



Circuit br.,3p motor protection

Part no.

NZMB1-M50

Article no.

265711

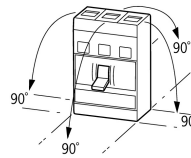


Test Auslauftyp

Delivery programme

Range			Circuit-breaker
Protective function			Motor protection
Standard/Approval			IEC
Installation type			Fixed mounted
Release system			Thermomagnetic release
Construction size			NZM1
Description			With phase-failure sensitivity Tripping class 10 A IEC/EN 60947-4-1, IEC/EN 60947-2 The circuit-breaker fulfills all requirements for AC-3 switching category.
Number of conductors			3 pole
Standard equipment			Box terminal
Switching capacity			
400/415 V 50/60 Hz	I_{cu}	kA	25
Rated current = rated uninterrupted current	$I_n = I_u$	A	50
Setting range			
Overload trip			
Overload releases	I_r	A	40 - 50
Short-circuit releases			
Non-delayed	$I_i = I_n \times \dots$		8 - 14
Motor rating AC-3 50/60 Hz			
400 V	P	kW	22
Rated operational current			
400 V	I_e	A	41

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	1.046
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 with plug-in adapter elements - 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	50
Rated surge voltage invariability	U_{imp}		
Main contacts		V	6000
Auxiliary contacts		V	6000
Rated operational voltage	U_e	V AC	440
Overvoltage category/pollution degree			III/3
Rated insulation voltage	U_i	V	690
For use in IT electrical power networks		V	440

