DATASHEET - NZMH2-4-A200/125-SVE



Circuit-breaker, 4p, 200A, 125A in 4th pole, plug-in module

Part no. Catalog No.

NZMH2-4-A200/125-SVE 113383

0004357062



EL-Nummer (Norway)

Similar to illustration

Delivery program

Product range			Circuit-breaker
Protective function			System and cable protection
Standard/Approval			IEC
Installation type			Plug-in units
Release system			Thermomagnetic release
Construction size			NZM2
Description			Set value in neutral conductor is synchronous with set value Ir of main pole.
Number of poles			4 pole
Standard equipment			Screw connection
Switching capacity			
400/415 V 50 Hz	l _{cu}	kA	150
Rated current = rated uninterrupted current			
Rated current = rated uninterrupted current	$I_n = I_u$	А	200
Neutral conductor	% of phase conductor	%	60
Reduced neutral conductor protection		А	125
Neutral conductor protection			Reduced neutral conductor protection
Setting range			
Overload trip			
L ل ل	l _r	A	160 - 200
Main pole	I _r	A	100 - 125
Short-circuit releases			
Non-delayed	I _i = I _n x		6 - 10

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

Weight		kg	3.5
Mounting position		9	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: - NZM4, N(S)4: vertical and 90° in all directions
Direction of incoming supply			as required
Degree of protection			
Device			In the operating controls area: IP20 (basic degree of protection)
Enclosures			With insulating surround: IP40 With door coupling rotary handle: IP66
Terminations			Tunnel terminal: IP10 Phase isolator and strip terminal: IP00
Other technical data (sheet catalogue)			Temperature dependency, Derating
Circuit-breakers			200
Rated current = rated uninterrupted current	I _n = I _u	A	200
Rated surge voltage invariability	U _{imp}		
Main contacts		V	8000
Auxiliary contacts		V	6000
Rated operational voltage	Ue	V AC	690
Overvoltage category/pollution degree			111/3
Rated insulation voltage	Ui	V	1000
Use in unearthed supply systems		V	≦ 690
Switching capacity Rated short-circuit making capacity	I _{cm}		
240 V		kA	330
400/415 V	I _{cm}	kA	330
440 V 50/60 Hz		kA	286
440 V 50/60 Hz	l _{cm}	kA	105
525 V 50/60 H	l _{cm} Ic	кА kA	40
очи и ролови н Rated short-circuit breaking capacity I _{cn}		NA.	עד
Icu to IEC/EN 60947 test cycle 0-t-CO	l _{cn}	k٨	
Icu to IEC/EN 60947 test cycle U-t-CU 240 V 50/60 Hz	lcu	kA kA	150
240 V 50/60 Hz	I _{cu}		
	I _{cu}	kA kA	150
440 V 50/60 Hz	I _{cu}	kA	130
525 V 50/60 Hz	I _{cu}	kA	50
690 V 50/60 Hz	I _{cu}	kA	20
Ics to IEC/EN 60947 test cycle 0-t-CO-t-CO	lcs	kA	150
240 V 50/60 Hz	I _{cs}	kA	150
400/415 V 50/60 Hz	I _{cs}	kA	150
440 V 50/60 Hz	I _{cs}	kA	130
525 V 50/60 Hz	I _{cs}	kA	37.5
690 V 50/60 Hz	I _{cs}	kA	5
			Maximum back-up fuse, if the expected short-circuit currents at the installation location exceed the switching capacity of the circuit-breaker.
Rated short-time withstand current			
t = 0.3 s	I _{cw}	kA	1.9
t = 1 s	I _{cw}	kA	1.9
Utilization category to IEC/EN 60947-2			A
Lifespan, mechanical(of which max. 50 % trip by shunt/undervoltage release)	Operations		20000
Lifespan, electrical			

