Circ.br.,3p syst.cable protect.terminals

Part no. NZMN2-A200-BT

Article no. 110284

Powering Business Worldwide

An Eaton Brand

Delivery programme

Number of conductors			3 pole
Number of poles			3-pole
			Terminals standard, terminal screws as accessories
Rated current = rated uninterrupted current	$I_n = I_u$	A	200
Setting range			
Overload releases	I_r	A	160 … 200
Short-circuit releases			
Short-circuit releases	I_i	A	1200 … 2000
Release system			Thermomagnetic release
Frame size			NZM2
Standard equipment			Box terminal

Notes

IEC/EN 60947-2

Adjustable overload release I_r

- 0.8 … 1 × I_n (ex-works 0.8 × I_n)

Adjustable short-circuit release I_i

- 6 … 10 × I_n (ex-works 6 × I_n)
  - NZM…-A40: 8 … 10 × I_n (ex-works 8 × I_n)

Fixed short-circuit release I_i

- 350 A at I_n = 20 … 32 A
- 1280 A at I_n = 160 A (NZM1)

Notes

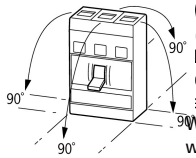
Notes for terminals → 260015

[1] Applies to NZM1

[2] Applies to NZM2

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, according to IEC 60068-2-78 Damp heat, cyclical to IEC 60068-2-30
Ambient temperature		°C	
Ambient temperature, storage		°C	– 40 - + 80
Operation		°C	– 25 … + 70
Mechanical shock resistance (IEC/EN 60068-2-27)			
Shock resistance		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			
Weight		kg	2.345
Mounting position			
Mounting position			Vertical and 90° in all directions

			 With plug-in dapter IZM2, N(S)2: ertical, 90° right/ eft With withdrawable unit NZM3, N(S)3: vertical, 90° left NZM4, N(S)4: vertical with remote operator: NZM2, N(S)2, NZM3, N(S)3, NZM4, N(S)4: vertical and 90° to all directions with residual current release NZM2: vertical and 90° to 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
Lifespan		S	
Releases		Switching operations	
Electrical lifespan at 8 A/230 V AC/70 °C	Operations		7500

Circuit-breakers

Rated impulse withstand voltage U_{imp}	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	187
400/415 V	I_{cm}	kA	105
440 V	I_{cm}	kA	74
525 V	I_{cm}	kA	53
690 V	I_{cm}	kA	40
Rated short-circuit breaking capacity I_{cn}	I_{cn}		
I_{cu} to IEC/EN 60947 operating sequence 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
500 V DC	I_{cu}	kA	30
750 V DC	I_{cu}	kA	30
I_{cu} to IEC/EN 60947 operating sequence 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
525 V 50/60 Hz	I_{cs}	kA	25
690 V 50/60 Hz	I_{cs}	kA	5
690 V AC	I_{cs}	kA	10
Maximum low-voltage h.b.c. fuse		A gG/gL	355
Utilization category to IEC/EN 60947-2			A
Rated short-time withstand current			

t = 0.3 s	I_{cw}	kA	1.9
Rated shorttime withstand current t = 1 s	I_{cw}	kA	1.9
Lifespan, mechanical	Operations		20000
Maximum operating frequency		Ops./h	
Max. operating frequency		Ops/h	120
Lifespan, electrical			
AC-1			
400/415 V 50/60 Hz	Operations		10000
415 V	Operations		10000
690 V 50/60 Hz	Operations		7500
AC--3			
400/415 V 50/60 Hz	Operations		6500
415 V	Operations		6500
690 V 50/60 Hz	Operations		5000
DC – -1			
500 V DC	Operations		7500
750 V DC	Operations		7500
DC – 3			
500 V DC	Operations		3000
750 V DC	Operations		3000
Current heat loss per pole at I_u		W	19
Overload releases	I_r	A	
to IEC/EN 60947, VDE 0660		°C	
Temperature compensation to IEC/EN 60947 Residual error in the range -25 °C/+70 °C (reference temperature 30 °C)		%/K	0
Temperature compensation			0
Total opening delay at short-circuit		ms	< 10

Terminal capacities

Standard equipment			Box terminal
Rated power of coil			
Tunnel terminal			
Solid		mm^2	1 × 16
Copper busbar (width × thickness)	mm		
Bolt terminal and rear-side connection			
Screw connection			M8

