



Circuit break.3p select.protection

Part no.

NZMN2-VE100

Article no.

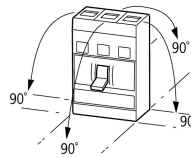
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Delivery programme

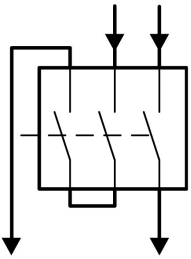
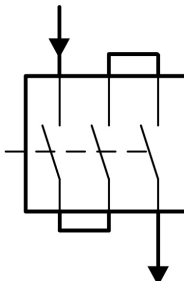
Range			Circuit-breaker
Protective function			Systems, cable, selectivity and generator protection
Standard/Approval			IEC
Installation type			Fixed mounted
Release system			Electronic release
Construction size			NZM2
Description			R.m.s. value measurement and "thermal memory" adjustable time delay setting to overcome current peaks tr: 2 – 20 s at 6 x I _r also infinity (without overload releases) Adjustable delay time tsd: Steps: 0, 20, 60, 100, 200, 300, 500, 750, 1000 ms i ² t constant function: fixed OFF
Number of conductors			3 pole
Standard equipment			Screw connection
Switching capacity			
400/415 V 50/60 Hz	I _{cu}	kA	50
Rated current = rated uninterrupted current			
Rated current = rated uninterrupted current	I _n = I _u	A	100
Setting range			
Overload trip			
Overload releases	I _r	A	50 - 100
Short-circuit releases			
Non-delayed	I _i = I _n x ...		1200 A fixed
Delayed	I _{sd} = I _r x ...		2 - 10

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	2.345
Mounting position			
Mounting position			<p>Vertical and 90° in all directions</p>  <p>With residual-current release XFI:</p> <ul style="list-style-type: none">- NZM1, N1, NZM2, N2: vertical and 90° in all directions- NZM1, N1, NZM2, N2: with plug-in adapter elements: vertical, 90° right/left- NZM1, N1, NZM2, N2: with withdrawable unit:<ul style="list-style-type: none">- NZM3, N3: vertical, 90 ° left- NZM4, N4: vertical- NZM4, N4: 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	100
Rated surge voltage invariability	U_{imp}		
Main contacts		V	8000
Auxiliary contacts		V	6000
Rated operational voltage	U_e	V AC	690
Rated operational voltage	U_e	V DC	750
			<p>1) Details apply for 3 pole system protection circuit-breaker with thermomagnetic release NZMN(H)1(2)(3)-A... to 500 A.</p> <p>For rated operating voltage switching via 3 contacts:</p> <p>DC correction factor for instantaneous release response value: NZM1: 1.25, NZM2: 1.35, NZM3: 1.45</p> <p>Set value for I_i at DC = set value I_i AC/correction factor DC</p> <div> <div> <p>Switching of one pole via two series contacts</p>  </div> <div> <p>Switching of one pole via three series contacts</p>  </div> </div>
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	187
400/415 V	I_{cm}	kA	105
440 V 50/60 Hz	I_{cm}	kA	74
525 V 50/60 Hz	I_{cm}	kA	53
690 V 50/60 H	I_c	kA	40
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	85
400/415 V 50/60 Hz	I_{cu}	kA	50
440 V 50/60 Hz	I_{cu}	kA	35
525 V 50/60 Hz	I_{cu}	kA	25
690 V 50/60 Hz	I_{cu}	kA	20
I_{cs} to IEC/EN 60947 test cycle O-t-CO-t-CO	I_{cs}	kA	
240 V 50/60 Hz	I_{cs}	kA	85
400/415 V 50/60 Hz	I_{cs}	kA	50
440 V 50/60 Hz	I_{cs}	kA	35