	AC-1			
680 YS98 hbOperations780A0 YS98 hbGenerations60091 YS98 hbGenerations50060 YS98 hbGenerations50060 YS98 hbGenerations50060 YS98 hbGenerations600700 Horse Arrows0 yee500700 Horse Arrows0 yee600700 Horse Arrows0 yee700700 Horse Arrows700700700 Horse Arrows700 <td>400 V 50/60 Hz</td> <td>Operations</td> <td></td> <td>10000</td>	400 V 50/60 Hz	Operations		10000
AC-3SeriesSeriesSeriesADV SRM H2Open 10SOADV SRM H2Open 10SOBDV SRM H2Open 10SOBDV SRM H2Open 10SOTotal rest and schederTotal rest and schederSOTotal rest and schederSOSOAndrot SchederSOSOAndrot SchederSOSOAndrot SchederSOSOAndrot SchederSOSOAndrot SchederSOSOAndrot SchederSOSOSolid Coper softwardSOSOSolid Coper sof	415 V 50/60 Hz	Operations		10000
490 Yabb R2OperationsImage: second sec	690 V 50/60 Hz	Operations		7500
415 V3000 h1DerationsV800Mon. parenting frequeryOeto0Nan. parenting frequeryOeto0Standard sequementNormate frequeryNormate frequeryAccessories requiredNormate frequeryNormate frequeryStandard sequementNormate frequeryNormate frequeryAccessories requiredNormate frequeryNormate frequeryStandard sequementNormate frequeryNormate frequeryRemeters requiredNormate frequeryNormate frequeryStandard sequementNormate frequeryNormate frequeryStandard sequenceNormate	AC3			
680 Yold NrOperation <td>400 V 50/60 Hz</td> <td>Operations</td> <td></td> <td>6500</td>	400 V 50/60 Hz	Operations		6500
Max agenting frequencyImage: Section of the section of	415 V 50/60 Hz	Operations		6500
Total transition capacity Image 4 Server connection Accessories required ZM2 + XSVS Solver connection on team Round cogner conductor Solver minal Solver minal Sold March ZM2 + XSVS Round cogner conductor March ZM2 + XSVS Sold March March	690 V 50/60 Hz	Operations		5000
Terminal capacityServe connectionStanded supimentServe connectionOptimal accessoriesNZMA 4XSYSOptimal accessoriesNZMA 4XSYSRound copier canductorServe minal connection on rearBoat cerninalNZMA 4XSYSRound copier canductorNZMA 4XSYSBoat cerninalNZMA 4XSYSStandedNZMA 4XSYSStandedNZMA 4XSYSStandedNZMA 4XSYSStandedNZMA 4XSYSTurnel terminalNZMA 4XSYSTurnel terminalNZMA 4XSYSStandedNZMA 4XSYStandedNZMA 4XSYStandedN	Max. operating frequency		Ops/h	120
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Accessries required Image: sessries M24.4X9S Grout cossories Similar terminal connection on stars Boat serminal Similar terminal connection on stars Solid Similar terminal Turnet terminal Similar terminal Solid Similar terminal Solid Similar terminal Solid Similar terminal Solid Similar terminal termin				
Optional accessories Anterninal anterninal consection or area Reind coper conductor Solid Boot serminal Solid Standed Solid Standentantrenstal consection Solid				
Read coper conductor Image: read coper conductor Botterminal comection on the sector of th				
Backerninil Mathematical state Math Math Math Math Math Math Math Math Math	Uptional accessories			Tunnel terminal
SididPart Part Part Part Part Part Part Part	Round copper conductor			
image: standed image: standed image: standed image: standed <	Box terminal			
Image 				2 x (6 - 16)
SolidIndIndIndSrandedIndexIndexIndexIndexIndexIndexIndexBoltsminal and rear-side connectionIndexIndexIndexSolidIndexIndexIndexSolidIndexIndexIndexStrandedIndexIndexIndexStrandedIndexIndexIndexSolidIndexIndexIndexSolidIndexIndexIndexStrandedIndexIndexIndex<			mm ²	1 x (25 - 185) 2 x (25 - 70)
