



Circuit-breaker 3p systems/cable prot.

Part no.

NZMH3-AE400

Article no.

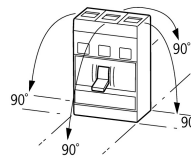
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Delivery programme

Range			Circuit-breaker
Protective function			System and cable protection
Standard/Approval			IEC
Installation type			Fixed mounted
Release system			Electronic release
Construction size			NZM3
Description			R.m.s. value measurement and "thermal memory"
Number of conductors			3 pole
Standard equipment			Screw connection
Switching capacity			
400/415 V 50/60 Hz	I_{cu}	kA	150
Rated current = rated uninterrupted current			
Rated current = rated uninterrupted current	$I_n = I_u$	A	400
Setting range			
Overload trip			
Overload releases	I_r	A	200 - 400
Short-circuit releases			
Non-delayed	$I_i = I_n \times \dots$		2 - 11

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		°C	
Ambient temperature, storage		°C	- 40 - + 80
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 VDE 0106 Part 101 and Part 101/A1			
Between auxiliary contacts and main contacts		V AC	500
between the auxiliary contacts		V AC	300
Weight		kg	6.34
Mounting position			
Mounting position			Vertical and 90° in all directions  With residual-current release XFI: - NZM1, N1, NZM2, N2: vertical and 90° in all directions - NZM1, N1, NZM2, N2: vertical, 90° right/left with withdrawable unit: - NZM3, N3: vertical, 90° 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)			Weight Temperature dependency, Derating Effective power loss

Circuit-breakers

Rated current = rated uninterrupted current	$I_n = I_u$	A	400
Rated surge voltage invariability	U_{imp}		
Main contacts		V	8000
Auxiliary contacts		V	6000
Rated operational voltage	U_e	V AC	690
Overvoltage category/pollution degree			III/3
Rated insulation voltage	U_i	V	1000
For use in IT electrical power networks		V	690

Switching capacity

Rated short-circuit making capacity	I_{cm}		
240 V	I_{cm}	kA	330
400/415 V	I_{cm}	kA	330
440 V 50/60 Hz	I_{cm}	kA	286
525 V 50/60 Hz	I_{cm}	kA	143
690 V 50/60 H	I_c	kA	74
Rated short-circuit breaking capacity I_{cn}	I_{cn}		
I_{cu} to IEC/EN 60947 test cycle O-t-CO	I_{cu}	kA	
240 V 50/60 Hz	I_{cu}	kA	150
400/415 V 50/60 Hz	I_{cu}	kA	150
440 V 50/60 Hz	I_{cu}	kA	130
525 V 50/60 Hz	I_{cu}	kA	65
690 V 50/60 Hz	I_{cu}	kA	35
I_{cs} to IEC/EN 60947 test cycle O-t-CO-t-CO	I_{cs}	kA	
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	33
690 V 50/60 Hz	I_{cs}	kA	9
			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	3.3
t = 1 s	I_{cw}	kA	3.3
Utilization category to IEC/EN 60947-2			A
Rated making and breaking capacity			
Rated operational current	I_e	A	
AC-1			
400 V	I_e	A	630
415 V	I_e	A	500
690 V	I_e	A	630
AC--3			
400 V	I_e	A	400
415 V	I_e	A	400
690 V	I_e	A	400
Lifespan, mechanical(of which max. 50 % trip by shunt/undervoltage release)	Operations		15000
Lifespan, electrical			

AC-1			
400 V V 50/60 Hz	Operations		5000
415 V V 50/60 Hz	Operations		5000
690 V 50/60 Hz	Operations		3000
AC--3			
400 V 50/60 Hz	Operations		2000
415 V 50/60 Hz	Operations		2000
690 V 50/60 Hz	Operations		2000
Max. operating frequency		Ops/h	60
Current heat losses per pole at I _u are based on the maximum rated operational current of the frame size.		W	31
			For current heat loss per pole the specification refers to the maximum rated operational current of the frame size.
Total downtime in a short-circuit		ms	< 10