Notes

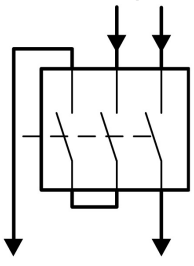
Notes Please enquire for rated operational DC voltage values
For NA switch switching capacity with NZM…1-…(C)NA the following applies: 480 Y/277 V from 60 A
For AC--3 rated operational current with NZM4 the following applies: 400 V: max. 650 kW; 690 V: max. 600 kW
For NA switch switching capacity with NZMH2 and NZMH3 the following applies: Current Limiting switch to UL489
For temperature compensation of overload releases, the following applies: at NZM...1-...160: 0.4
For NA switch switching capacity with NZMH4 at 240 V 60 Hz the following applies: on request
For current heat loss per pole the specification refers to the maximum nominal current of the frame size.

For rated operational voltage switching on 3 contacts the following applies: DC correction factor for instantaneous release response value NZM1: 1.25, NZM2: 1.35, NZM3: 1.45

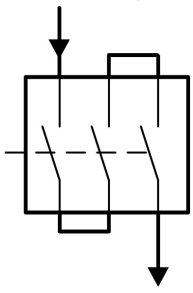
Setting for I_i at DC = setting I_i AC/correction factor DC

Details apply for 3-pole system protection circuit-breaker with thermomagnetic release NZM(H)1(2)-A…

