MOELLER

Type: **NZMN3–VE250**
Article No.: **259131**



Ordering information			
Description			Terminal screws standard, terminals as accessories
Rated current = rated uninterrupted current	I_u	A	250
Setting range			
Short–circuit releases Non–delayed		A	500 – 2750
Short–circuit releases Delayed	I_{rmv}	× I_r	250 – 2500
Switching capacity Switching capacity		kA	50
Release system			Electronic release
Pole			3

Notes concerning the product group

IEC/EN 61131–2

Adjustable overload release I_r

- 0.5 – 1 × I_n (ex–factory0.8 × I_n)

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)

Adjustable delayed short−circuit releases I_{sd}

- 2 – 10 × I_r (ex−factory 6 × I_r)

– NZM...3−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

- NZM...4−VE...: 2 – 12 × I_n (ex−factory 12 × I_n)
- NZM2 fixed 12 × I_n
- NZM...3−VE250/400: 2 – 11 × I_n (ex−factory 6 × I_n)
- NZM...3−VE630: 2 – 8 × I_n (ex−factory 6 × I_n)

i^2t constant function

- NZM2 fixed OFF
- NZM3, NZM4 switched (ex−factory OFF)

For limiter switching capacity with NZM...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			
		V AC	500

Between auxiliary contacts and main contacts			
between the auxiliary contacts		V AC	300
Dimensions			
Weight			
Weight		kg	6,34
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	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_{cu} to IEC/EN 60947 operating sequence O–t–CO			
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

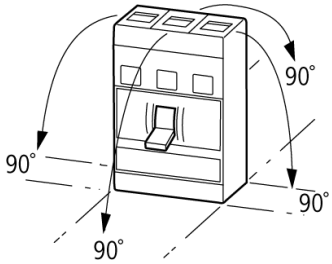
690 V 50/60 Hz	I_{cu}	kA	20
I_{cu} to IEC/EN 60947 operating sequence O–t–CO–t–CO			
240 V 50/60 Hz	I_{cs}	kA	85
400/415 V 50/60 Hz	I_{cs}	kA	50
440 V 50/60 Hz	I_{cs}	kA	35
525 V 50/60 Hz	I_{cs}	kA	13
690 V 50/60 Hz	I_{cs}	kA	5
Technical data, divergent from the products for the IEC market switching capacity NA switches (UL489, CSA 22.2 No. 5.1)			
240 V 60 Hz		kA	85
480V 60Hz		kA	42
600 V 60 Hz		kA	35
Utilization category to IEC/EN 60947–2			A
Rated short–time withstand current			
t = 0.3 s	I_{cw}	kA	1,9
t = 1 s	I_{cw}	kA	1,9
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
Explanation			Systems, cable, selectivity and generator protection
Explanation			I^2t = constant
Explanation			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

