection incomePartial interderPartial interderDirection incomePartial interderPartial interderDirection incomePartial interderPartial interderTrainationPartial interderPartial interderDirection incomePartial interderPartial interderDirection incomePa	Mounting position			Vertical and 90° in all directions With XFI earth-fault release: - NZM1, N1, NZM2, N2: vertical and 90° in all directions with plug-in unit - NZM1, N1, NZM2, N2: vertical, 90° right/left with withdrawable unit: - NZM3, N3: vertical, 90° right/left - NZM4, N4: vertical with remote operator: - NZM2, N(S)4: vertical and 90° in all
PerformancePerformanc				
IndexAnd 	Direction of incoming supply			as required
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Note::::::::::::::::::::::::::::::::::::	Enclosures			
Circuit-breaker Control	Terminations			
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New partner in the second se		1 -1	٨	125
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40 V 50/60 Hz eu Ka 400/415 V 50/60 Hz luu Ka 40 V 50/60 Hz luu Ka 52 V 50/60 Hz luu Ka 60 V 50/60 Hz luu Ka 200 V 50/60 Hz luu Ka 400 V 50/60 Hz luu Ka 600 V 50/60 Hz Ka Sa VIIII Luu Ka Maintaback up fuse, if the expected short-circuit urrents at the installation in exceed the switching capacity of the circuit breaker. VIIII Luu Ka Ya VIIII Luu Ya Ya VIIII Luu Ya Ya VIIII Luu Ya Ya VIIII Luu Ya <td></td> <td></td> <td></td> <td></td>				
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40/415 V 50/60 Hz 400/415 V 50/60 Hz 40 V 50/60 Hz 40 V 50/60 Hz 525 V 50/60 Hz 600 V 50/60 V 50		lcs	kA	
Add V 50/60 Hz Ics KA Sca KA Sca KA Sca Sca KA Sca		I _{cs}	kA	55
Instrument Instrum	400/415 V 50/60 Hz	I _{cs}	kA	36
Act Act <td>440 V 50/60 Hz</td> <td>I_{cs}</td> <td>kA</td> <td>22.5</td>	440 V 50/60 Hz	I _{cs}	kA	22.5
Image: state in the state i	525 V 50/60 Hz	I _{cs}	kA	6
Idea Increase of the switching capacity of the circuit-breaker. Utilization category to IEC/EN 60947-2 A Lifespan, mechanical(of which max. 50% trip by shunt/undervoltage release) Operations AC-1 A 400 V 50/60 Hz Operations 415 V 50/60 Hz Operations	690 V 50/60 Hz	I _{cs}	kA	4
Lifespan, electrical AC-1 Constrained of the second	Utilization category to IEC/EN 60947-2			location exceed the switching capacity of the circuit-breaker.
Lifespan, electrical AC-1 Constrained of the second		Operations		
400 V 50/60 Hz Operations 10000 415 V 50/60 Hz Operations 7500				
415 V 50/60 Hz Operations 7500	AC-1			
	400 V 50/60 Hz	Operations		10000
690 V 50/60 Hz Operations 5000	415 V 50/60 Hz	Operations		7500
	690 V 50/60 Hz	Operations		5000