525 V 50/60 Hz	I _{cs}	kA	25
690 V 50/60 Hz	I _{cs}	kA	5
Maximum low-voltage h.b.c. fuse		A gG/gL	355
			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
Rated making and breaking capacity			
Rated operational current	I _e	A	
AC-1			
400 V	I _e	A	300
415 V	I _e	A	300
690 V	I _e	A	300
AC--3			
400 V	I _e	A	100
415 V	I _e	A	100
690 V	I _e	A	100
Lifespan, mechanical(of which max. 50 % trip by shunt/undervoltage release)	Operations		20000
Lifespan, electrical			
AC-1			
400 V V 50/60 Hz	Operations		10000
415 V V 50/60 Hz	Operations		10000
690 V 50/60 Hz	Operations		7500
AC--3			
400 V 50/60 Hz	Operations		6500
415 V 50/60 Hz	Operations		6500
690 V 50/60 Hz	Operations		5000
Max. operating frequency		Ops/h	120
Current heat losses per pole at I ₀ are based on the maximum rated operational current of the frame size.		W	19
			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

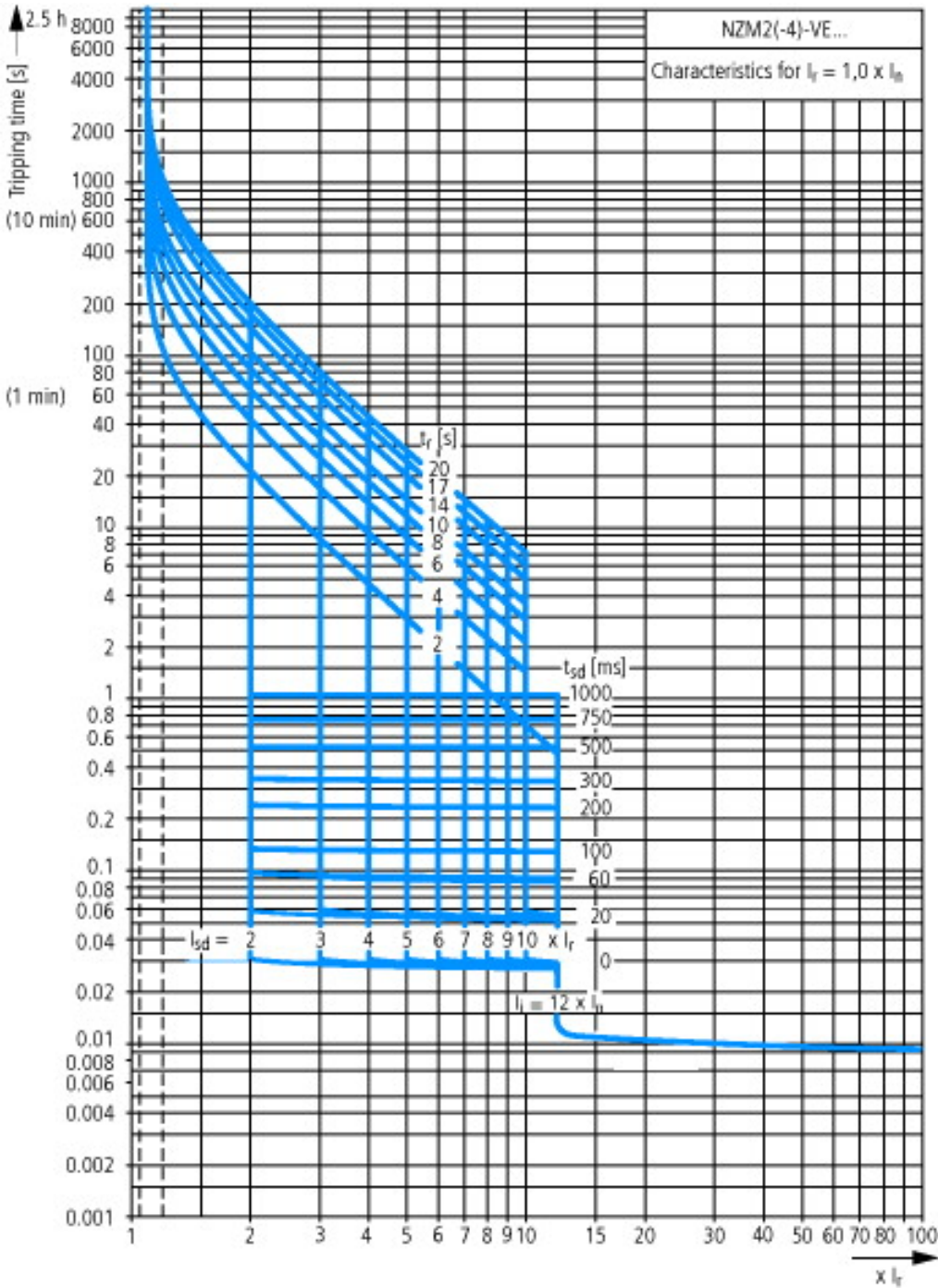
Terminal capacity

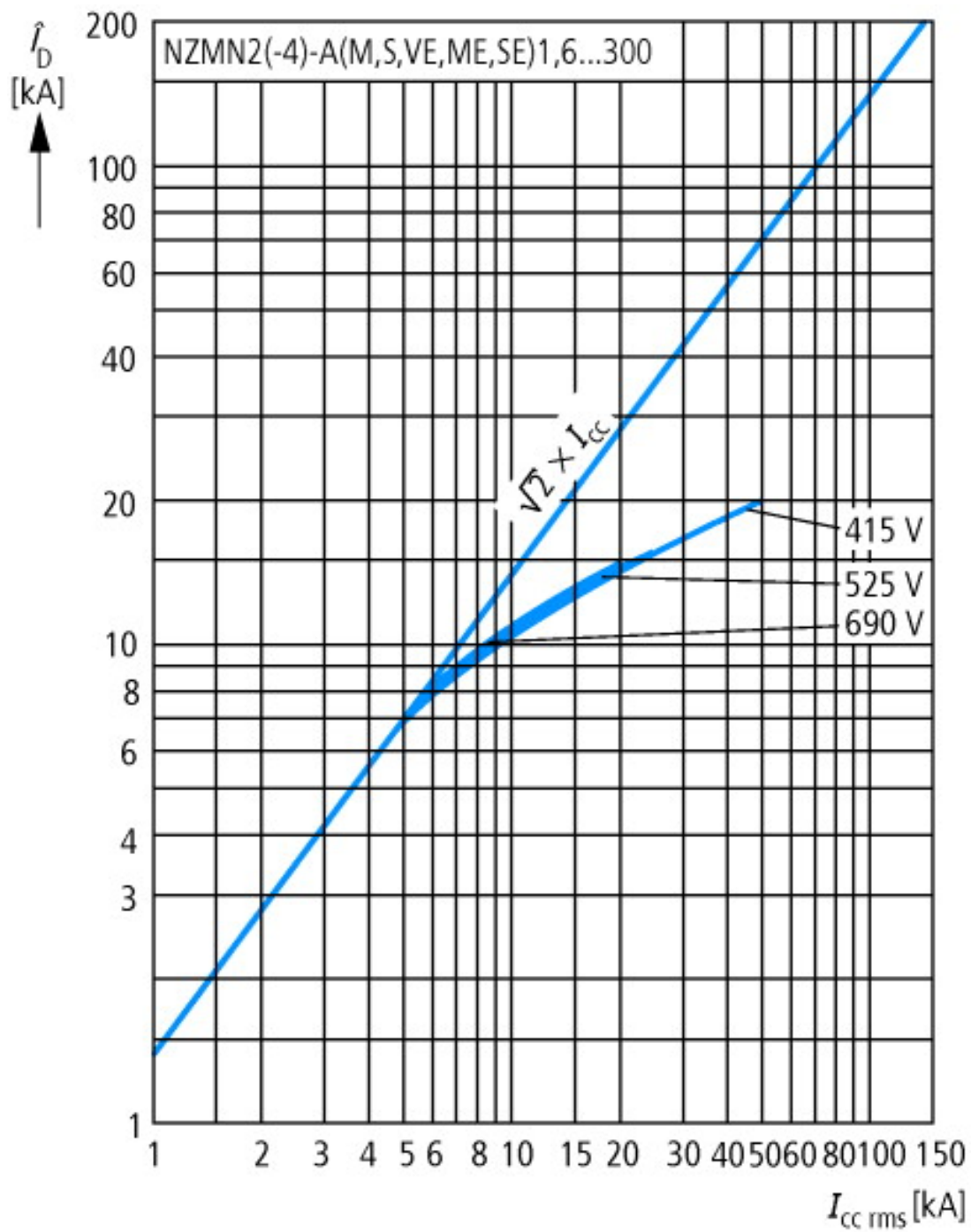
Standard equipment			Screw connection
Overview			<div> <div>Basic equipment</div> <div> <div>Box terminal</div> <div>●</div> <div>-</div> <div>-</div> <div>-</div> </div> <div> <div>Screw connection</div> <div>-</div> <div>●</div> <div>●</div> <div>●</div> </div> </div> <div> <div>Accessories</div> <div> <div>Box terminal</div> <div>-</div> <div>●</div> <div>●</div> <div>-</div> </div> <div> <div>Screw connection</div> <div>●</div> <div>-</div> <div>-</div> <div>●</div> </div> <div> <div>Tunnel terminal</div> <div>●</div> <div>●</div> <div>●</div> <div>●</div> </div> <div> <div>Connection on rear Flat conductor terminal</div> <div>●</div> <div>●</div> <div>●</div> <div>●</div> </div> <div> <div></div> <div>-</div> <div>-</div> <div>-</div> <div>●</div> </div> </div>
Round copper conductor			
Box terminal			
Solid		mm ²	1 x (4 - 16) 2 x (4 - 16)
Stranded		mm ²	1 x (25 - 185) 2 x (25 - 70)
Tunnel terminal			