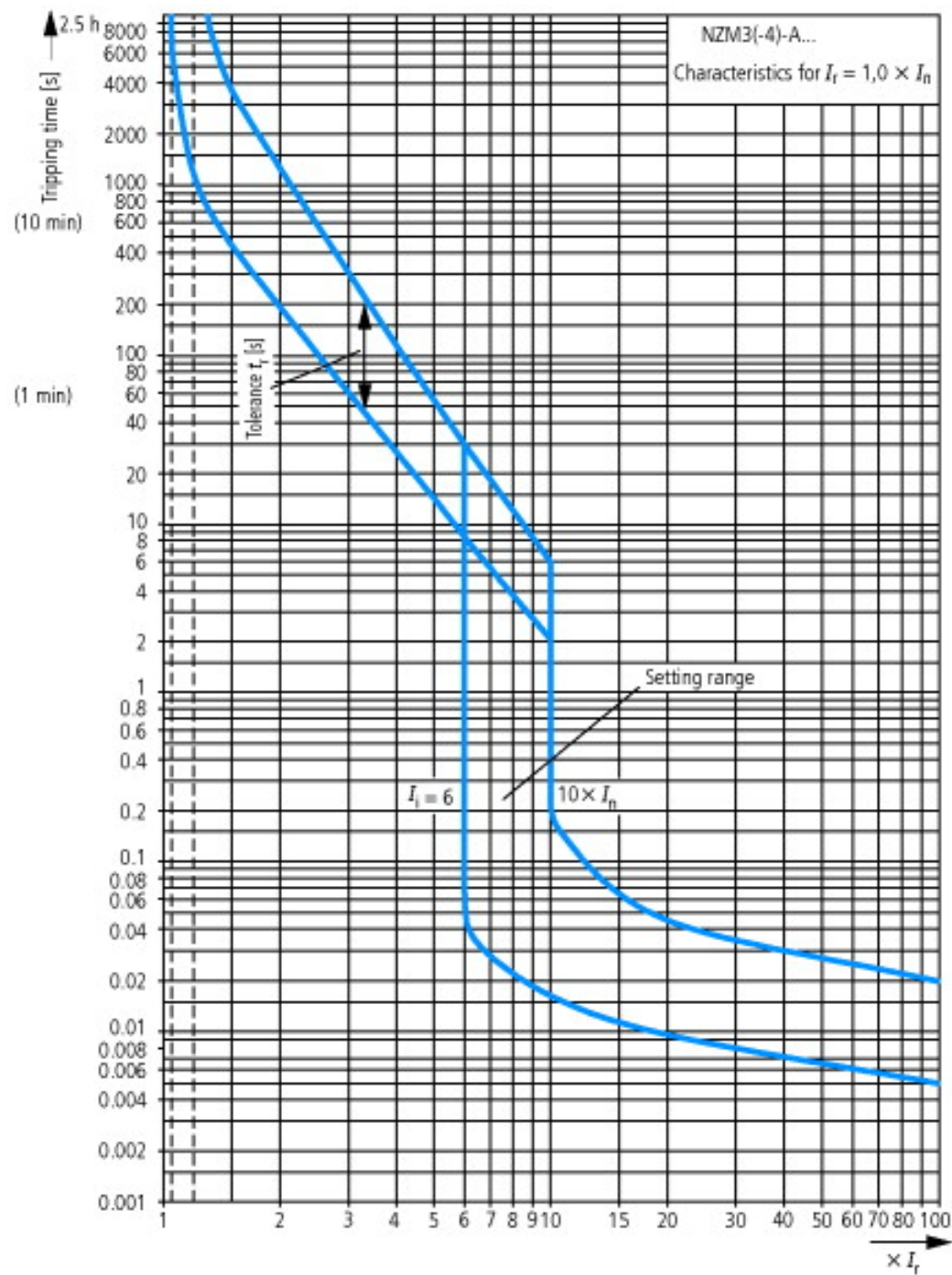
Terminal capacity

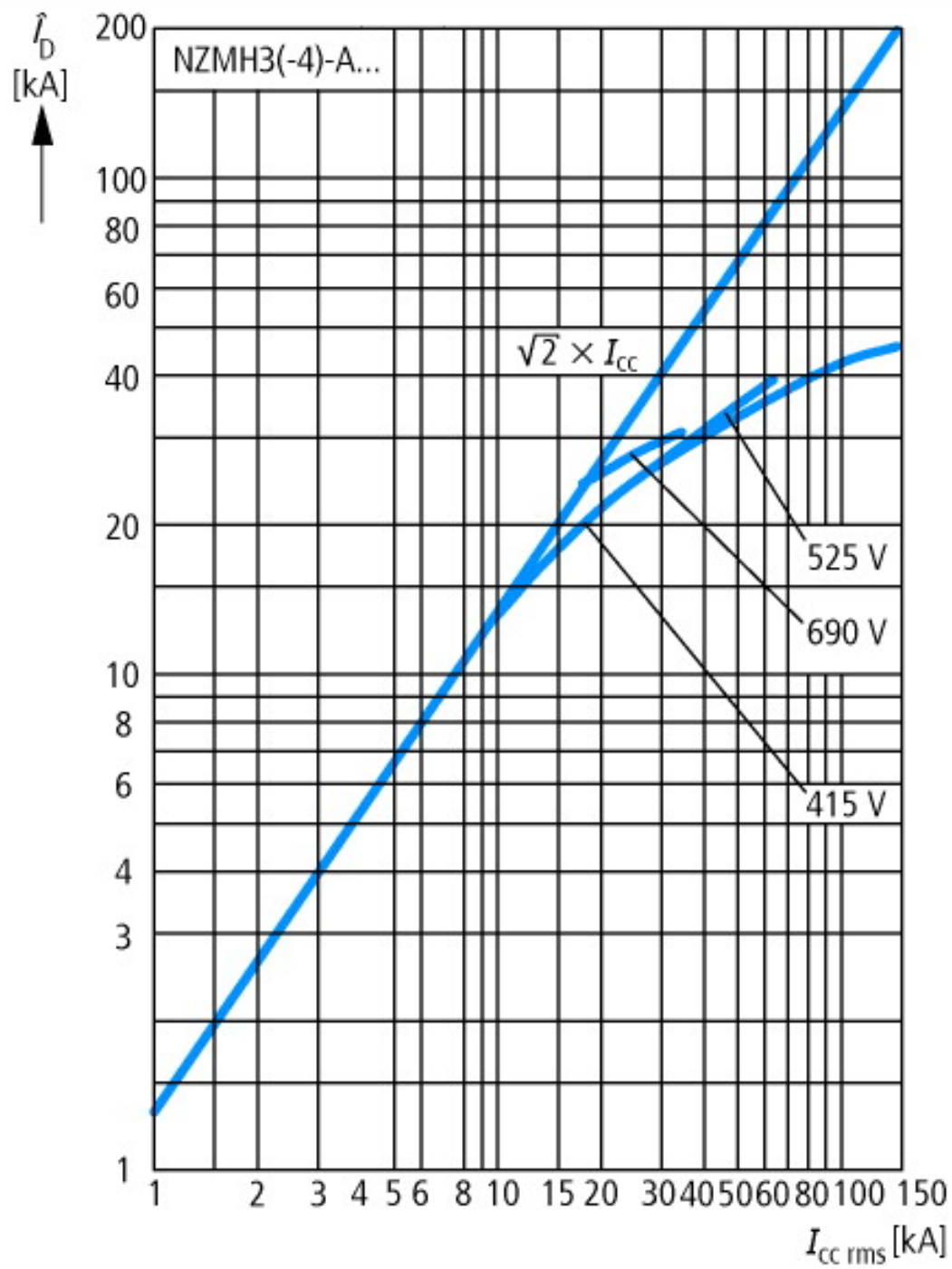
Standard equipment			Screw connection
Overview			Basic equipment Box terminal ● - - - Screw connection - ● ● ● Accessories Box terminal - ● ● - Screw connection ● - - ● Tunnel terminal ● ● ● ● Connection on rear flat conductor terminal ● ● ● ● Flat conductor terminal - - - ●
Round copper conductor			
Box terminal			
Solid		mm ²	2 x 16
Stranded		mm ²	1 x (35 - 240) 2 x (25 - 120)
Tunnel terminal			
Solid		mm ²	1 x (16 - 185)
Stranded		mm ²	
Stranded		mm ²	1 x (25 - 185)
Double hole fitting		mm ²	1 x (50 - 240) 2 x (50 - 240)
Bolt terminal and rear-side connection			
Direct on the switch			
Solid		mm ²	1 x 16 2 x 16
Stranded		mm ²	1 x (25 - 240) 2 x (25 - 240)
Connection width extension		mm ²	
Connection width extension		mm ²	2 x 300
Al conductors, Cu cable			
Solid		mm ²	1 x 16
Stranded		mm ²	
Stranded		mm ²	1 x (25 - 185) In base alla casa produttrice dei cavi, collegabile fino a 240 mm²
Double hole fitting		mm ²	1 x (50 - 240) 2 x (50 - 240)
Bolt terminal and rear-side connection			
Flat copper strip, with holes	min.	mm	6 x 16 x 0.8
Flat copper strip, with holes	max.	mm	10 x 32 x 1.0 + 5 x 32 x 1.0