Switching of one pole via two series contacts



Switching of one pole via three series contacts

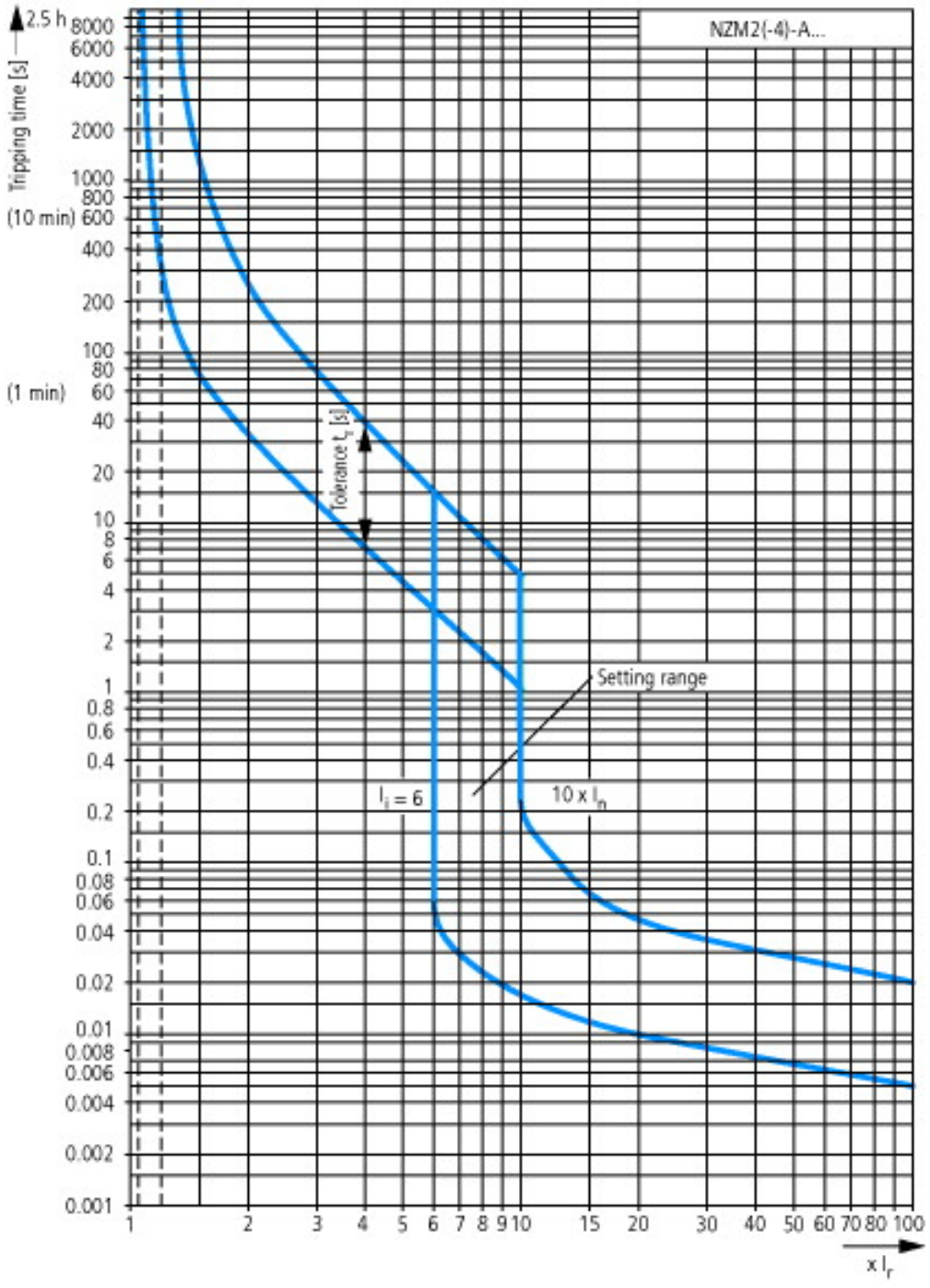


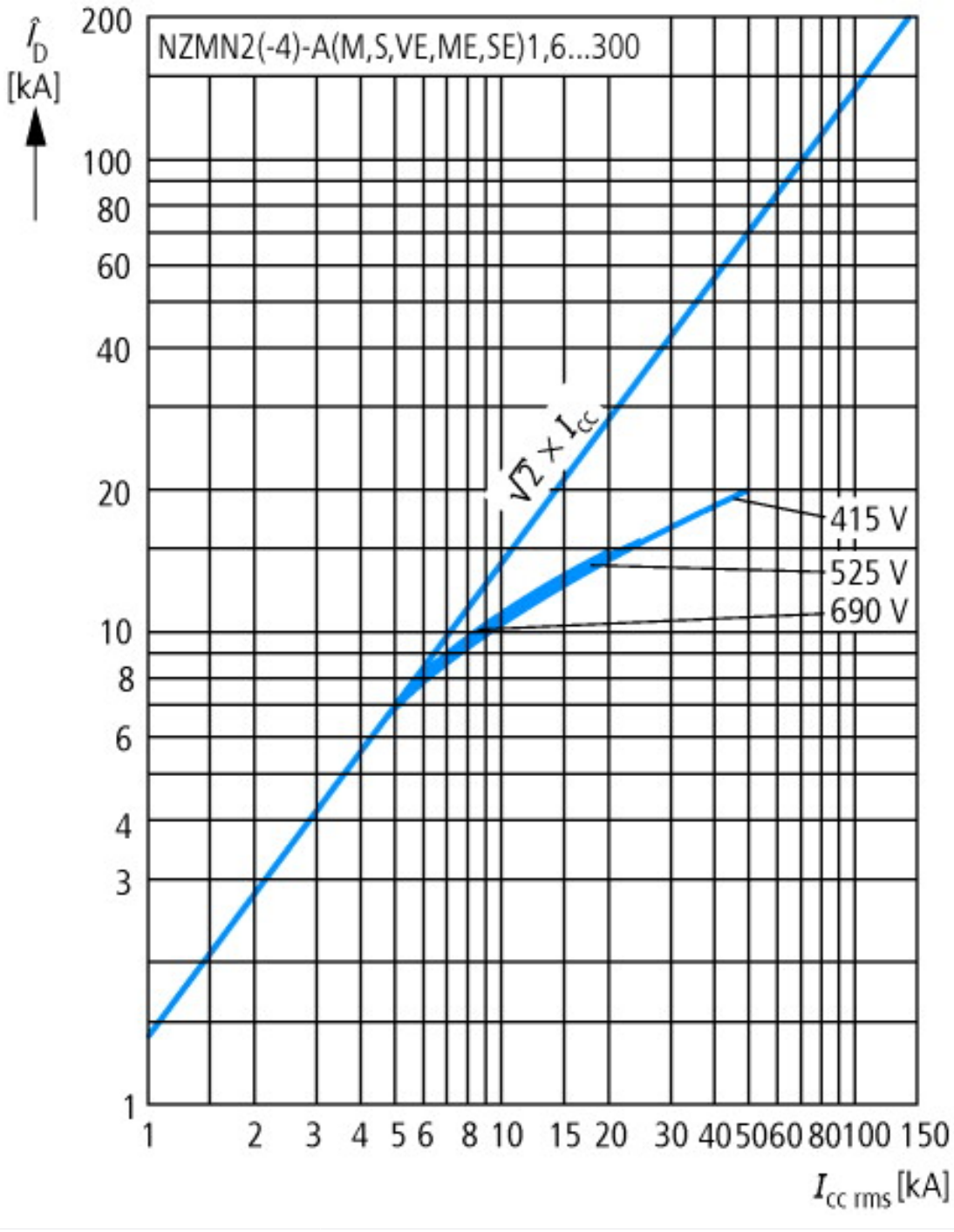
For NA switch switching capacity with NZM…1-…(C)NA the following applies: 480 Y/277 V from 60 A
For AC-3 rated operational current with NZM4 the following applies: 400 V: max. 650 kW; 690 V: max. 600 kW
For NA switch switching capacity with NZML2 and NZML3 the following applies: Current Limiting switch to UL489
Only valid for NZM…A… with thermal-magnetic trip block
For NA switch switching capacity with NZMH4 at 240 V 60 Hz the following applies: on request
For current heat loss per pole the specification refers to the maximum nominal current of the frame size.
For 3-pole system protection circuit-breaker the following applies: 400/415 V 7500 switching operations