Max. operating frequency		0ps/h	120
Total break time at short-circuit		ms	< 10
Terminal capacity			
Standard equipment			Box terminal
Optional accessories			Screw connection Tunnel terminal connection on rear
Round copper conductor			
Box terminal			
Solid		mm ²	1 x (10 - 16) 2 x (6 - 16)
Stranded		mm ²	1 x (10 - 70) ³⁾ 2 x (6-25)
Turnel terminel			³⁾ Up to 95 mm ² can be connected depending on the cable manufacturer.
Tunnel terminal		0	1 16
Solid		mm ²	1 x 16
Stranded			
1-hole		mm ²	1 x (25 - 95)
Bolt terminal and rear-side connection			
Direct on the switch			
Solid		mm ²	1 x (10 - 16) 2 x (6 - 16)
Stranded		mm ²	1 x (10 - 70) ³⁾ 2 x 25
			$^{3)}$ Up to 95 $\rm mm^2$ can be connected depending on the cable manufacturer.
Al circular conductor			
Tunnel terminal			
Solid		mm ²	1 x 16
Stranded			
Stranded		mm ²	1 x (25 - 95)
Bolt terminal and rear-side connection			
Direct on the switch			
Solid		mm ²	1 x (10 - 16) 2 x (10 - 16)
Stranded		mm ²	1 × (25 - 35) 2 × (25 - 35)
Cu strip (number of segments x width x segment thickness)			
Box terminal			
	min.	mm	2 x 9 x 0.8
	max.	mm	9 x 9 x 0.8
Copper busbar (width x thickness)	mm		
Bolt terminal and rear-side connection			
Screw connection			M6
Direct on the switch			
	min.	mm	12 x 5
	max.	mm	16 x 5
Control cables			
		mm ²	1 x (0.75 - 2.5) 2 x (0.75 - 1.5)

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	l _n	А	125
Equipment heat dissipation, current-dependent	P _{vid}	W	26.72
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	70
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			

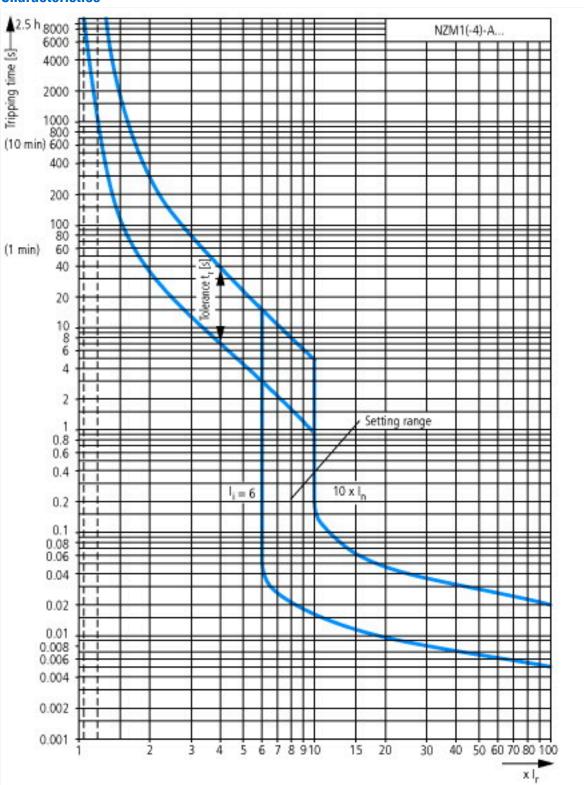
10.2.2 Corrosion resistance	Meets the product standard's requirements.
10.2.3.1 Verification of thermal stability of enclosures	Meets the product standard's requirements.
10.2.3.2 Verification of resistance of insulating materials to normal heat	Meets the product standard's requirements.
10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric 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 Insulation properties	
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.

