DATASHEET - NZMB2-A200



Circuit-breaker, 3p, 200A

Part no. NZMB2-A200 Catalog No. 259089

EL-Nummer (Norway) 4315535



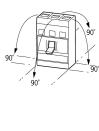


Delivery program			
Product range			Circuit-breaker
Protective function			System and cable protection
Standard/Approval			IEC
Installation type			Fixed
Release system			Thermomagnetic release
Construction size			NZM2
Number of poles			3 pole
Standard equipment			Screw connection
Switching capacity			
400/415 V 50 Hz	I _{cu}	kA	25
Rated current = rated uninterrupted current			
Rated current = rated uninterrupted current	$I_n = I_u$	Α	200
Setting range			
Overload trip			
中	I _r	A	160 - 200
Short-circuit releases			
Non-delayed	$I_i = I_n \times \dots$		6 - 10
Short-circuit releases	I _{rm}	A	1200 - 2000

Technical data

Conoral

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	2.345
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

			with withdrawable unit: - NZM3, N3: vertical, 90° right/left - NZM4, N4: vertical with remote operator: - NZM2, N(S)2, NZM3, N(S)3, 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			
Rated current = rated uninterrupted current	$I_n = I_u$	Α	200
Rated surge voltage invariability	U_{imp}		
Main contacts		V	8000
Auxiliary contacts		V	6000
Rated operational voltage	U _e	V AC	440
Overvoltage category/pollution degree			III/3
Rated insulation voltage	Ui	V	690
Use in unearthed supply systems		V	≦ 440
Switching capacity			
Rated short-circuit making capacity	I _{cm}		
240 V	I _{cm}	kA	63
400/415 V	I _{cm}	kA	53
440 V 50/60 Hz	I _{cm}	kA	53
Rated short-circuit breaking capacity I _{cn}	I _{cn}		
		LΛ	
Icu to IEC/EN 60947 test cycle 0-t-C0 240 V 50/60 Hz	lcu	kA kA	20
	I _{cu}		30
400/415 V 50/60 Hz	I _{cu}	kA	25
440 V 50/60 Hz	I _{cu}	kA	25
Ics to IEC/EN 60947 test cycle 0-t-C0-t-C0	Ics	kA	
240 V 50/60 Hz	I _{cs}	kA	30
400/415 V 50/60 Hz	I _{cs}	kA	25
440 V 50/60 Hz	I _{cs}	kA	18.5
Utilization category to IEC/EN 60947-2			Maximum back-up fuse, if the expected short-circuit currents at the installation location exceed the switching capacity of the circuit-breaker.
Lifespan, mechanical(of which max. 50 % trip by shunt/undervoltage release)	Operations		20000
Lifespan, electrical			
AC-1			
400 V 50/60 Hz	Operations		10000
415 V 50/60 Hz	Operations		7500
Max. operating frequency		Ops/h	120
Total downtime in a short-circuit		ms	<10
Terminal capacity			
Standard equipment			Screw connection
Optional accessories			Box terminal Tunnel terminal connection on rear
Round copper conductor			
Box terminal			
0-1:4		2	1 (10 10)

1 x (10 - 16)

Solid

			2 x (6 - 16)
Stranded		mm ²	1 x (25 - 185) 2 x (25 - 70)
Tunnel terminal			
Solid		mm^2	1 x 16
Stranded		mm ²	
1-hole		mm ²	1 x (25 - 185)
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 (25 - 185) 2 x (25 - 70)
Al conductors, Cu cable			
Solid		mm ²	1 x 16
Stranded		mm^2	
Stranded		mm^2	1 x (25 - 185)
Cu strip (number of segments x width x segment thickness)			
Box terminal			
	min.	mm	2 x 9 x 0.8
	max.	mm	10 x 16 x 0.8 (2x) 8 x 15.5 x 0,8
Bolt terminal and rear-side connection			
Flat copper strip, with holes	min.	mm	2 x 16 x 0.8
Flat copper strip, with holes	max.	mm	10 x 24 x 0.8
Copper busbar (width x thickness)	mm		
Bolt terminal and rear-side connection			
Screw connection			M8
Direct on the switch			
	min.	mm	16 x 5
	max.	mm	24 x 8
Control cables			. (0.75 0.7)
		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	In	Α	200
Equipment heat dissipation, current-dependent	P _{vid}	W	48
Operating ambient temperature max.		°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.