Stranded Image: Stranded Image: Stranded Image: Stranded Direct on the switch Image: Stranded Image: Stranded Image: Stranded Stranded Image: Stranded Image: Stranded Image: Stranded Alcicular conductor Image: Stranded Image: Stranded Image: Stranded Solid Image: Stranded I				1.10
I-holeIIIIIIBolt eminal and rear-side connectionIII			mm ²	1 x 16
Bolterminal and rear-side connection Image: solution of the switch Image: solution of the switch Solid Image: solution of the switch Image: solution of the switch Image: solution of the switch Stranded Image: solution of the switch Image: solution of the switch Image: solution of the switch A circular conductor Image: solution of the switch Image: solution of the switch Image: solution of the switch Stranded Image: solution of the switch Image: solution of the switch Image: solution of the switch Stranded Image: solution of the switch Image: solution of the switch Image: solution of the switch Stranded Image: solution of the switch Image: solution of the switch Image: solution of the switch Stranded Image: solution of the switch Image: solution of the switch Image: solution of the switch Stranded Image: solution of the switch Image: solution of the switch Image: solution of the switch Stranded Image: solution of the switch Image: solution of the switch Image: solution of the switch Stranded Image: solution of the switch Image: solution of the switch Image: solution of the switch				
Direct on the switch Image: Solid	1-hole		mm ²	1 x (25 - 185)
SidNmStanded	Bolt terminal and rear-side connection			
Standed Kale (a) (a) (b) (b) (b) (b) (b) (b) (b) (b) (b) (b	Direct on the switch			
Al circular conductor 2 × (25 - 70) Al circular conductor	Solid		mm ²	2 x (6 - 16)
Tunel terminal Image: Provide terminal Stranded Pm2 Stranded mm2 Box terminal mm2 Stranded mm2 Box terminal mm2 Stranded mm2 Flat copper strip, with holes mm2 Flat copper strip, with holes mm2 Strew connection mm3 Strew connection mm3 </td <td></td> <td></td> <td>mm²</td> <td></td>			mm ²	
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Box terminal Min Min X > X > X > X > X > X > X > X > X > X	Stranded		mm ²	1 x (25 - 185)
init max max </td <td></td> <td></td> <td></td> <td></td>				
Imax	Box terminal			
Image: Section of the switch of the switc				
Bolt terminal and rear-side connection init. mm 2x16x 0.8 Flat copper strip, with holes max. mm 1x24x 0.8 Copper busbar (width x thickness) mm 1x24x 0.8 Bolt terminal and rear-side connection mm		max.	mm	
Flat copper strip, with holes min. mm 2x 16 x 0.8 Flat copper strip, with holes max. mm 10x 24 x 0.8 Copper busbar (width x thickness) mm	Bolt terminal and rear-side connection			
Copper busbar (width x thickness) mm imm Bolt terminal and rear-side connection imm imm Screw connection imm imm Direct on the switch imm M8 Imm mm 16 × 5 Control cables max mm	Flat copper strip, with holes	min.	mm	2 x 16 x 0.8
Copper busbar (width x thickness) mm imm Bolt terminal and rear-side connection imm imm Screw connection imm imm Direct on the switch imm M8 Imm mm 16 × 5 Control cables imm imm	Flat copper strip, with holes	max.	mm	10 x 24 x 0.8
Screw connection M8 Direct on the switch min. mm 1000000000000000000000000000000000000		mm		
Direct on the switch Image: Control cables Image: Control cables <th< td=""><td>Bolt terminal and rear-side connection</td><td></td><td></td><td></td></th<>	Bolt terminal and rear-side connection			
min. mm 16 x 5 max. mm 24 x 8	Screw connection			M8
Control cables max. mm 24 x 8	Direct on the switch			
Control cables		min.	mm	16 x 5
		max.	mm	24 x 8
mm^2 1 x (0.73 - 2.3) 2 x (0.75 - 1.5)	Control cables		mm ²	1 x (0.75 - 2.5)

