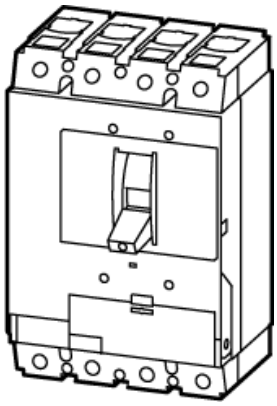
MOELLER

Type: **NZMH3–4–VE400**
Article No.: **265963**



Ordering information			
Description			Terminal screws standard, terminals as accessories
Rated current = rated uninterrupted current	I_u	A	400
Setting range			
Short–circuit releases Non–delayed		A	800 – 4400
Short–circuit releases Delayed	I_{rmv}	× I_r	400 – 4000
Switching capacity Switching capacity		kA	100
Release system			Electronic release
Pole			4

Notes concerning the product group

IEC/EN 61131–2

Adjustable overload release I_r

- 0.5 – 1 × I_n (ex–factory0.8 × I_n)

Setting on neutral pole implemented via the main pole setting I_r of the main pole.

R.m.s. value measurement and “thermal memory”

Adjustable time delay setting to overcome current peaks t_r

- 2 – 20 s with 6 × I_r
- as well as infinity (without overload release) (ex–factory 10 s)

– NZM...3–4–VE630: 2 – 14 s With 6 × I_r as well as infinity (without overload release)

Adjustable delayed short–circuit releases I_{sd}

- 2 – 10 × I_r (ex–factory 6 × I_r)

– NZM...3–4–VE630: 1.5 – 7 × I_r (ex–factory 6 × I_r)

Adjustable delay time t_{sd}

- Steps: 0, 20, 60, 100, 200, 300, 500, 750, 1000 ms (ex–factory 0 ms)

Adjustable non–delayed short–circuit releases I_i

- NZM2 fixed 12 × I_n
- NZM...3–4–VE400: 2 – 11 × I_n (ex–factory 6 × I_n)
- NZM...3–4–VE630: 2 – 8 × I_n (ex–factory 6 × I_n)
- NZM...4–4–VE...: 2 – 12 × I_n (ex–factory 12 × I_n)

i^2t constant function (ex–factory OFF)

NZM2 fixed OFF

NZM3, NZM4 switched (ex–factory OFF)

NZM...–4–VE...

- With 100% overload and short–circuit protection in 4th pole

NZM...–4–VE.../...

- With 60% overload and short–circuit protection in 4th pole

NZM...–4–VE.../0

- No overload and 100 % short–circuit protection in the 4th pole
- Not for use in IT electrical power networks

For limiter switching capacity with NZML4–4–VE... the following applies: 100 kA

Notes concerning the product group

Notes for terminals → 260042

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
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
Dimensions			
Weight			
Weight		kg	8,4
Mounting position			
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
Circuit−breakers			
Rated impulse withstand voltage 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
Switching capacity			
Rated short−circuit making capacity			
240 V	I_{cm}	kA	220

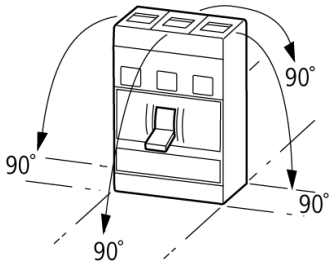
400/415 V	I_{cm}	kA	220
440 V	I_{cm}	kA	143
525 V	I_{cm}	kA	95
690 V	I_{cm}	kA	53
Rated short−circuit breaking capacity I_{cn}			
I_{cu} to IEC/EN 60947 operating sequence O−t−CO			
240 V 50/60 Hz	I_{cu}	kA	100
400/415 V 50/60 Hz	I_{cu}	kA	100
440 V 50/60 Hz	I_{cu}	kA	65
525 V 50/60 Hz	I_{cu}	kA	45
690 V 50/60 Hz	I_{cu}	kA	25
I_{cu} to IEC/EN 60947 operating sequence O−t−CO−t−CO			
240 V 50/60 Hz	I_{cs}	kA	100
400/415 V 50/60 Hz	I_{cs}	kA	100
440 V 50/60 Hz	I_{cs}	kA	65
525 V 50/60 Hz	I_{cs}	kA	22
690 V 50/60 Hz	I_{cs}	kA	6
Technical data, divergent from the products for the IEC market switching capacity NA switches (UL489, CSA 22.2 No. 5.1)			
240 V 60 Hz		kA	100
480V 60Hz		kA	65
600 V 60 Hz		kA	42
Utilization category to IEC/EN 60947−2			A
Rated short−time withstand current			
t = 0.3 s	I_{cw}	kA	3,3
t = 1 s	I_{cw}	kA	3,3
Lifespan, mechanical	Operations		15000
Maximum operating frequency			
Max. operating frequency		Ops/h	60
Lifespan, electrical			
AC−1			
400/415 V 50/60 Hz	Operations		5000
690 V 50/60 Hz	Operations		3000
AC−−3			