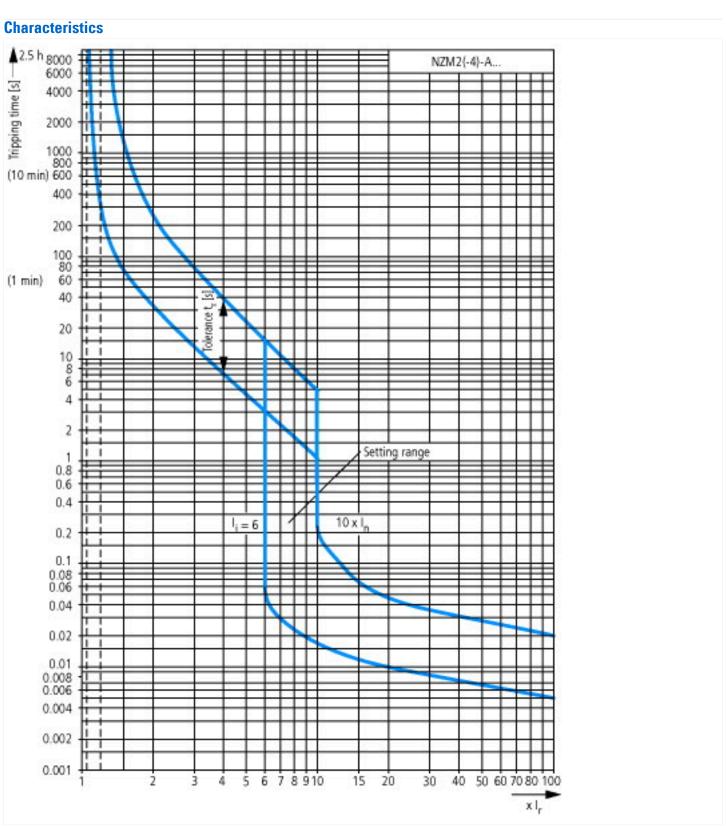
10.7 Internal electrical circuits and connections	Is the panel builder's responsibility.
10.8 Connections for external conductors	Is the panel builder's responsibility.
10.9 Insulation properties	
10.9.2 Power-frequency electric strength	Is the panel builder's responsibility.
10.9.3 Impulse withstand 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 (II) is observed