Design verification as per IEC/EN 61439

Technical data for design verification				
Rated operational current for specified	heat dissipation	I _n	А	200

Equipment heat dissipation, current-dependent	P _{vid}	W	48
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.

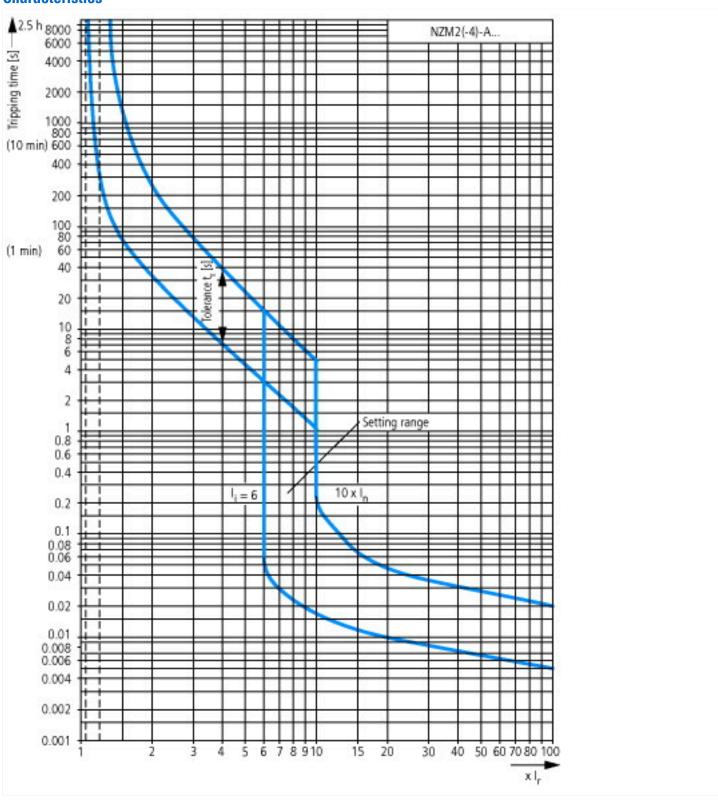
Technical data ETIM 7.0

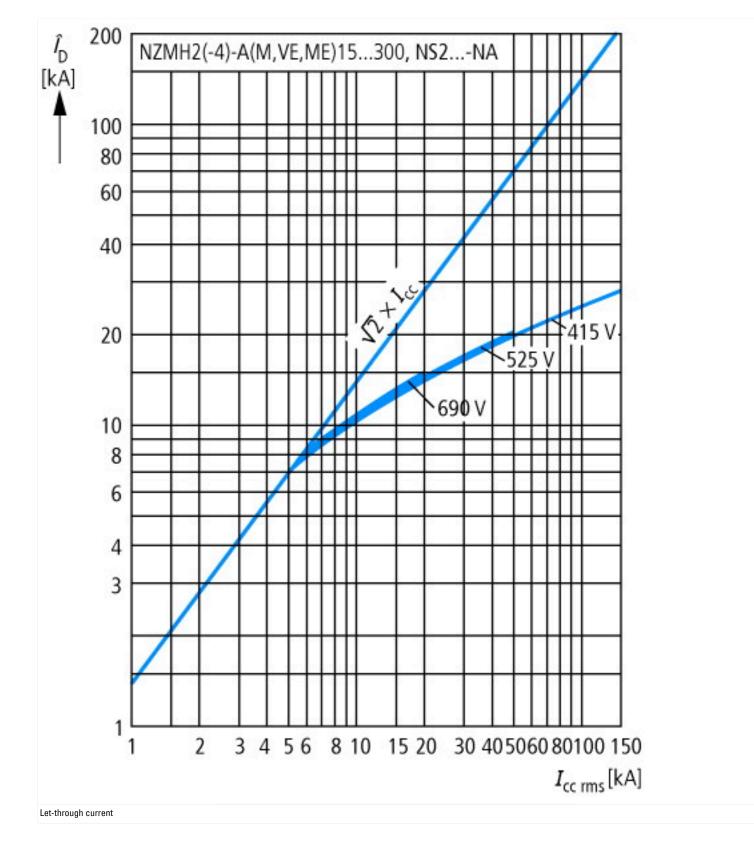
Low-voltage industrial components (EG000017) / Power circuit-breaker for trafo/generator/installation protection (EC000228)

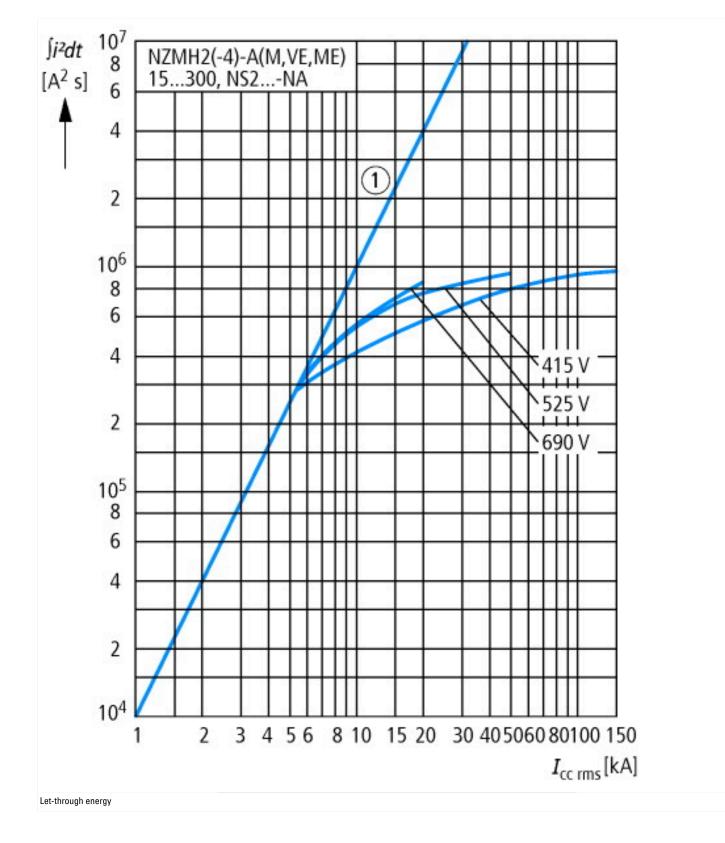
Electric engineering, automation, process control engineering / Low-voltage switch technology / Circuit breaker (LV < 1 kV) / Circuit breaker for power transformer, generator and system protection (ecl@ss10.0.1-27-37-04-09 [AJZ716013])