400/415 V 50/60 Hz	Operations		2000
690 V 50/60 Hz	Operations		2000
Current heat loss per pole at I_u		W	40
Overload releases			
Temperature compensation for NZM2 to IEC/EN 60947, residual error in the range –25 °C/+70 °C (reference temperature 40 °C)			
Electronic			0
Total opening delay at short–circuit		ms	< 10
Terminal capacities			
Standard equipment			Screw terminal
Accessories			Box terminal Tunnel terminal Connection on rear
Cu conductors, Cu cable			
Box terminal			
Solid		mm^2	2 × 16
Stranded		mm^2	1 × (35 – 240) 2 × (25 – 120)
Tunnel terminal			
Solid		mm^2	1 × (16 – 185)
Stranded			
Single hole		mm^2	1 × (25 – 185)
Double hole fitting		mm^2	1 × (50 – 240) 2 × (50 – 240)
Bolt terminal and rear–side connection			
Direct on the switch			
Solid		mm^2	1 × 16 2 × 16
Stranded		mm^2	1 × (25 – 240) 2 × (25 – 240)
Connection width extension		mm^2	2 × 300
Al conductors, Cu cable			
Tunnel terminal			
Solid		mm^2	1 × 16
Stranded			
Single hole		mm^2	1 × (25 – 185) je nach Kabelhersteller bis zu 240 mm^2 anschließbar
Double hole fitting		mm^2	

			1 × (50 – 240) 2 × (50 – 240)
Bolt terminal and rear–side connection			
Direct on the switch			
Solid		mm^2	1 × 16 2 × (10 – 16)
Stranded		mm^2	1 × (25 – 120) 2 × (25 – 120)
Cu strip (number of segments x width x segment thickness)			
Box terminal			
	min.	mm^2	6 × 16 × 0.8
	max.	mm^2	10 × 24 × 1.0 + 5 × 24 × 1.0 (2 ×) 8 × 24 × 1.0
Bolt terminal and rear–side connection			
Flat copper strip, with holes	min.	mm	6 × 16 × 0.8
Flat copper strip, with holes	max.	mm	10 × 32 × 1.0 + 5 × 32 × 1.0
Connection width extension		mm^2	(2 ×) 10 × 50 × 1.0
Copper busbar (width × thickness)			
Bolt terminal and rear–side connection			
Screw connection			M10
Direct on the switch			
	min.	mm^2	20 × 5
	max.	mm^2	30 × 10 + 30 × 5
Connection width extension			
Connection width extension	max.	mm^2	2 × (10 × 50)
Dimensions			
			Arcing chamber, minimum clearing to neighbouring parts 60 mm
Explaination			1 half–shaft

Mounting position

Vertical and 90° in all directions



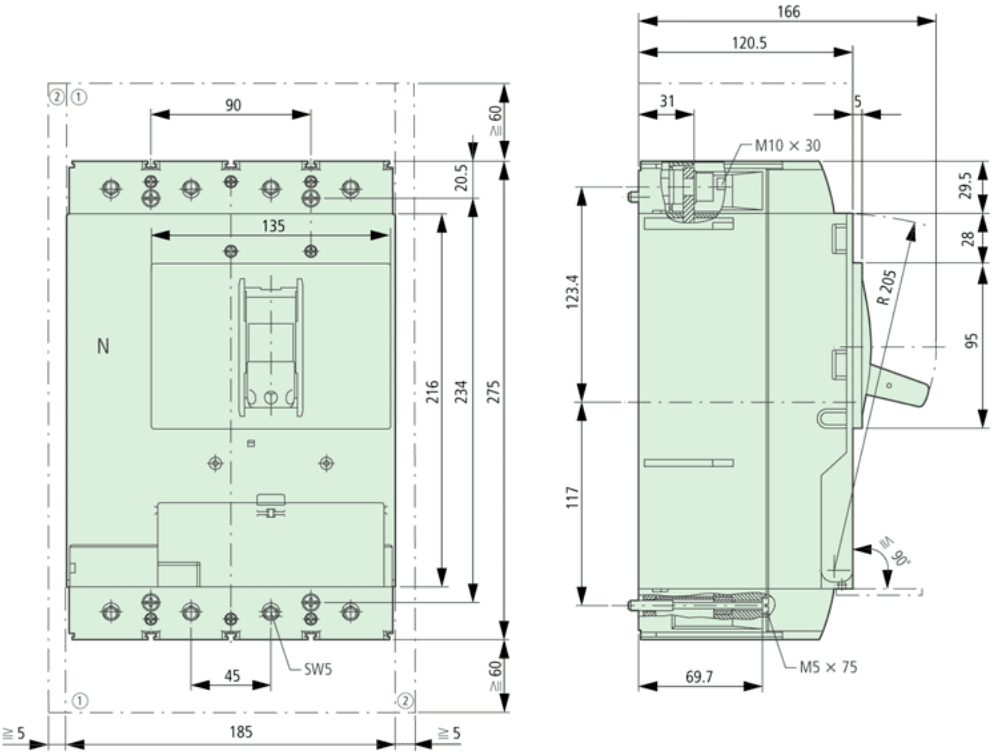
With plug−in adapter NZM2: vertical, 90° right/left