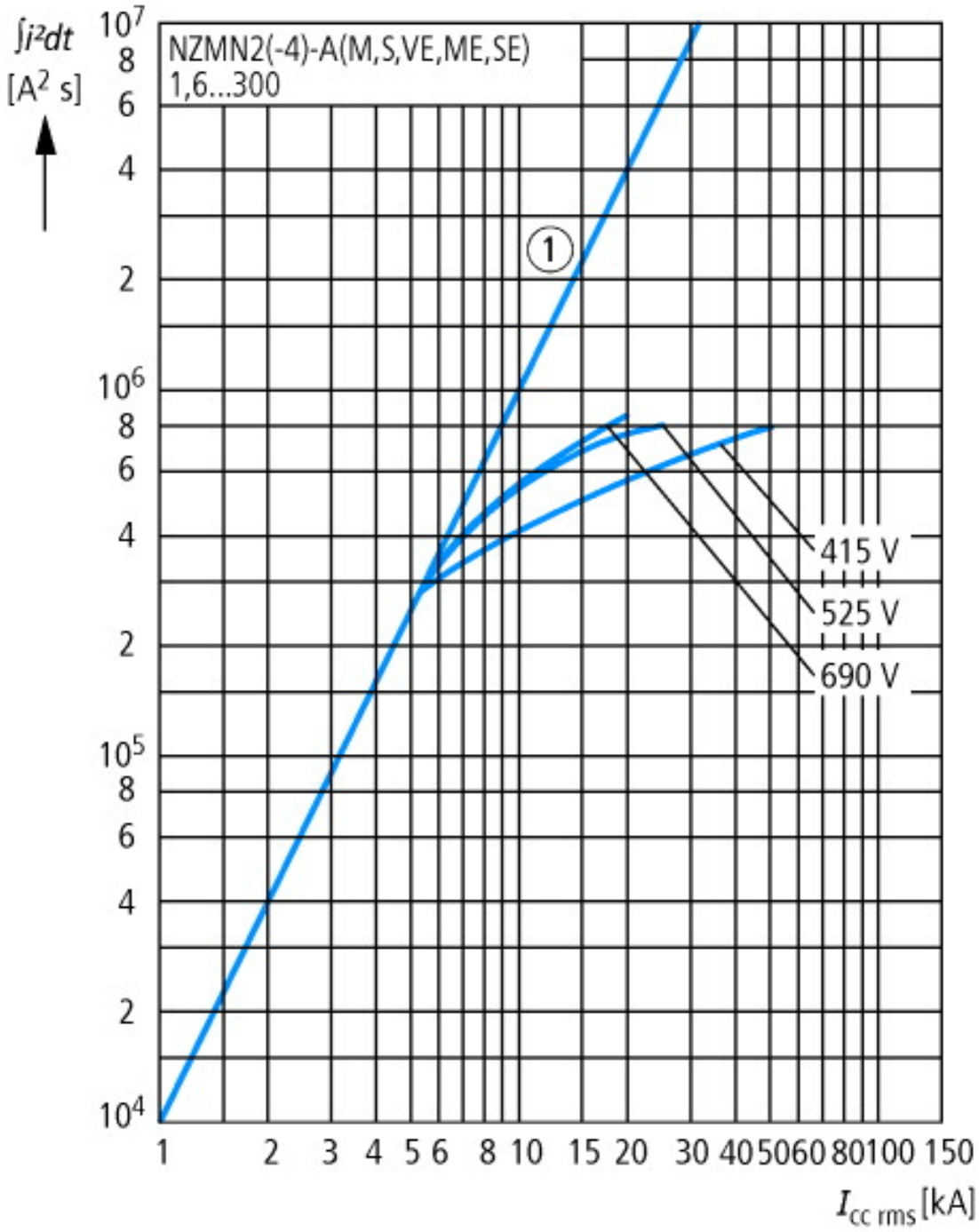
Maximum back-up fuse, if the expected short-circuit currents at the installation location exceed the switching capacity of the circuit-breaker.

