

Circuit-breakers NZM1, 2, 3, 4 up to 2000 A

Reliably and safely controlling, switching and managing power, in industry, in buildings and in machine construction. Enabled by innovative protection concepts coupled with diagnostic and communication functions.



Circuit-breaker series NZM1 to NZM4

- just 4 compact frame sizes
- available as 3 and 4-pole device
- now also up to 2000 A
- flexible mounting using modular function groups
- full rated current at 50 °C ambient temperature
- switch suitable for world-wide use

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Standard/trip-indicating auxiliary contact from the Titan range

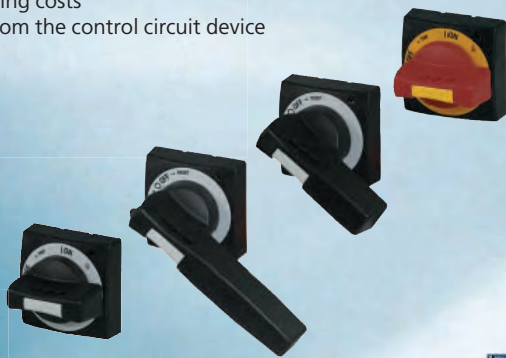
- reduced number of variants and stockholding requirement
- simple front installation at the same position
- simple clip-on feature saves mounting costs
- attractively priced identical parts from the control circuit device range

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Door coupling rotary handles

- identical drilling template for all variants
- innovative automatic centring
- axis support for long-term reliable operation
- side-wall operation ensuring space-saving main switch installation

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Remote operators

- common functional concept of all variants
- low closing delays 60 ms to 100 ms
- locking and sealing features provide security

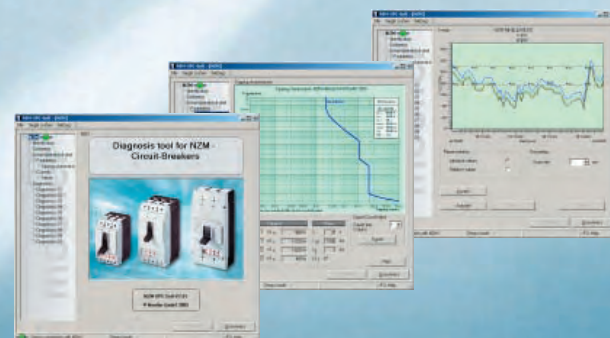
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Diagnostics software NZM-XPC-SOFT

- diagnostics with a malfunction
- fault-free commissioning and documentation
- load analysis during operation