Technical data ETIM 7.0

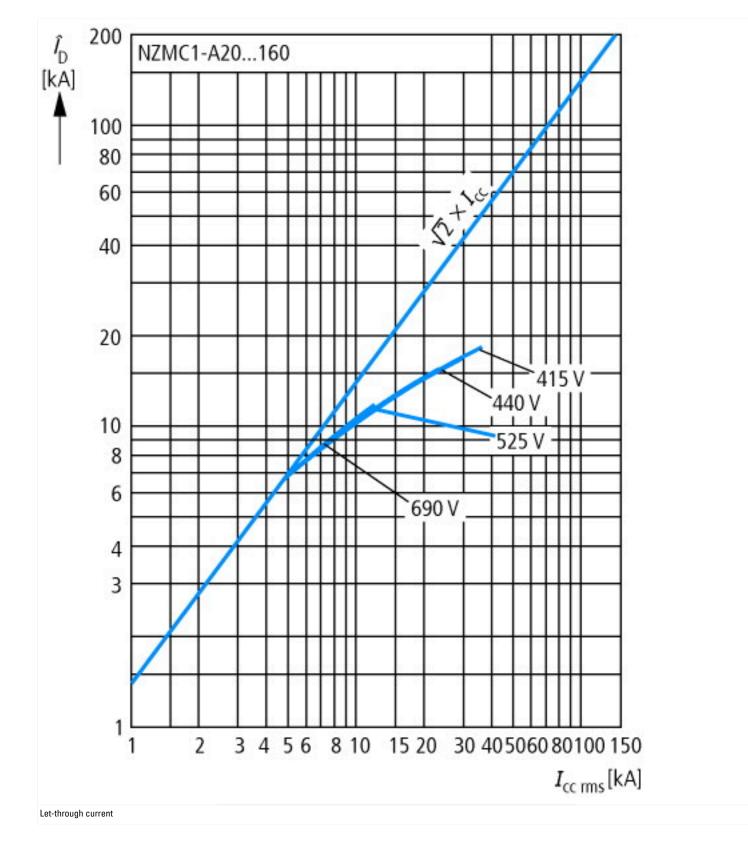
Low-voltage industrial components (EG000017) / Power circuit-breaker for trafo/generator/installation protection (EC000228)

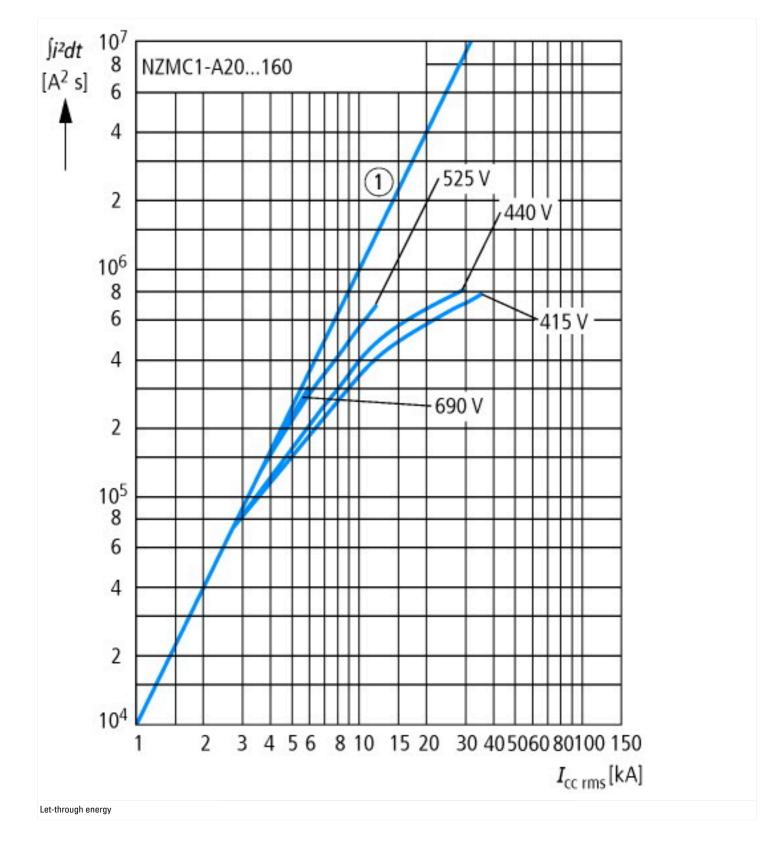
Electric engineering, automation, process control engineering / Low-voltage switch technology / Circuit breaker (LV < 1 kV) / Circuit breaker for power transformer, generator and system protection (ecl@ss10.0.1-27-37-04-09 [AJZ716013])

protection (eci@ss10.0.1-27-37-04-09 [AJZ710013])		
Rated permanent current lu	А	125
Rated voltage	V	690 - 690
Rated short-circuit breaking capacity Icu at 400 V, 50 Hz	kA	36
Overload release current setting	А	100 - 125
Adjustment range short-term delayed short-circuit release	А	0 - 0
Adjustment range undelayed short-circuit release	А	6 - 10
Integrated earth fault protection		No
Type of electrical connection of main circuit		Frame clamp
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 under voltage release		No
Number of poles		4
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
Degree of protection (IP)		IP20