1600 A

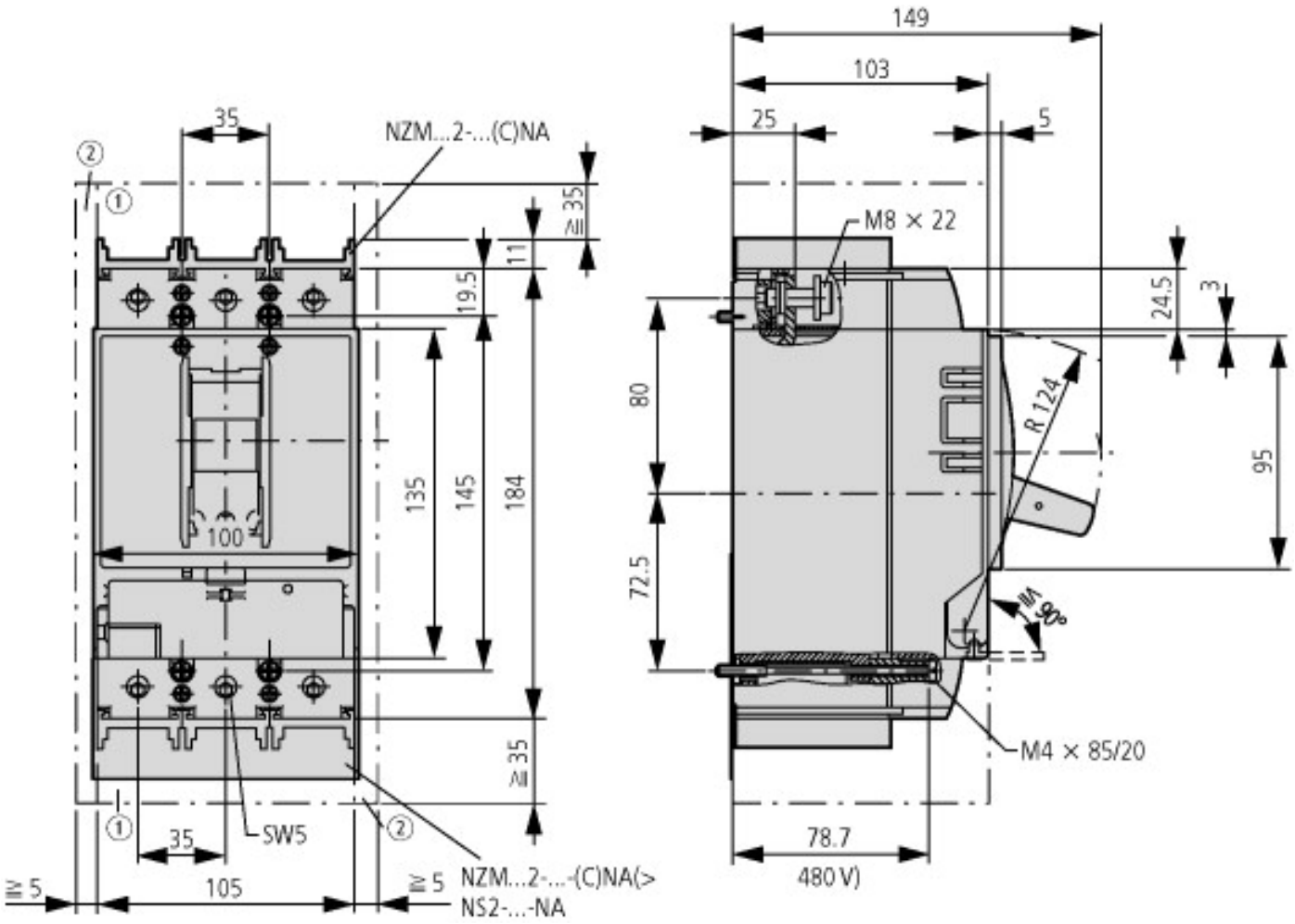
Higher switching capacity on request




$\hat{I}_D$
[kA]
NZMN2(-4)-A(M,S,VE,ME,SE)1,6...300
200
100
80
60
40
20
10
8
6
4
3
1
$\sqrt{2} \times I_{cc}$
415 V
525 V
690 V
1
2
3
4
5
6
8
10
15
20
30
40
50
60
80
100
150
$I_{cc\ rms}$ [kA]