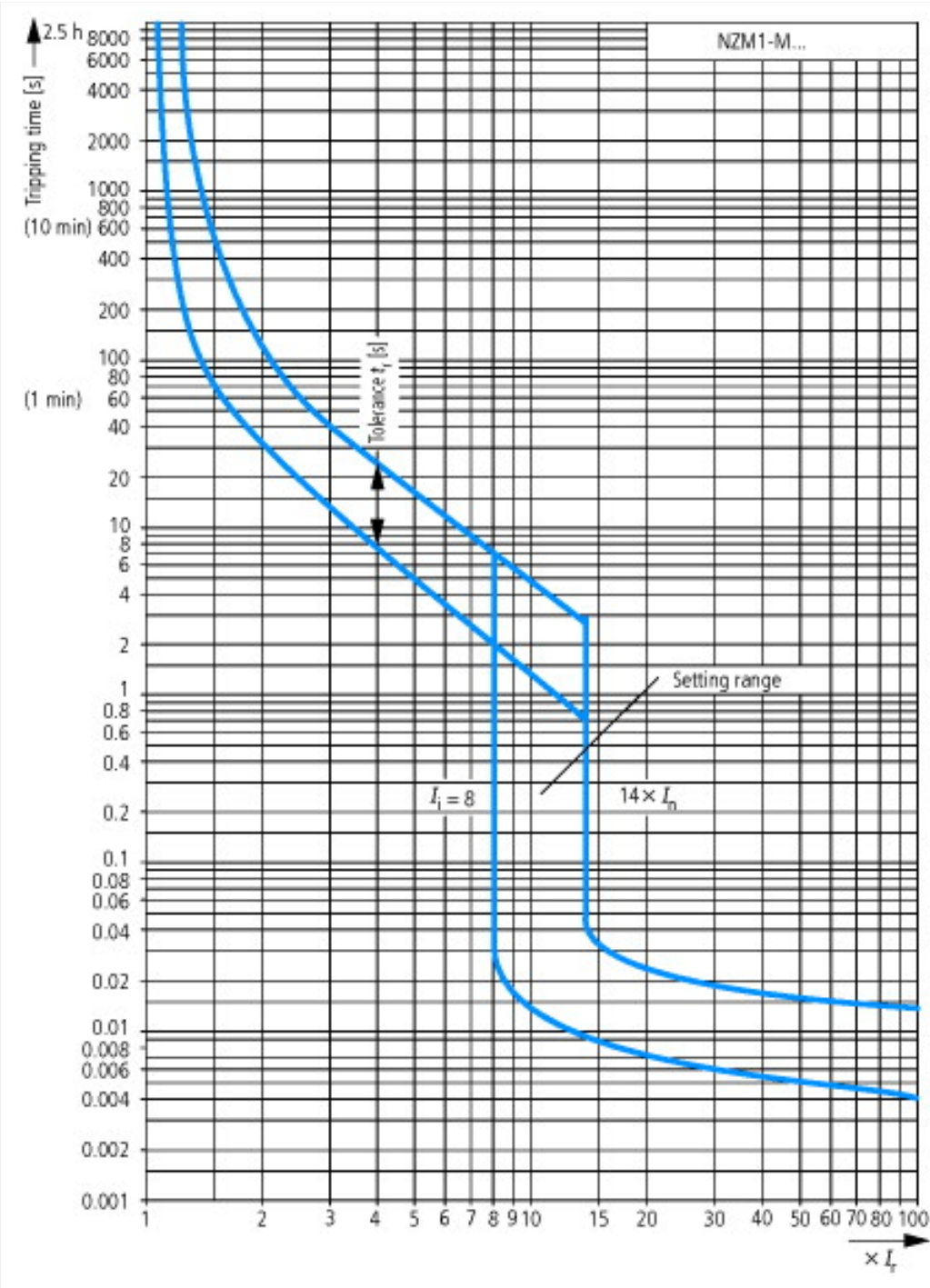
Switching capacity

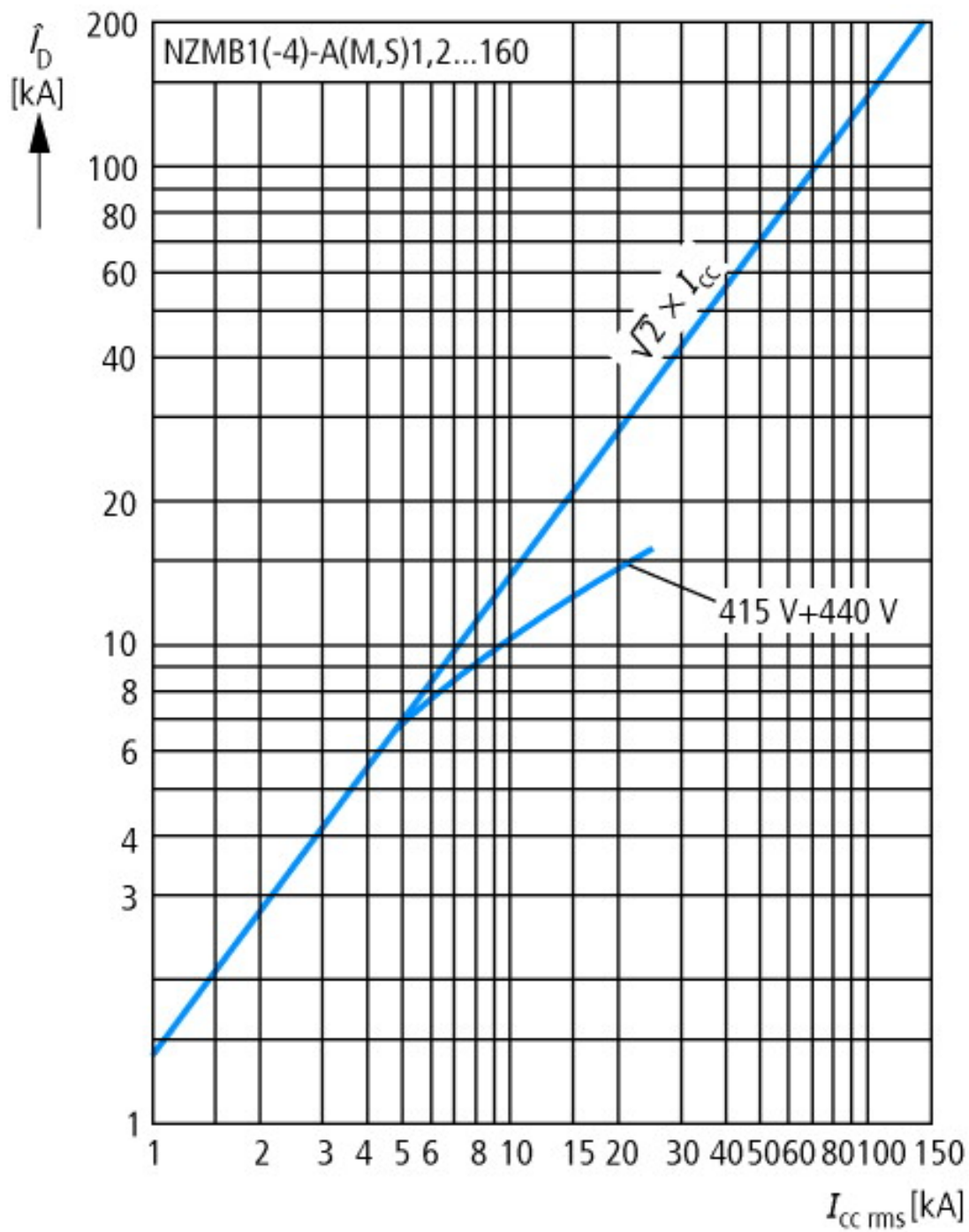
Rated short-circuit making capacity	I_{cm}		
240 V	I_{cm}	kA	63
400/415 V	I_{cm}	kA	53
440 V 50/60 Hz	I_{cm}	kA	53
Rated short-circuit breaking capacity I_{cn}	I_{cn}		
I_{cu} to IEC/EN 60947 test cycle O-t-CO	I_{cu}	kA	
240 V 50/60 Hz	I_{cu}	kA	30
400/415 V 50/60 Hz	I_{cu}	kA	25
440 V 50/60 Hz	I_{cu}	kA	25
I_{cs} to IEC/EN 60947 test cycle O-t-CO-t-CO	I_{cs}	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
Maximum low-voltage h.b.c. fuse		A gG/gL	200
			Maximum back-up fuse, if the expected short-circuit currents at the installation location exceed the switching capacity of the circuit-breaker.
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	160
415 V	I_e	A	125
690 V	I_e	A	160
AC--3			
400 V	I_e	A	50
415 V	I_e	A	50
690 V	I_e	A	50
Lifespan, mechanical(of which max. 50 % trip by shunt/undervoltage release)	Operations		20000
Lifespan, electrical			
AC-1			
400 V V 50/60 Hz	Operations		7500