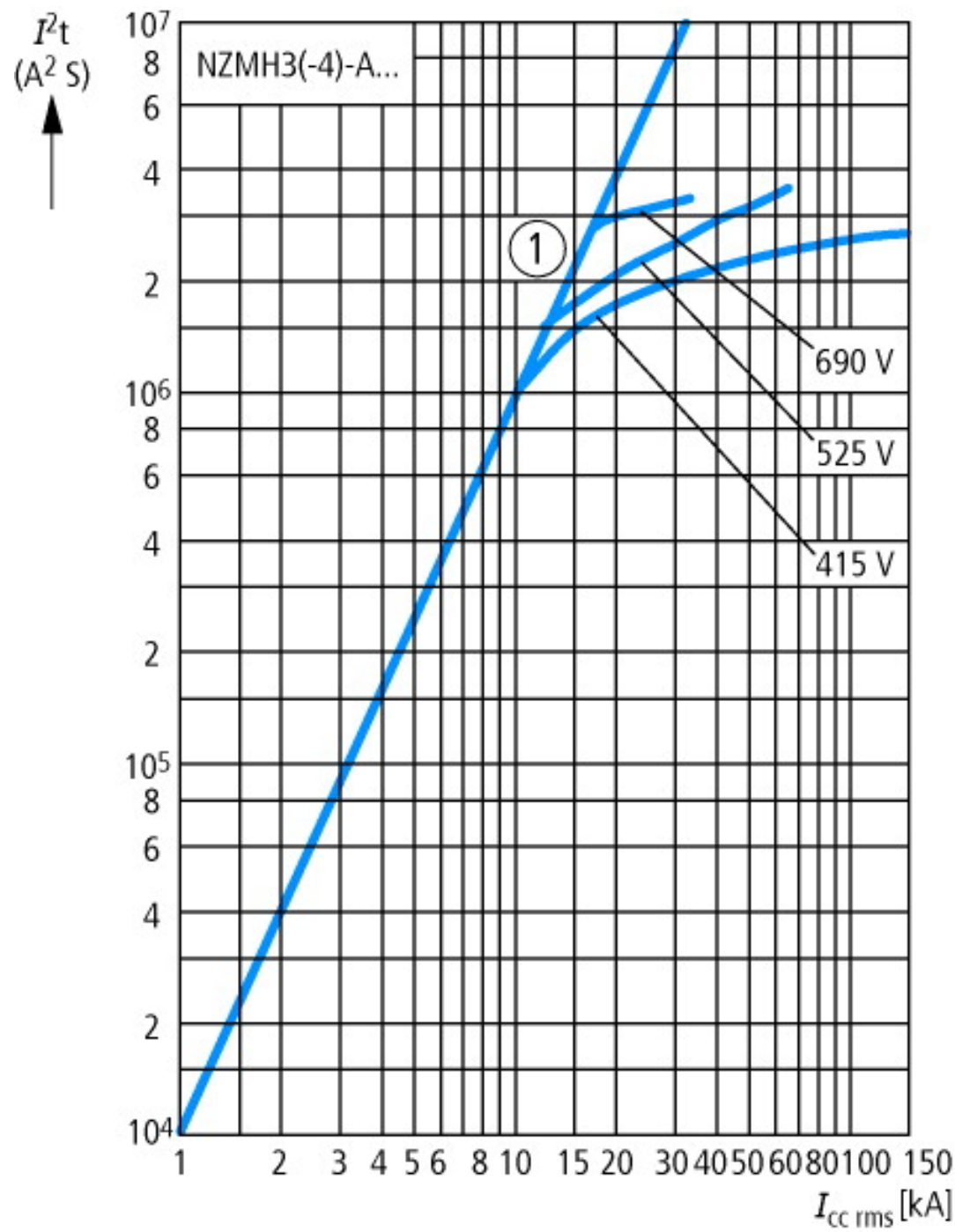
Connection width extension		mm ²	(2 x) 10 x 50 x 1.0
Cu strip (number of segments x width x segment thickness)			
Box terminal			
	min.	mm ²	6 x 16 x 0.8
	max.	mm ²	10 x 24 x 1.0 + 5 x 24 x 1.0 (2 x) 8 x 24 x 1.0
Bolt terminal and rear-side connection			
Flat copper strip, with holes	min.	mm	6 x 16 x 0.8
Flat copper strip, with holes	max.	mm	10 x 32 x 1.0 + 5 x 32 x 1.0
Connection width extension		mm ²	(2 x) 10 x 50 x 1.0
Copper busbar (width x thickness)	mm		
Bolt terminal and rear-side connection			
Screw connection			M10
Direct on the switch			
	min.	mm ²	20 x 5
	max.	mm ²	30 x 10 + 30 x 5
Connection width extension		mm ²	
Connection width extension	max.	mm ²	2 x (10 x 50)
Control cables			
		mm ²	1 x (0.75 - 2.5) 2 x (0.75 - 1.5)