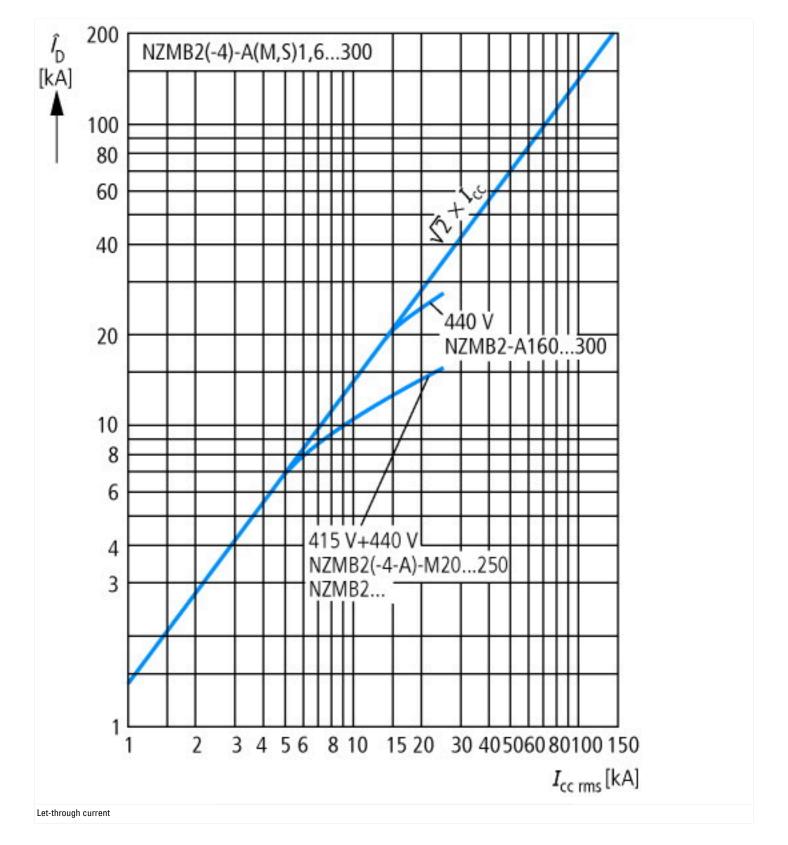
Technical data ETIM 6.0

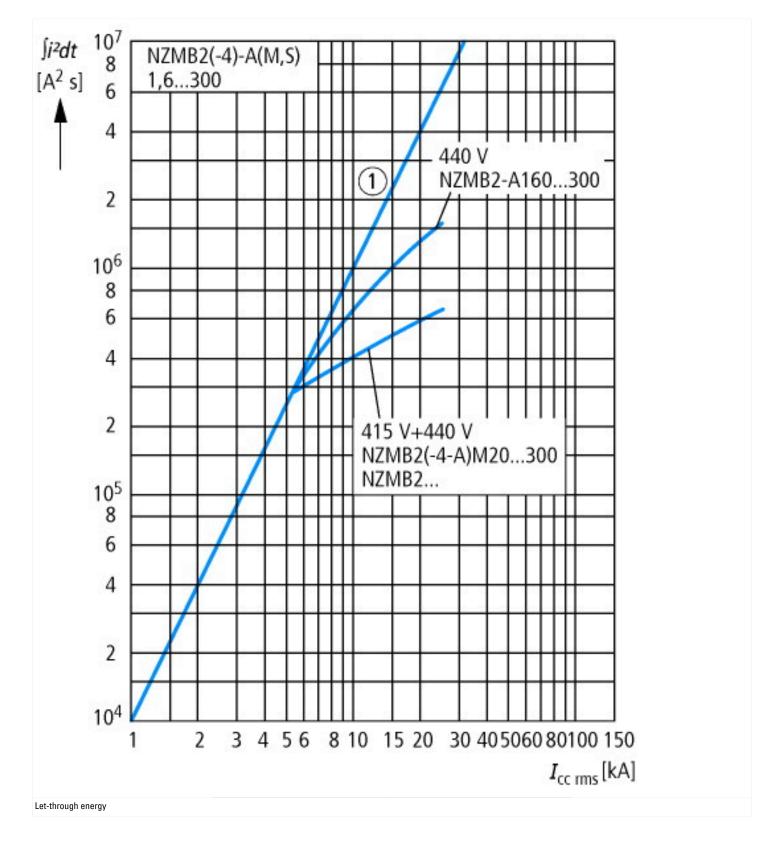
Low-voltage industrial components (EG000017) / Power circuit-breaker for trafo/generator/installation prot. (EC000228)

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@ss8.1-27-37-04-09 [AJZ716010])