Part no. NZM-XPC-KIT,

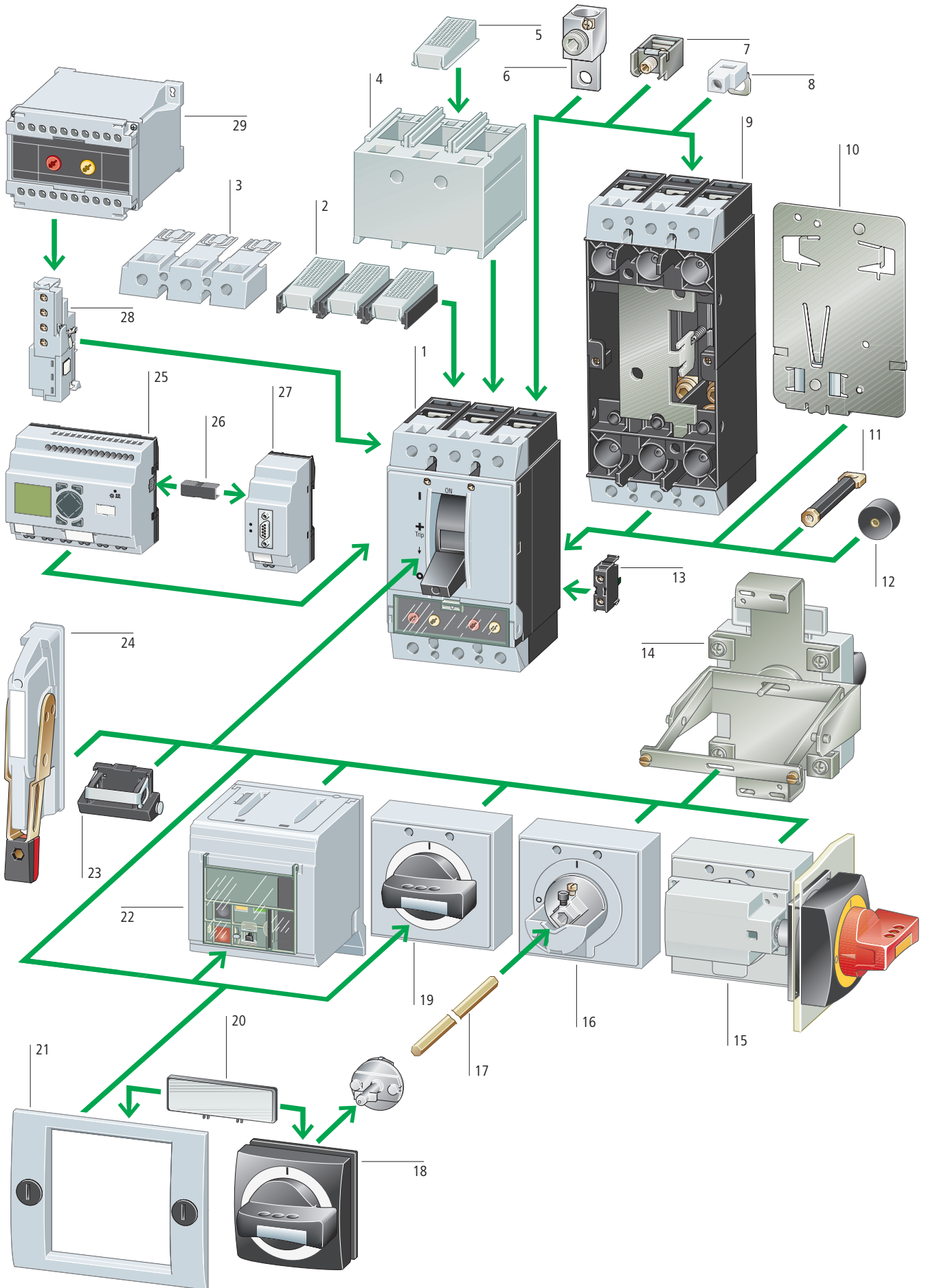
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Circuit-breakers, switch-disconnectors from 1.2 to 2000 A