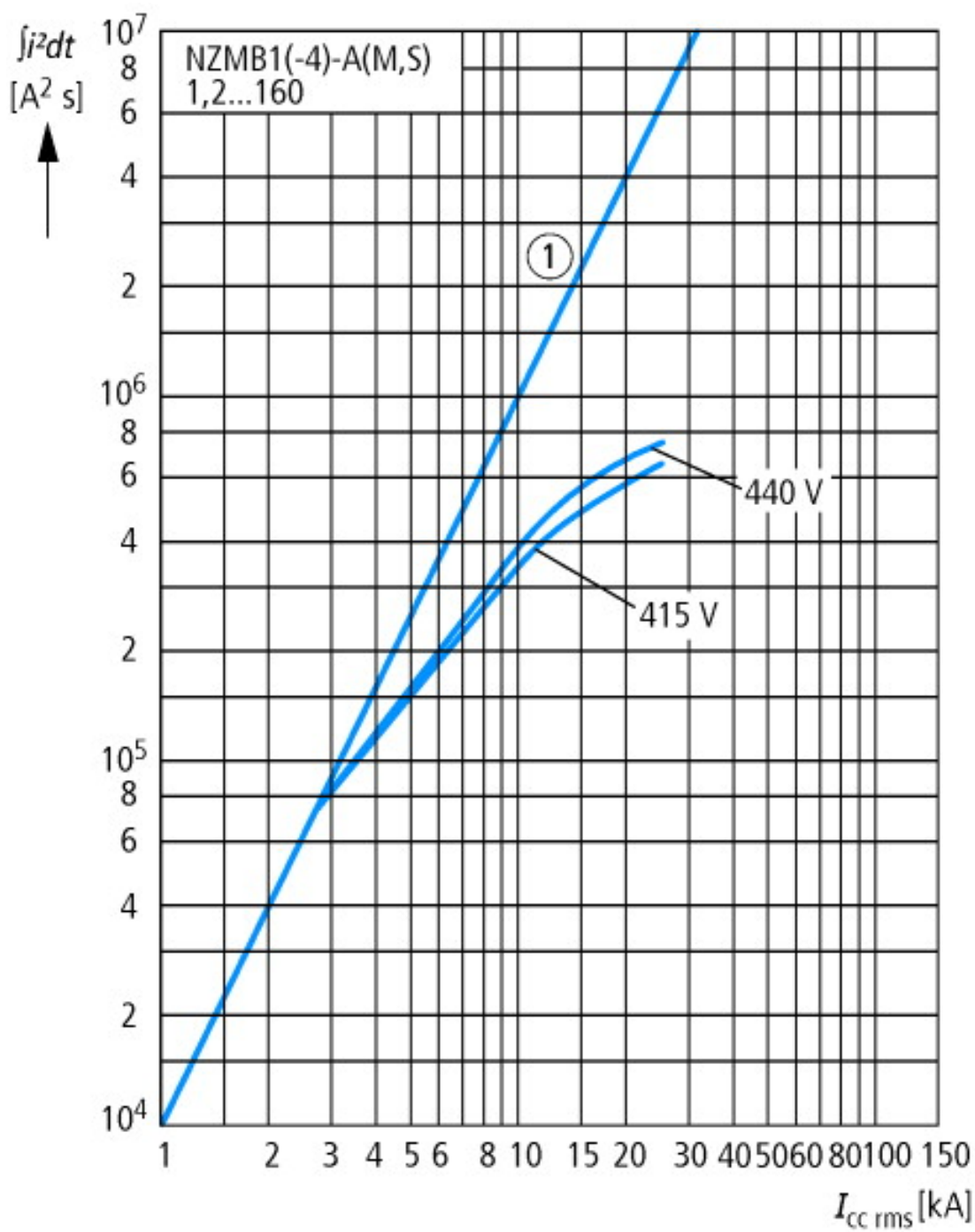
415 V V 50/60 Hz	Operations		10000
AC--3			
415 V 50/60 Hz	Operations		7500
Max. operating frequency		Ops/h	120
Current heat losses per pole at I _u are based on the maximum rated operational current of the frame size.		W	16.7
			For current heat loss per pole the specification refers to the maximum rated operational current of the frame size.
Total downtime in a short-circuit		ms	< 10
Terminal capacity			
Standard equipment			Box terminal
Overview			Basic equipment Box terminal ● - - - Screw connection - ● ● ● Accessories Box terminal - ● ● - Screw connection ● - - ● Tunnel terminal ● ● ● ● Connection on rear Flat conductor terminal ● ● ● ● - - - ●
Round copper conductor			
Box terminal			
Solid		mm ²	1 x (10 - 16) 2 x (6 - 16)
Stranded		mm ²	1 x (25 - 70) 2 x 25
Tunnel terminal			
Solid		mm ²	1 x (16 - 95)
Stranded		mm ²	
Stranded		mm ²	1 x (25 - 95)
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 - 70) 2 x 25
Al conductors, Cu cable			
Solid		mm ²	1 x 16
Stranded		mm ²	
Stranded		mm ²	1 x (25 - 95)
Cu strip (number of segments x width x segment thickness)			
Box terminal			
	min.	mm ²	2 x 9 x 0.8
	max.	mm ²	9 x 9 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	12 x 5
	max.	mm ²	16 x 5
Control cables			
		mm ²	1 x (0.75 - 2.5) 2 x (0.75 - 1.5)