Rated permanent current lu	А	200
Rated voltage	V	690 - 690
Rated short-circuit breaking capacity Icu at 400 V, 50 Hz	kA	150
Overload release current setting	А	160 - 200
Adjustment range short-term delayed short-circuit release	А	0 - 0
Adjustment range undelayed short-circuit release	Α	6 - 10
Integrated earth fault protection		No
Type of electrical connection of main circuit		Screw connection
Device construction		Built-in device plug-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

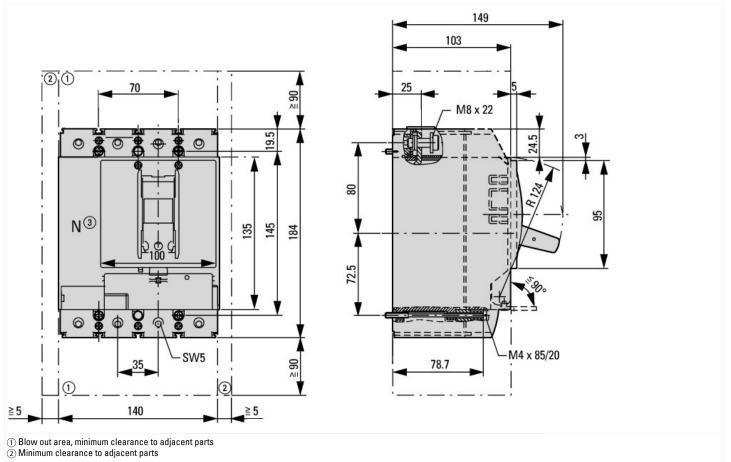
	gree of protection (IP)
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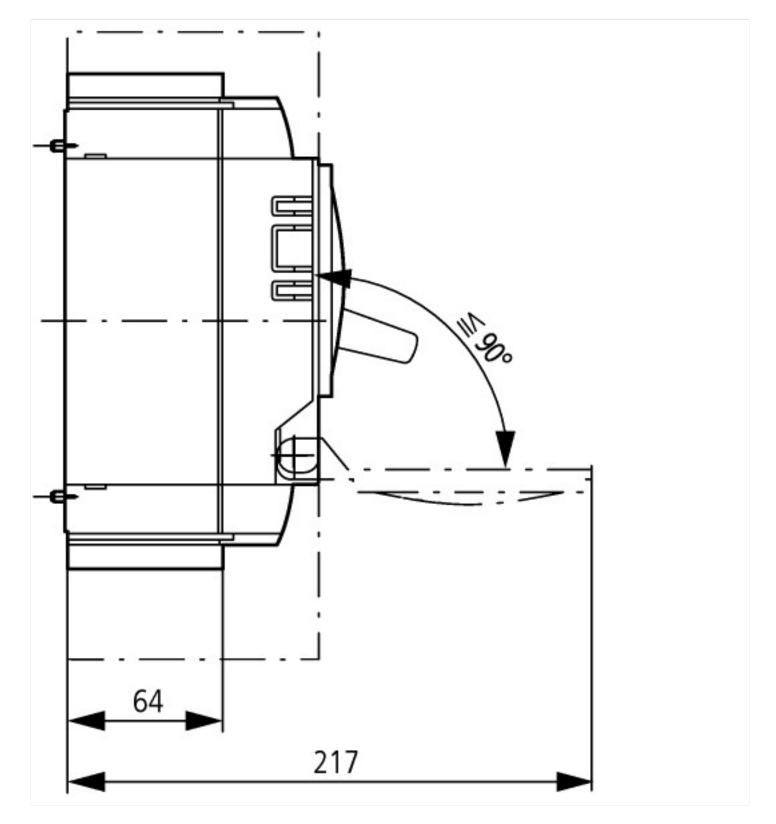












Additional product information (links)

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	https://es-assets.eaton.com/DOCUMENTATION/PDF/nzm_technic_de_en.pdf