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Basic units	Add-on functions	Mounting accessories
<p>Circuit-breaker 1</p> <p>Rated uninterrupted current up to 2000 A</p> <hr/> <p>Switching capacity 25, 36, 50, 100, 150 kA at 415 V</p> <p>Adjustable releases for overload and short-circuit</p> <p>Adjustable time selectivity</p> <p>Earth-fault protection</p> <p>Protection of systems, cables, motors, generators</p> <p>3 and 4 pole versions, IEC/EN 60947</p> <p>→ page 10/6</p> <p>Switch-disconnector 1</p> <p>Rated uninterrupted current up to 1600 A</p> <hr/> <p>Remotely tripped switch-disconnector with undervoltage or shunt release</p> <hr/> <p>3 and 4 pole versions, IEC/EN 60947</p> <p>→ page 10/24</p> <p>Circuit-breakers for North America 1</p> <p>Rated uninterrupted current up to 1200 A</p> <hr/> <p>Switching capacity 25, 35, 65, 100 kA at 480 V</p> <p>Adjustable releases for overload and short-circuit</p> <p>Adjustable time selectivity</p> <p>Earth-fault protection</p> <p>Protection of systems, cables, motors, generators</p> <p>3 pole version, UL489/CSA22.2 No.5.1, IEC/EN 60947</p> <p>→ page 10/28</p> <p>Molded case switches for North America 1</p> <p>Rated uninterrupted current up to 1200 A</p> <hr/> <p>Remotely tripped with undervoltage or shunt release</p> <hr/> <p>3 pole version, UL489/CSA22.2 No.5.1</p> <p>→ page 10/42</p>	<p>Standard auxiliary contact (HIN) 13</p> <p>Switching with the main contacts. Used for indication and interlock functions.</p> <hr/> <p>Trip-indicating auxiliary contact (HIA) 13</p> <p>General trip indication '+', when tripped by voltage release, overload release or short-circuit release</p> <hr/> <p>Early-make auxiliary contacts 28</p> <p>For interlocking and load shedding circuits, as well as for early make of the undervoltage release in main switch/Emergency-stop applications</p> <hr/> <p>→ page 10/70</p> <p>Voltage release 28</p> <p>Undervoltage release</p> <ul style="list-style-type: none"> • Non-delayed • OFF-delayed <p>Shunt release</p> <p>→ page 10/72</p> <p>Delay unit for undervoltage release 29</p> <hr/> <p>→ page 10/77</p> <p>Rear drive 14</p> <p>→ page 10/90</p> <p>Door coupling rotary handle 16, 18</p> <ul style="list-style-type: none"> • Lockable • With door interlock <p>→ page 10/82</p> <p>Main switch rotary handle for side panel mounting 15</p> <p>→ page 10/88</p> <p>Extension shaft 17</p> <p>Can be cut to required length.</p> <p>→ page 10/82</p> <p>Rotary handle 19</p> <p>Lockable</p> <p>→ page 10/86</p> <p>Remote operator 22</p> <p>For remote switching of circuit-breakers and switch-disconnectors</p> <p>→ page 10/96</p> <p>Toggle lever interlock device 23</p> <hr/> <p>→ page 10/92</p> <p>Side operator handle 24</p> <p>→ page 10/91</p> <p>Data Management Interface (DMI module) 25</p> <p>Access to diagnostics and operational data</p> <hr/> <p>Recording of current values</p> <p>Motor starter function</p> <p>Parameterization and control of the circuit-breakers with electronic releases</p> <p>→ page 10/98</p> <p>EASY-LINK-DS data plug 26</p> <hr/> <p>→ page 4/45</p> <p>PROFIBUS-DP interface 27</p> <p>→ page 10/98</p>	<p>Control circuit terminal 8</p> <p>For two terminals at top or bottom</p> <hr/> <p>NZM1 → page 10/49</p> <p>NZM2 → page 10/53</p> <p>NZM3 → page 10/57</p> <p>NZM4 → page 10/57</p> <p>Tunnel terminals for Al and Cu cable 6</p> <p>Standard with control circuit terminal</p> <hr/> <p>NZM1 → page 10/47</p> <p>NZM2 → page 10/51</p> <p>NZM3 → page 10/57</p> <p>NZM4 → page 10/63</p> <p>Box terminals 7</p> <p>Standard version of frame size 1 assembled within the circuit-breaker enclosure</p> <p>NZM1 → page 10/47</p> <p>NZM2 → page 10/51</p> <p>NZM3 → page 10/55</p> <p>Terminal cover 4</p> <p>Protection against direct contact where cable lugs, busbars or tunnel terminals are used</p> <hr/> <p>NZM1 → page 10/49</p> <p>NZM2 → page 10/53</p> <p>NZM3 → page 10/58</p> <p>NZM4 → page 10/67</p> <p>Terminal cover, knockout 3</p> <p>NZM1 → page 10/49</p> <p>NZM2 → page 10/53</p> <p>NZM3 → page 10/58</p> <p>NZM4 → page 10/67</p> <p>Clip plate 10</p> <p>NZM1-XC35 a for 35 mm top-hat rail</p> <p>NZM2-XC75 a for 75 mm top-hat rail</p> <p>→ page 10/92</p> <p>Rear connection 11</p> <p>NZM1 → page 10/47</p> <p>NZM2 → page 10/51</p> <p>NZM3 → page 10/57</p> <p>NZM4 → page 10/63</p> <p>Plug-in and withdrawable unit 9</p> <hr/> <p>→ page 10/68</p> <p>Insulating surround 21</p> <p>For use with toggle lever, rotary drive and remote operator protruding from the enclosure</p> <p>→ page 10/92</p> <p>External warning plate/designation label 20</p> <hr/> <p>→ page 10/90</p> <p>Spacer 12</p> <p>→ page 10/92</p> <p>IP2X protection against contact with a finger 2</p> <p>For box terminals</p> <p>NZM1 → page 10/49</p> <p>NZM2 → page 10/53</p> <p>NZM3 → page 10/58</p> <p>IP2X protection against contact with a finger 5</p> <p>For barrier</p> <p>NZM1 → page 10/49</p> <p>NZM2 → page 10/53</p> <p>NZM3 → page 10/58</p>