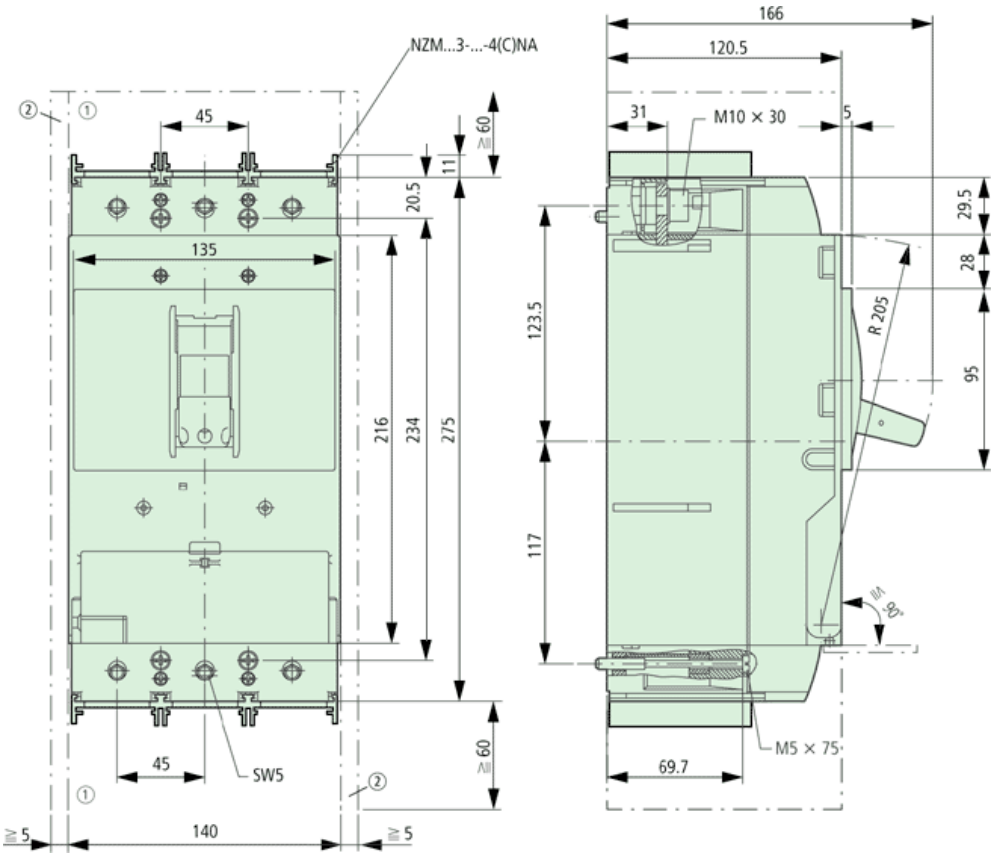
Overview

Basic equipment

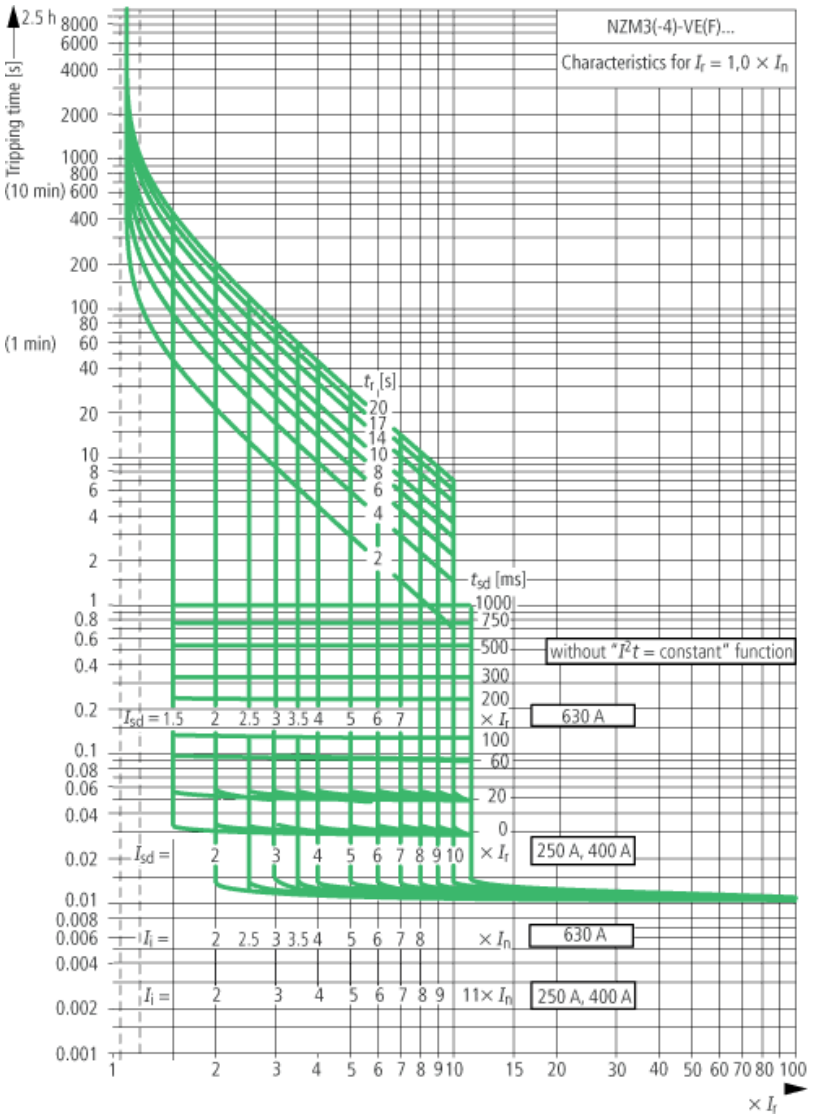
Box terminal	● – – –
Screw connection	– ● ● ●