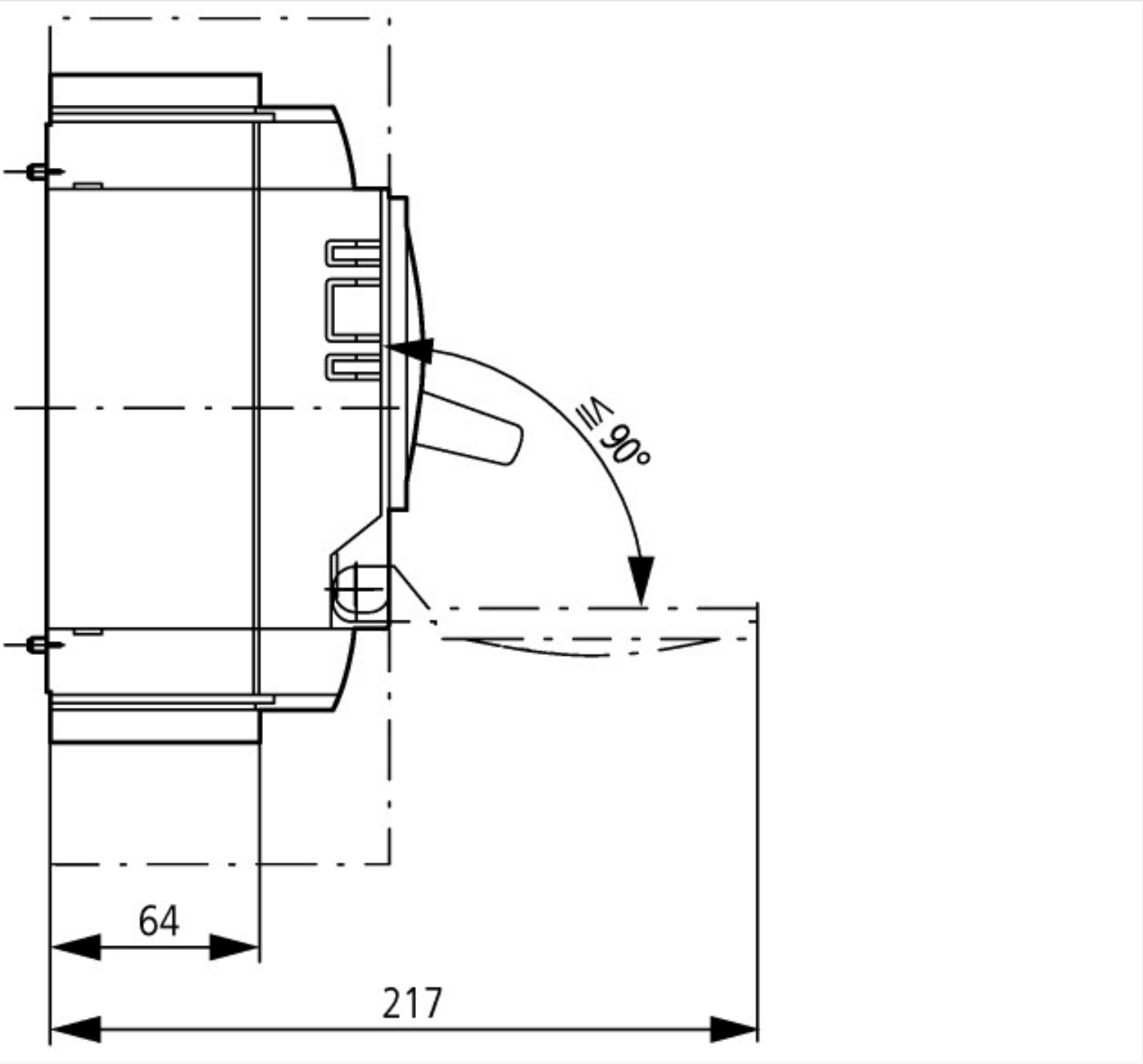


Dimensions



① Blow out area, minimum distance to other parts ≧ 35 mm

② Minimum distance to adjacent parts ≧ 5 mm



Additional product information (links)