Technische Daten nach ETIM 4.0

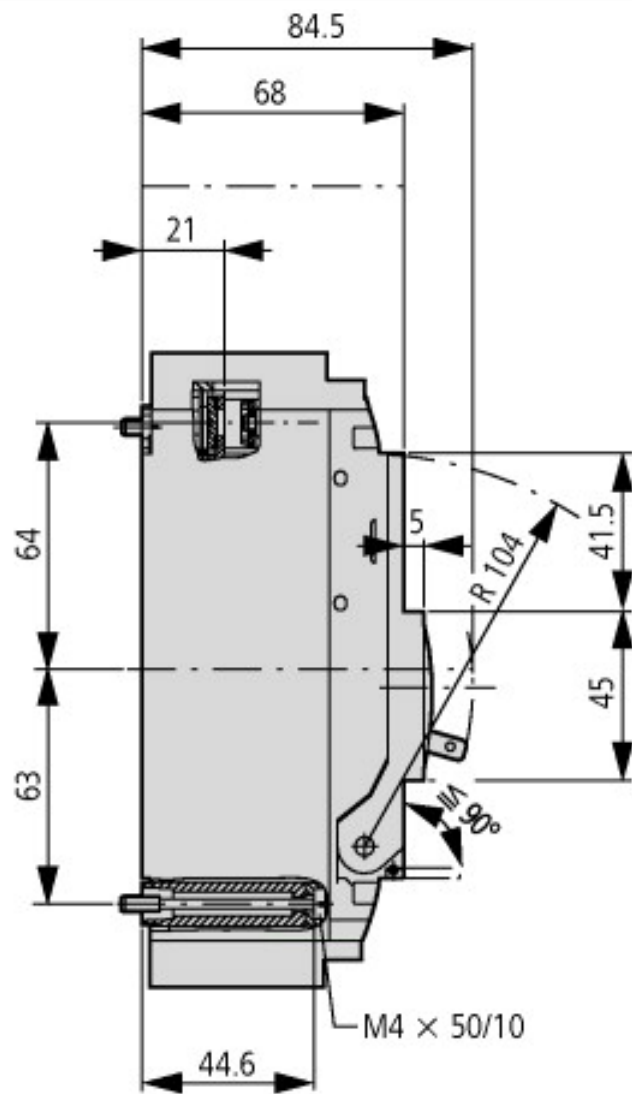
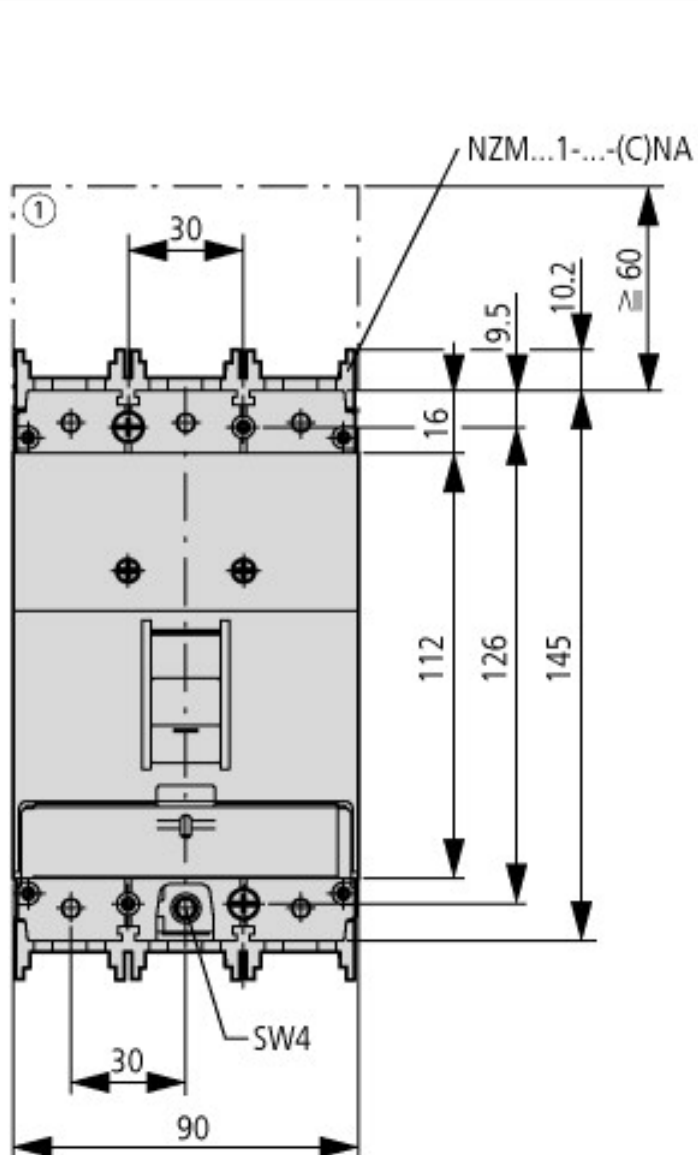
Rated operation power at AC-3, 400 V		kWh	22
With integrated auxiliary switch			No
Rated permanent current Iu		A	50
With integrated under voltage release			No
Number of poles			3
Degree of protection (IP)			IP20
Connection type main current circuit			-