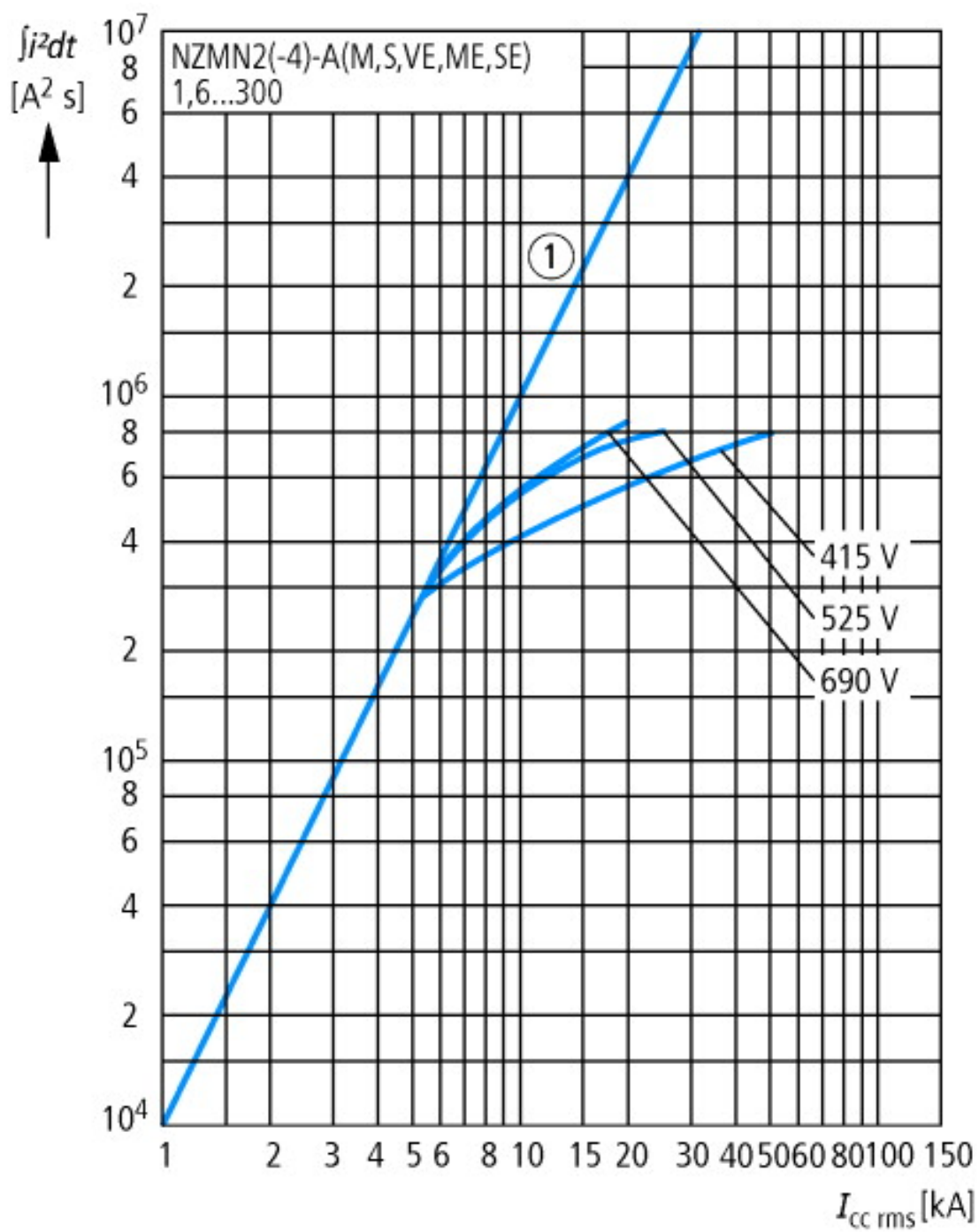
Solid		mm ²	1 x 16
Stranded		mm ²	
Stranded		mm ²	1 x (25 - 185)
Bolt terminal and rear-side connection			
Direct on the switch			
Solid		mm ²	1 x (4 - 16) 2 x (4 - 16)
Stranded		mm ²	1 x (25 - 185) 2 x (25 - 70)
Al conductors, Cu cable			
Solid		mm ²	1 x 16
Stranded		mm ²	
Stranded		mm ²	1 x (25 - 185) je nach Kabelhersteller bis zu 240 mm ² anschließbar
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 16 x 0.8
Cu strip (number of segments x width x segment thickness)			
Box terminal			
	min.	mm ²	2 x 9 x 0.8
	max.	mm ²	10 x 16 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 16 x 0.8
Copper busbar (width x thickness)	mm		
Bolt terminal and rear-side connection			
Screw connection			M8
Direct on the switch			
	min.	mm ²	16 x 5
	max.	mm ²	20 x 5
Control cables			
		mm ²	1 x (0.75 - 2.5) 2 x (0.75 - 1.5)