With withdrawable unit NZM3: vertical, 90° left NZM4: verticalwith remote operator: NZM2, NZM3, NZM4: vertical and 90° in all directions

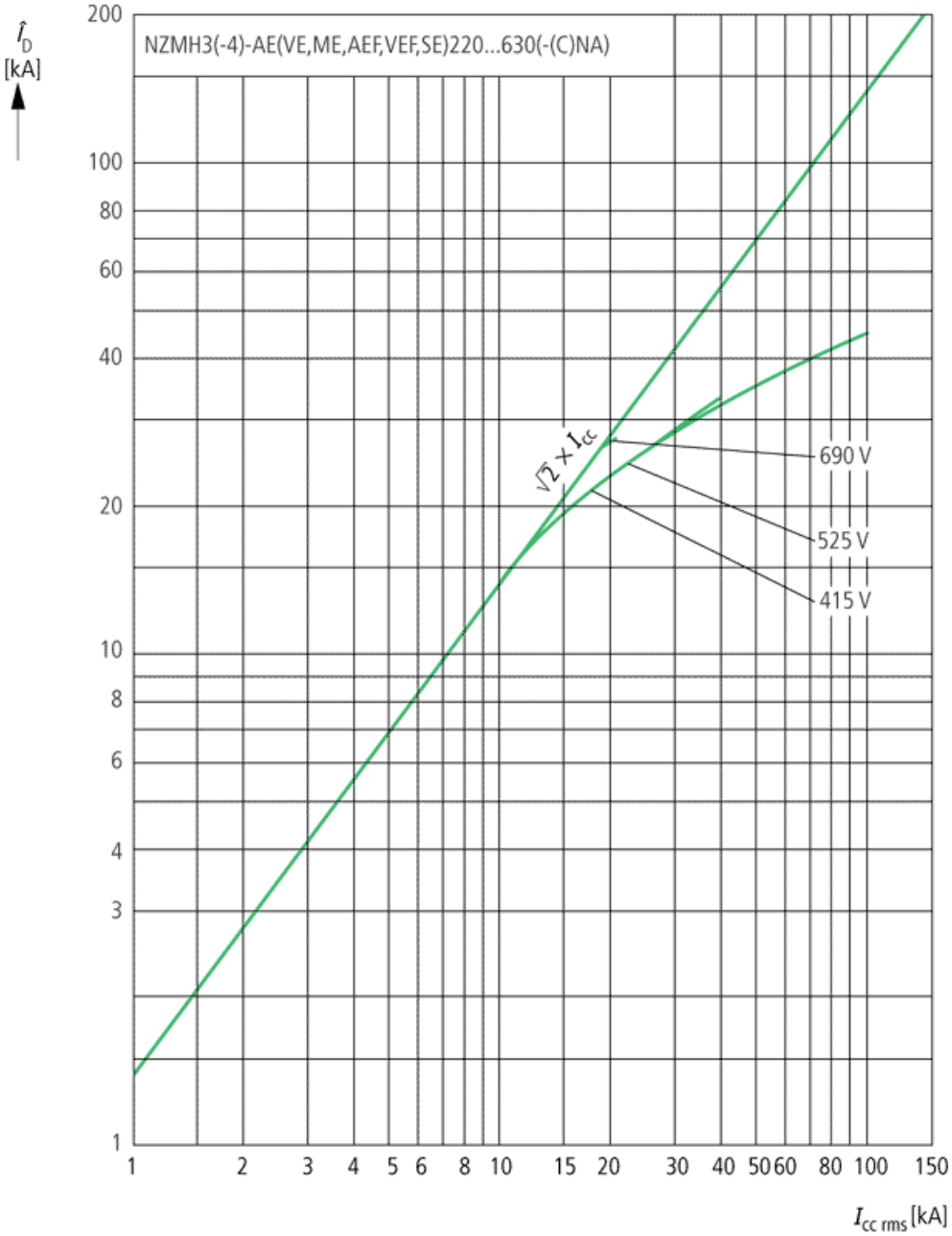
Overview

Basic equipment				
Box terminal	●	–	–	–
Screw connection	–	●	●	●
Accessories				