Technische Daten nach ETIM 4.0

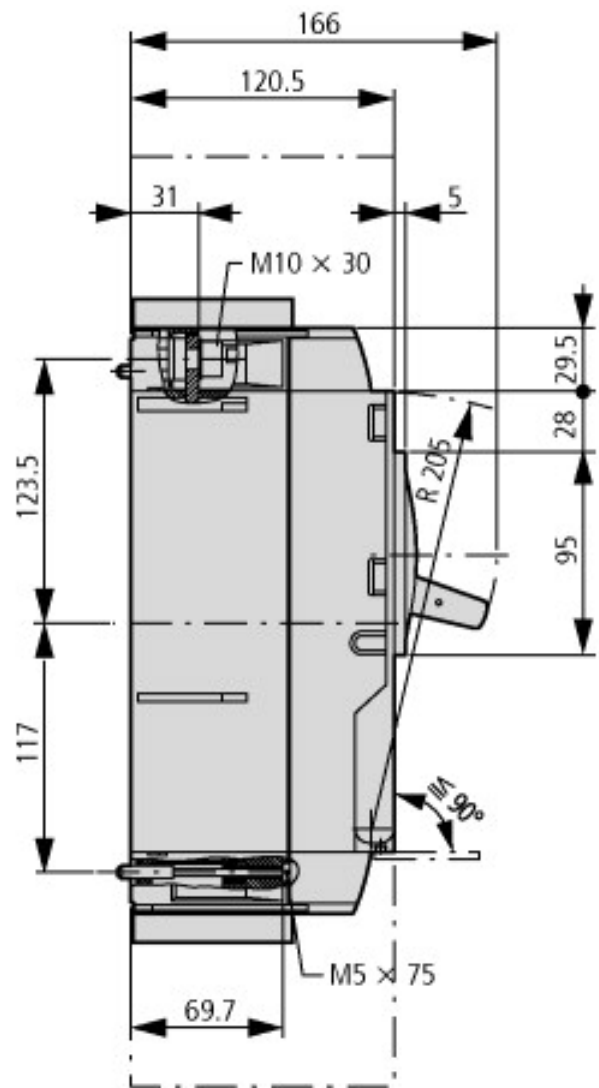
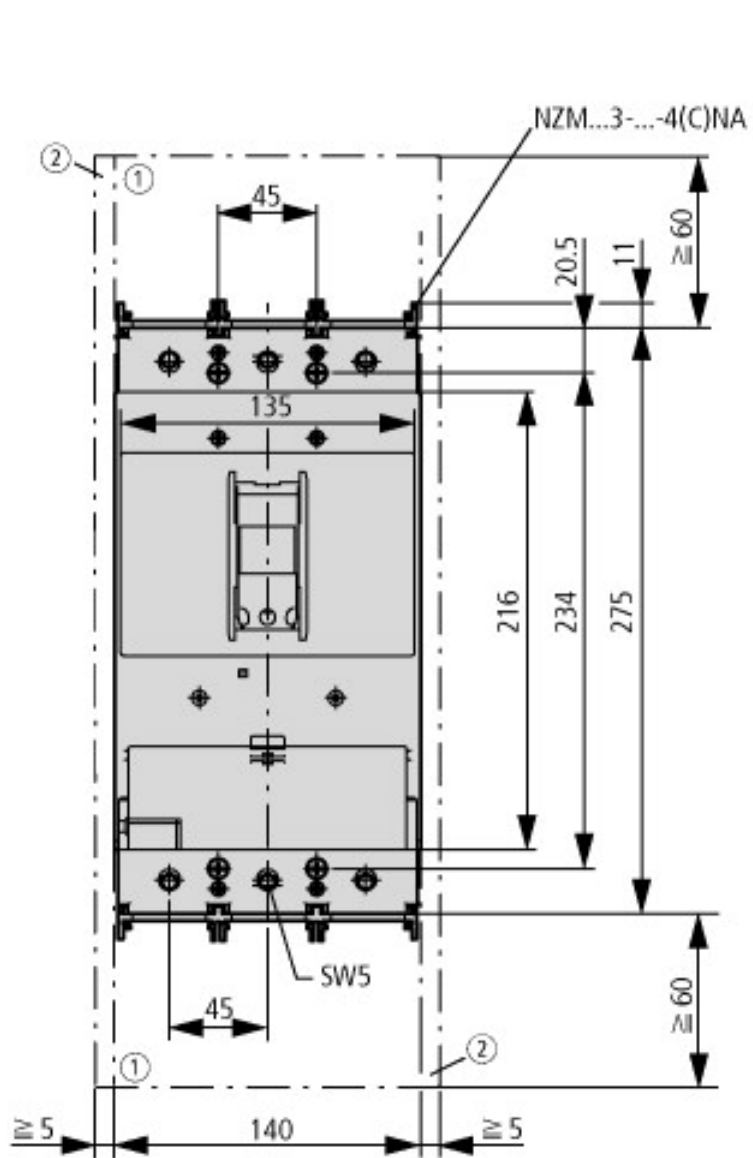
Number of poles			3
Rated uninterrupted current Iu		A	400
Number of auxiliary contacts as N/Cs			0
Number of auxiliary contacts as N/Os			0
Device construction			Built-in device fixed built-in technique
With under voltage release			No
Motor operator optional			YES
Integrated earth fault protection			No
Suitable for DIN rail (top hat rail) mounting			No
Setting range non-delayed short-circuit release		A	4400
Setting range short-term delayed short-circuit release		A	0
Rated short-circuit breaking capacity Icu at 400 V, 50 Hz		kA	150
Switched-off indicator available			No
Type of control element			Toggle lever
Connection type main current circuit			Screw connection
Motor operator integrated			No
Position of connection for main circuit			Front connection
Protection type (IP)			IP20
Number of auxiliary contacts as changeover contact			0
Setting range of overload releases		A	400