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

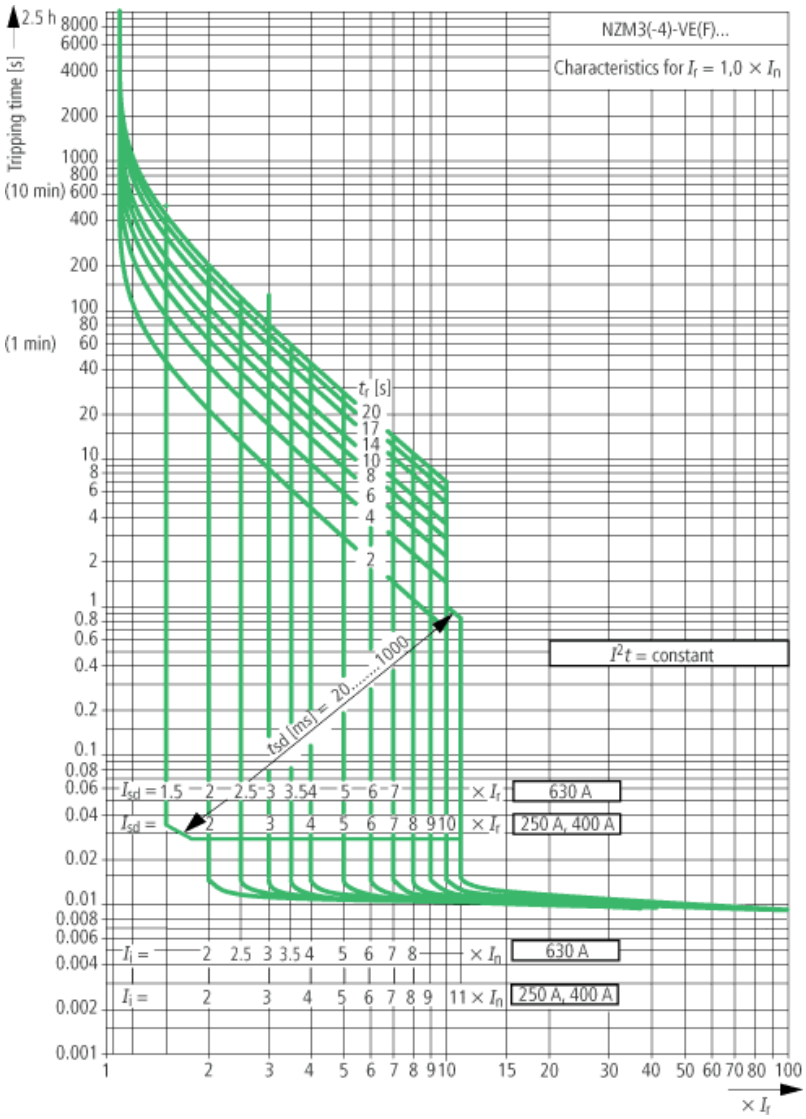
Dimensions



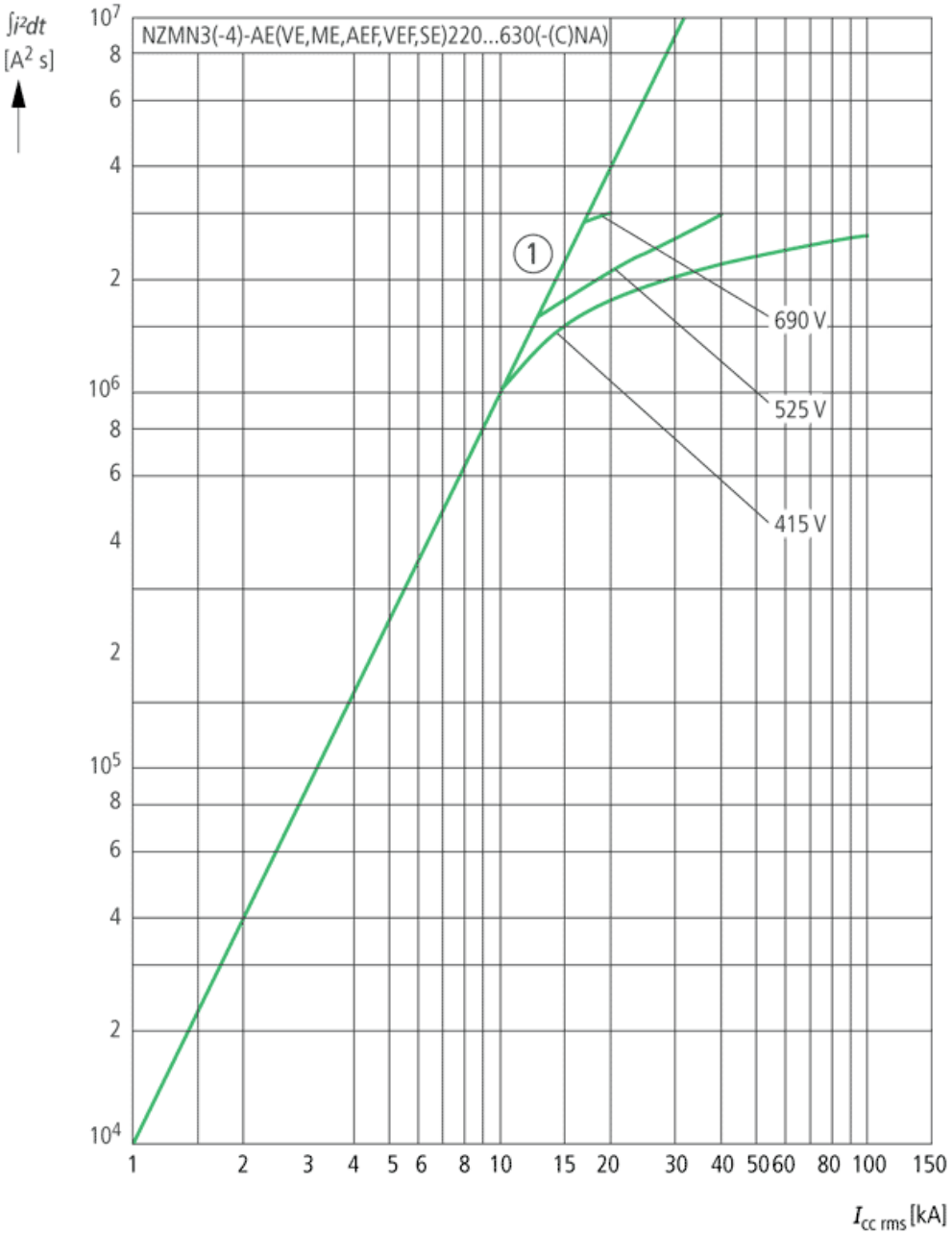
Characteristic curve



Characteristic curve



Characteristic curve



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