Box terminal	–	●	●	–
Screw connection	●	–	–	●
Tunnel terminal	●	●	●	●
Connection on rear	●	●	●	●
Flat conductor terminal	–	–	–	●

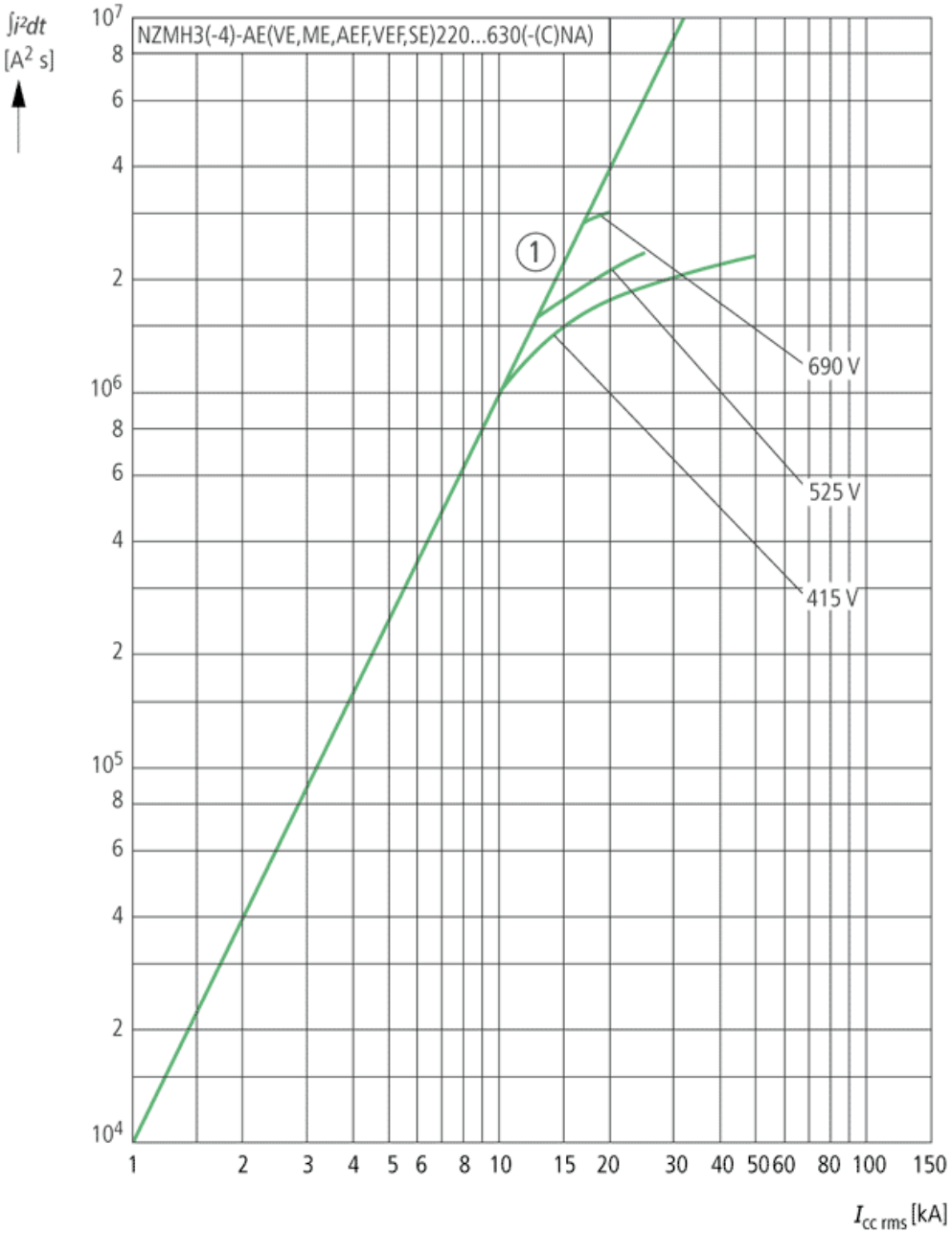
Dimensions



Characteristic curve



Characteristic curve



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