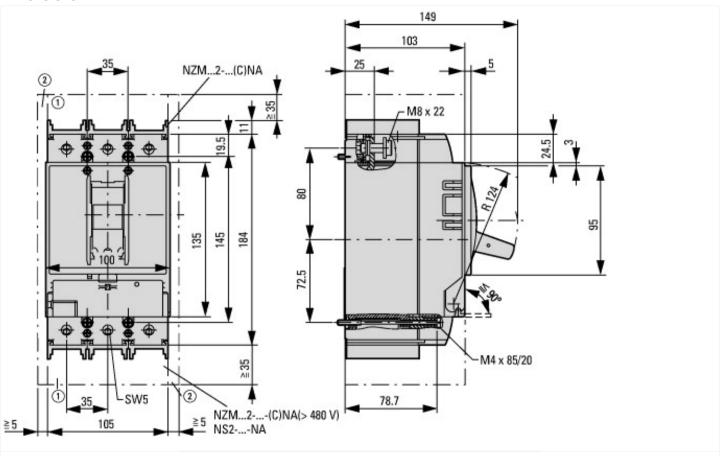
Rated permanent current lu A 200 Rated voltage 40 404 40 404 Rated voltage 40 404 25 Overload release current setting 60 20 10 20 Adjustment range sont-term delayed short-circuit release 60 20 200 - 2000 Adjustment range undelayed short-circuit release 70 20 20 200 - 2000 Adjustment range undelayed short-circuit release 80 20 20 200 - 2000 Adjustment range undelayed short-circuit release 80 20 20 200 - 2000 Tiege are de arth fault protection 80 20 20 200 - 2000 Type of electrical connection of main circuit 80 20 20 200 - 2000 Suitable for DIN rail (top hat rail) mounting 80 20 20 200 20 Number of auxiliary contacts as normally closed contact 90 20 200 20 Number of auxiliary contacts as change-over contact 90 20 200 20 With under voltage release 90 20 200 20 With under voltage release 90 20 200 20 Vibrougher voltage release 90 20 20 20 20 Type of control element 90 20 20 <th>protection (ecl@ss8.1-27-37-04-09 [AJZ716010])</th> <th></th> <th></th>	protection (ecl@ss8.1-27-37-04-09 [AJZ716010])		
Rated short-circuit breaking capacity lou at 400 V, 50 Hz kA 5 Overload release current setting A 160 - 200 Adjustment range short-term delayed short-circuit release A 0 - 0 Adjustment range undelayed short-circuit release A 1200 - 2000 Integrated earth fault protection B No Type of electrical connection of main circuit Screw connection Device construction Built-in device fixed built-in technique DIN rail (top hat rail) mounting optional Yes Number of auxiliary contacts as normally closed contact Yes Number of auxiliary contacts as change-over contact Yes Switched-off indicator available Yes With under voltage release No Number of poles 3 Position of connection for main current circuit Yes Type of control element Rocker lever Complete device with protection unit Yes Motor drive integrated Yes Motor drive pitonal Yes	Rated permanent current lu	Α	200
Overload release current setting A 160 - 200 Adjustment range short-term delayed short-circuit release A 0 - 0 Adjustment range undelayed short-circuit release A 1200 - 2000 Integrated earth fault protection B A 1200 - 2000 Type of electrical connection of main circuit Screw connection Screw connection Device construction Built-in device fixed built-in technique Corew connection DIN rail (top hat rail) mounting optional Ves Ves Number of auxiliary contacts as normally closed contact Ves 0 Number of auxiliary contacts as change-over contact Ves 0 Number of auxiliary contacts as change-over contact No No With under voltage release No No Number of poles 3 Screw connection for main current circuit Type of control element Font side Font side Complete device with protection unit Roser lever Roser lever Motor drive integrated No No	Rated voltage	V	440 - 440
Adjustment range short-term delayed short-circuit release Adjustment range undelayed short-circuit release Adjustment range undelayed short-circuit release Integrated earth fault protection Type of electrical connection of main circuit Device construction Bevice construction Built-in device fixed built-in technique Suitable for DIN rail (top hat rail) mounting DIN rail (top hat rail) mounting optional Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as change-over contact Number of pausiliary contacts as change-over contact Number of poles Number of poles No No No No No No No No No N	Rated short-circuit breaking capacity Icu at 400 V, 50 Hz	kA	25
Adjustment range undelayed short-circuit release Integrated earth fault protection Type of electrical connection of main circuit Device construction Suitable for DIN rail (top hat rail) mounting DIN	Overload release current setting	Α	160 - 200
Integrated earth fault protection Type of electrical connection of main circuit Device construction Suitable for DIN rail (top hat rail) mounting DIN rail (top hat rail) mounting optional Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as normally closed contact Number of auxiliary contacts	Adjustment range short-term delayed short-circuit release	Α	0 - 0
Type of electrical connection of main circuit Device construction Device construction Suitable for DIN rail (top hat rail) mounting DIN rail (top hat rail) mounting optional Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Switched-off indicator available Number of poles Number of poles Number of poles Number of poles Position of connection for main current circuit Type of control element Complete device with protection unit Motor drive integrated Motor drive optional	Adjustment range undelayed short-circuit release	Α	1200 - 2000
Device construction Suitable for DIN rail (top hat rail) mounting DIN rail (top hat rail) mounting optional Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Number of pindicator available No No No No No No No No No N	Integrated earth fault protection		No
Suitable for DIN rail (top hat rail) mounting DIN rail (top hat rail) mounting optional Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Number of puxiliary contacts as change-over contact Number of puxiliary contacts as change-over contact Number of poss No	Type of electrical connection of main circuit		Screw connection
DIN rail (top hat rail) mounting optional Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as change-over contact No Switched-off indicator available No No Number of poles No No No No No No No No No N	Device construction		Built-in device fixed built-in technique
Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact No Number of indicator available No No Number of poles No Number of poles Position of connection for main current circuit Type of control element Complete device with protection unit Motor drive integrated No No No Yes Motor drive optional	Suitable for DIN rail (top hat rail) mounting		No
Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Switched-off indicator available With under voltage release No Number of poles Position of connection for main current circuit Type of control element Complete device with protection unit Motor drive integrated Motor drive optional	DIN rail (top hat rail) mounting optional		Yes
Number of auxiliary contacts as change-over contact Switched-off indicator available With under voltage release No Number of poles Position of connection for main current circuit Type of control element Complete device with protection unit Motor drive integrated Motor drive optional	Number of auxiliary contacts as normally closed contact		0
Switched-off indicator available With under voltage release No Number of poles Position of connection for main current circuit Type of control element Complete device with protection unit Motor drive integrated Motor drive optional	Number of auxiliary contacts as normally open contact		0
With under voltage release No Number of poles Position of connection for main current circuit Type of control element Complete device with protection unit Motor drive optional No No No No No No No No No N	Number of auxiliary contacts as change-over contact		0
Number of poles Position of connection for main current circuit Type of control element Complete device with protection unit Motor drive optional Substitution of connection for main current circuit Rocker lever Yes No Yes Yes	Switched-off indicator available		No
Position of connection for main current circuit Type of control element Complete device with protection unit Motor drive optional Front side Rocker lever Yes No Yes Yes	With under voltage release		No
Type of control element Complete device with protection unit Motor drive optional Rocker lever Yes No Yes	Number of poles		3
Complete device with protection unit Notor drive integrated Motor drive optional No Yes No Yes	Position of connection for main current circuit		Front side
Motor drive integrated No Yes	Type of control element		Rocker lever
Motor drive optional Yes	Complete device with protection unit		Yes
	Motor drive integrated		No
Degree of protection (IP) IP20	Motor drive optional		Yes
	Degree of protection (IP)		IP20