Rated current = rated uninterrupted current $I_n = I_u$ A	Setting range	
	Overload releases	Short-circuit releases
	I_r A 	I_i A 

Basic switching capacity 25 kA at 415 V 50/60 Hz		Comfort switching capacity 36 kA at 415 V 50/60 Hz	
Part no. Article no.	Price see price list	Part no. Article no.	Price see price list


Protection of systems and cables

3 pole

Terminals standard, terminal screws as accessories

	20	15...20	350	NZMB1-A20 280987	NZMC1-A20 283293
	25	20...25	350	NZMB1-A25 280988	NZMC1-A25 283294
	32	25...32	350	NZMB1-A32 280989	NZMC1-A32 283295
	40	32...40	320...400	NZMB1-A40 259075	NZMC1-A40 271392
	50	40...50	300...500	NZMB1-A50 259076	NZMC1-A50 271393
	63	50...63	380...630	NZMB1-A63 259077	NZMC1-A63 271394
	80	63...80	480...800	NZMB1-A80 259078	NZMC1-A80 271395
	100	80...100	600...1000	NZMB1-A100 259079	NZMC1-A100 271396
	125	100...125	750...1250	NZMB1-A125 259080	NZMC1-A125 271397
	160	125...160	1280	NZMB1-A160 281230	NZMC1-A160 283296

Terminal screws standard, terminals as accessories

	20	15...20	350		
	25	20...25	350		
	32	25...32	350		
	40	32...40	320...400		
	50	40...50	300...500		
	63	50...63	380...630		
	80	63...80	480...800		
	100	80...100	600...1000		
	125	100...125	750...1250		
	160	125...160	960...1600	NZMB2-A160 259088	NZMC2-A160 271421
	200	160...200	1200...2000	NZMB2-A200 259089	NZMC2-A200 271422
	250	200...250	1500...2500	NZMB2-A250 259090	NZMC2-A250 271423

Notes Notes for terminals → 10/47

Normal switching capacity 50 kA at 415 V 50/60 Hz		High switching capacity 100 kA ¹⁾ /150 kA ²⁾ at 415 V 50/60 Hz		Std. pack	Notes
Part no. Article no.	Price see price list	Part no. Article no.	Price see price list		

NZMN1-A20 281231		NZMH1-A20 284376		1 off	IEC/EN 60947-2 Adjustable overload releases I_r • $0.8 - 1 \times I_n$ (ex-works $0.8 \times I_n$) Adjustable short-circuit releases I_i • $6 - 10 \times I_n$ (ex-works $6 \times I_n$) – NZM...A40: $8 - 10 \times I_n$ (ex-works $8 \times I_n$) Fixed short-circuit release I_i • 350 A at $I_n = 20 - 32$ A • 1280 A at $I_n = 160$ A (NZM1) ¹⁾ valid for NZM1 ²⁾ valid for NZM2
NZMN1-A25 281232		NZMH1-A25 284377			
NZMN1-A32 281233		NZMH1-A32 284378			
NZMN1-A40 259081		NZMH1-A40 284379			
NZMN1-A50 259082		NZMH1-A50 284410			
NZMN1-A63 259083		NZMH1-A63 284411			
NZMN1-A80 259084		NZMH1-A80 284412			
NZMN1-A100 259085		NZMH1-A100 284413			
NZMN1-A125 259086		NZMH1-A125 284414			
NZMN1-A160 281234		NZMH1-A160 284415			
		NZMH2-A20 281281			
		NZMH2-A25 281282			
		NZMH2-A32 281283			
		NZMH2-A40 259095			
		NZMH2-A50 259096			
		NZMH2-A63 259097			
		NZMH2-A80 259098			
		NZMH2-A100 259099			
		NZMH2-A125 259100			
NZMN2-A160 259092		NZMH2-A160 259101			
NZMN2-A200 259093		NZMH2-A200 259102			
NZMN2-A250 259094		NZMH2-A250 259103			

Normal switching capacity 50 kA at 415 V 50/60 Hz

Rated current = rated uninterrupted current

Setting range

Overload releases

Short-circuit releases

Non-delayed

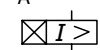
Delayed short-circuit release

$I_n = I_u$
A

I_r
A

I_i
A

I_{sd}
A



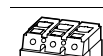
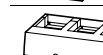
Part no.
Article no.