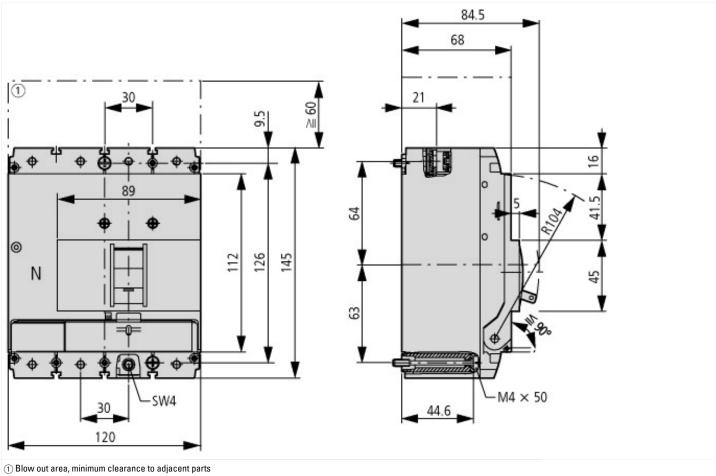


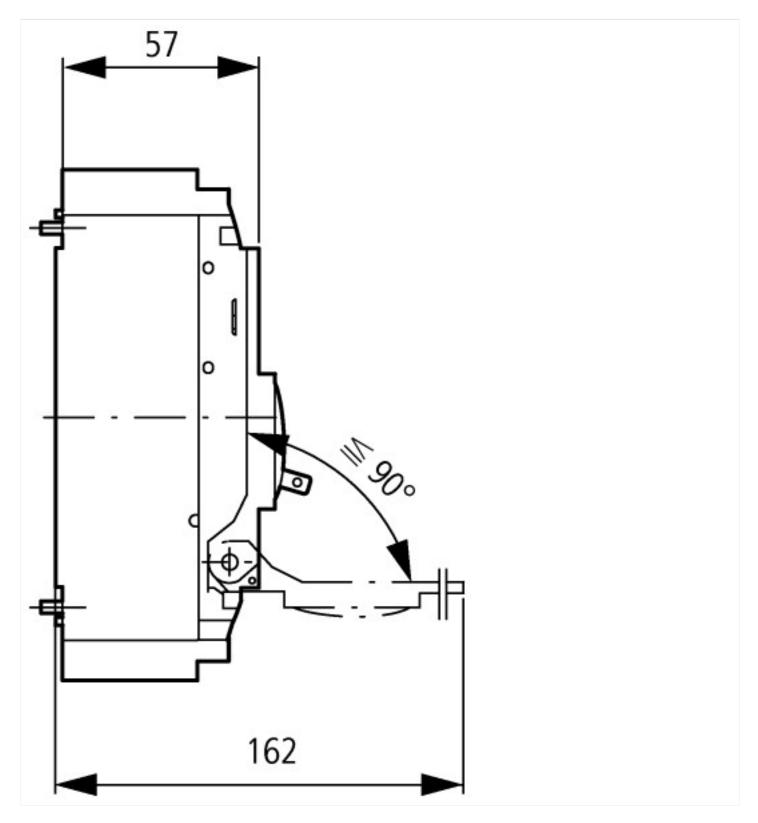
Characteristics











Additional product information (links)

Temperature dependency, Derating	http://ecat.moeller.net/flip-cat/?edition=HPLEN&startpage=17.172
CurveSelect characteristics program	http://www.eaton.eu/DE/Europe/Electrical/CustomerSupport/ConfigurationTools/CharacteristicsProgram/ index.htm
additional technical information for NZM power switch	ftp://ftp.moeller.net/DOCUMENTATION/PDF/nzm_technic_de_en.pdf