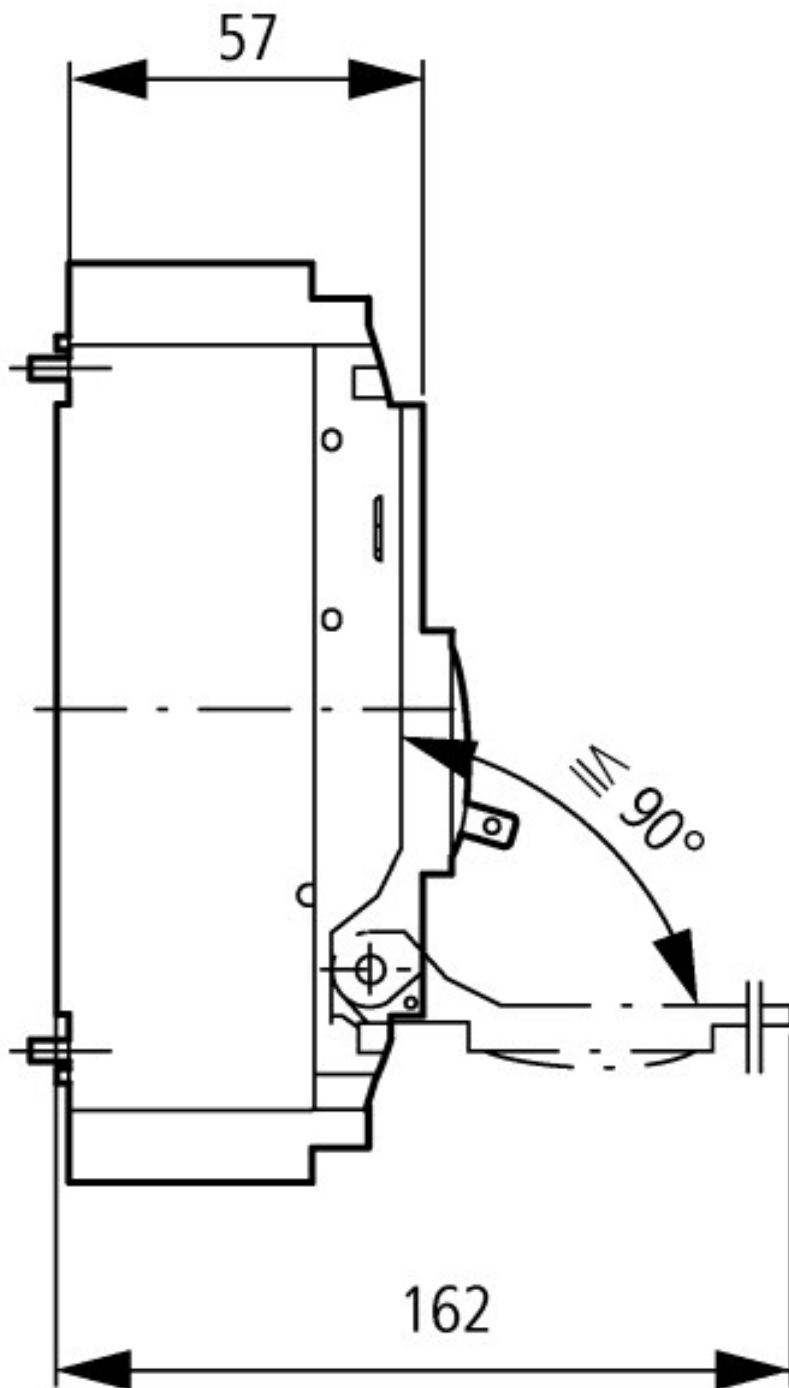




Dimensions



① Blow out area, minimum clearance to adjacent parts



Additional product information (links)

IL01203004Z (AWA1230-1913) Circuit-breaker, switch-disconnector	ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL01203004Z2010_11.pdf
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