Price
see price list

Protection of systems and cables

3 pole

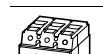
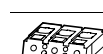
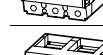

Terminal screws standard, terminals as accessories

	250	125...250	500...2750		NZMN3-AE250 259113	
	400	200...400	800...4400		NZMN3-AE400 259114	
	630	315...630	1260...5040		NZMN3-AE630 259115	
	630	315...630	1260...7560		NZMN4-AE630 265758	
	800	400...800	1600...9600		NZMN4-AE800 265759	
	1000	500...1000	2000...12000		NZMN4-AE1000 265760	
	1250	630...1250	2500...15000		NZMN4-AE1250 265761	
	1600	800...1600	3200...19200		NZMN4-AE1600 265762	

Systems and cable protection, selectivity and generator protection

3 pole

Terminal screws standard, terminals as accessories

	100	50...100	1200	100...1000	NZMN2-VE100 259122	
	160	80...160	1920	160...1600	NZMN2-VE160 259123	
	250	125...250	3000	250...2500	NZMN2-VE250 259124	
	250	125...250	500...2750	250...2500	NZMN3-VE250 259131	
	400	200...400	800...4400	400...4000	NZMN3-VE400 259132	
	630	315...630	1260...5040	472...4410	NZMN3-VE630 259133	
	630	315...630	1260...7560	630...6300	NZMN4-VE630 265768	
	800	400...800	1600...9600	800...8000	NZMN4-VE800 265769	
	1000	500...1000	2000...12000	1000...10000	NZMN4-VE1000 265770	
	1250	630...1250	2500...15000	1250...12500	NZMN4-VE1250 265771	
	1600	800...1600	3200...19200	1600...16000	NZMN4-VE1600 265772	
	2000	1000...2000	4000...16000	2000...12000	NZMN4-VE2000^{2) 3)} 107274	

Notes

Notes for terminals → 10/55

¹⁾ High switching capacity for NZMH4-VE...: 85 kA; please enquire for higher switching capacities.

²⁾ please enquire.

³⁾ cannot be used as withdrawable.

High switching capacity 150 kA¹⁾ at 415 V 50/60 Hz

Part no.
Article no.

Price
see price list

Std. pack

Notes

NZMH3-AE250 259116	1 off	IEC/EN 60947-2
NZMH3-AE400 259117		Adjustable overload releases I_r
NZMH3-AE630 259118		• $0.5 - 1 \times I_n$ (ex-works $0.8 \times I_n$)
NZMH4-AE630 265763		R.m.s. value measurement and "thermal memory"
NZMH4-AE800 265764		Adjustable short-circuit releases I_i
NZMH4-AE1000 265765		• NZM...3-AE250/400: $2 - 11 \times I_n$ (ex-works $6 \times I_n$)
NZMH4-AE1250 265766		• NZM...3-AE630: $2 - 8 \times I_n$ (ex-works $6 \times I_n$)
NZMH4-AE1600 265767		• NZM...4-AE...: $2 - 12 \times I_n$ (ex-works $6 \times I_n$)