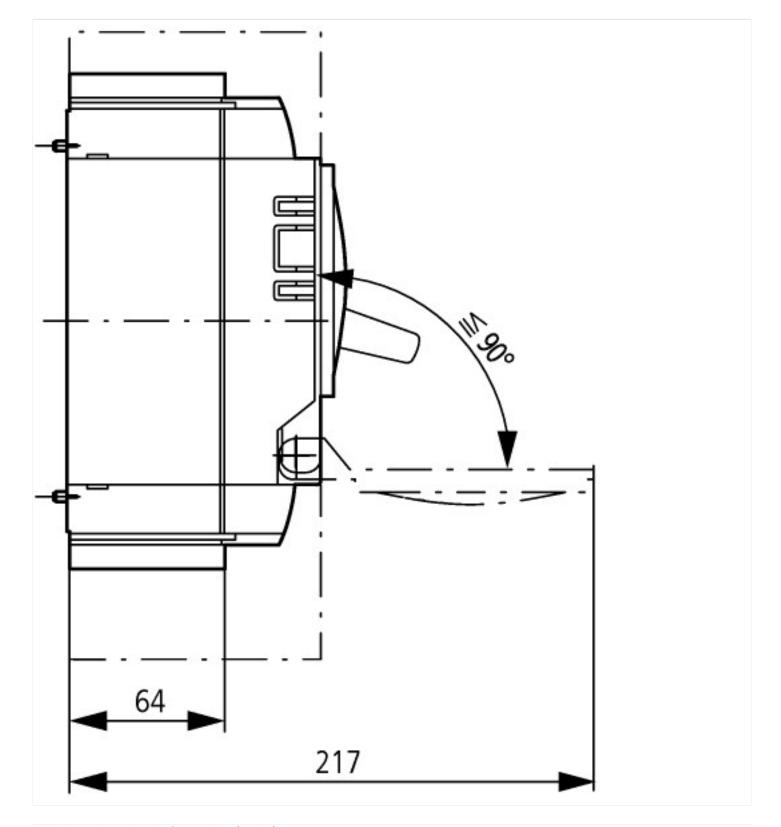




Dimensions



Blow out area, minimum clearance to adjacent parts
 Minimum clearance to adjacent parts



Additional product information (links)

tuditional product information (mixe)				
IL01206006Z (AWA1230-1916) Circuit-Breaker, basic unit				
IL01206006Z (AWA1230-1916) Circuit-Breaker, basic unit	ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL01206006Z2015_11.pdf			
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			