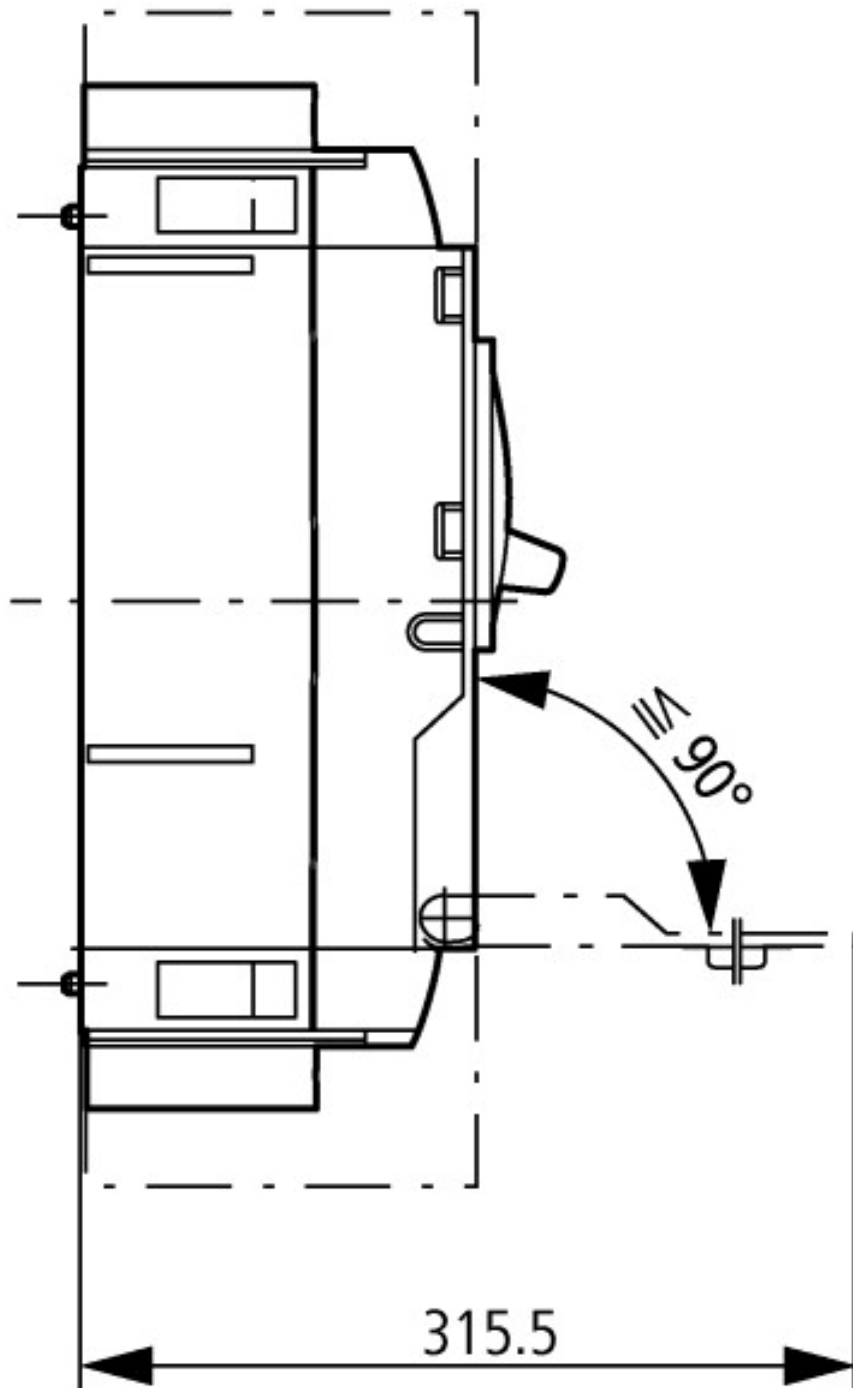




Dimensions



- ① Blow out area, minimum clearance to adjacent parts
- ② Minimum clearance to adjacent parts



Additional product information (links)

IL01208009Z (AWA1230-1992) Circuit-breaker, basic device

ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL01208009Z2010_11.pdf