Technische Daten nach ETIM 4.0

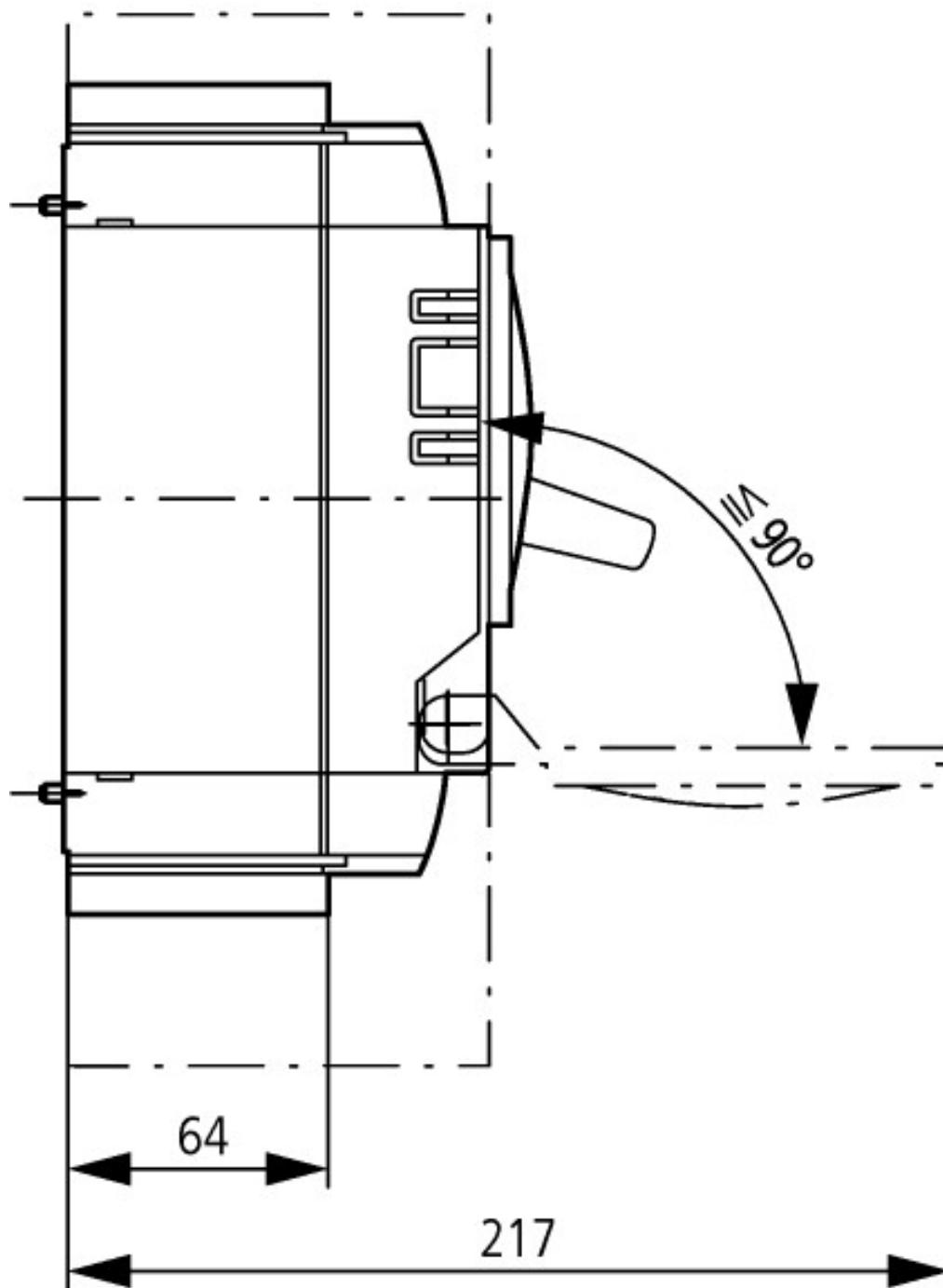
Number of poles			3
Rated uninterrupted current Iu		A	100
Number of auxiliary contacts as N/Cs			0
Number of auxiliary contacts as N/Os			0
Device construction			Built-in device fixed built-in technique
With under voltage release			No
Motor operator optional			YES
Integrated earth fault protection			No
Suitable for DIN rail (top hat rail) mounting			No
Setting range non-delayed short-circuit release		A	1200
Setting range short-term delayed short-circuit release		A	1000
Rated short-circuit breaking capacity Icu at 400 V, 50 Hz		kA	50
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







Dimensions



Additional product information (links)

IL01206006Z (AWA1230-1916) Circuit-breaker, basic device

ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL01206006Z2010_11.pdf