NZMH2-VE100 259125	1 off	IEC/EN 60947-2
NZMH2-VE160 259126		Adjustable overload releases I_r
NZMH2-VE250 259127		• $0.5 - 1 \times I_n$ (ex-works $0.8 \times I_n$)
NZMH3-VE250 259134		R.m.s. value measurement and "thermal memory"
NZMH3-VE400 259135		Adjustable time delay setting to overcome current peaks t_r
NZMH3-VE630 259136		• $2 \dots 20$ s with $6 \times I_r$ as well as infinity (without overload release) (ex-factory 10 s)
NZMH4-VE630 265773		– NZM...4-VE2000: $2 \dots 10$ s at $6 \times I_r$ also infinity (ex-works 10 s)
NZMH4-VE800 265774		Adjustable delayed short-circuit releases I_{sd}
NZMH4-VE1000 265775		• $2 - 10 \times I_r$ (ex-works $6 \times I_r$)
NZMH4-VE1250 265776		– NZM...3-VE630: $1.5 - 7 \times I_r$ (ex-works $6 \times I_r$)
NZMH4-VE1600 265777		– NZM...4-VE2000: $2 - 6 \times I_r$ (ex-works $6 \times I_r$)
NZMH4-VE2000^{2) 3)} 101400		Adjustable delay time t_{sd}
		• Steps: 0, 20, 60, 100, 200, 300, 500, 750, 1000 ms (ex-works 0 ms)
		Adjustable non-delayed short-circuit releases I_i
		• NZM2 fixed $12 \times I_n$
		• NZM...3-VE250/400: $2 - 11 \times I_n$ (ex-works $6 \times I_n$)
		• NZM...3-VE630: $2 - 8 \times I_n$ (ex-works $6 \times I_n$)
		• NZM...4-VE...: $2 - 12 \times I_n$ (ex-works $12 \times I_n$)
		• NZM...4-VE2000: $2 - 8 \times I_n$ (ex-works $8 \times I_n$)
		i^2t constant function
		• NZM2 fixed OFF
		• NZM3, NZM4 switched (ex-works OFF)



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Rated current = rated uninterrupted current $I_n = I_u$ A	Setting range Short-circuit releases I_i A 	Motor rating AC-3 at 400 V 50/60 Hz P kW	Rated operational current AC-3 at 400 V 50/60 Hz I_e A	Basic switching capacity 25 kA at 415 V 50/60 Hz		Normal switching capacity 50 kA at 415 V 50/60 Hz	
				Part no. Article no.	Price see price list	Part no. Article no.	Price see price list
Short-circuit protection							
Motor protection in conjunction with overload relay							
<ul style="list-style-type: none"> • With short-circuit release • Without overload release 							
3 pole							
Terminals standard, terminal screws as accessories							
	40	320...560	18.5	36	NZMB1-S40 265726		NZMN1-S40 265731
	50	400...700	22	41	NZMB1-S50 265727		NZMN1-S50 265732
	63	504...882	30	55	NZMB1-S63 265728		NZMN1-S63 265733
	80	640...1120	37	68	NZMB1-S80 265729		NZMN1-S80 265734
	100	800...1250	55	99	NZMB1-S100 265730		NZMN1-S100 265735
Terminal screws standard, terminals as accessories							
	40	320...560	18.5	36			
	50	400...700	22	41			
	63	504...882	30	55			
	80	640...1120	37	68			
	100	800...1400	55	99			
	125	1000...1750	55	99	NZMB2-S125 265736		NZMN2-S125 265739
	160	1280...2240	75	134	NZMB2-S160 265737		NZMN2-S160 265740
	200	1600...2500	110	196	NZMB2-S200 265738		NZMN2-S200 265741

Notes Notes for terminals → 10/47



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Part no. Article no.	Price see price list	Part no. Article no.	Price see price list	Std. pack	Notes																																									
						High switching capacity 100 kA at 415 V 50/60 Hz																																								
NZMH1-S40 284436				1 off	IEC/EN 60947-4-1 and IEC/EN 60947-2 The circuit-breaker fulfills all requirements for AC-3 switching category. Adjustable short-circuit releases I_i • $8 - 14 \times I_n$ (ex-works $12 \times I_n$) – NZM...1-S100, NZM...2-S200: $8 - 12.5 \times I_n$ (ex-works $12 \times I_n$) Without overload release I_r Selection of circuit-breakers without overload release when combining with ZEV electronic motor-protective relay: The tripping response of the ZEV motor-protective relay is matched by setting of the tripping class (CLASS), to the starting behaviour of the motor to be protected.																																									
NZMH1-S50 284437																																														
NZMH1-S63 284438																																														
NZMH1-S80 284439																																														
NZMH1-S100 284440																																														
NZMH2-S40 265742		NZML2-S40 265750		1 off	<table border="1"> <thead> <tr> <th></th> <th>I_n in A</th> <th>Maximum permissible tripping class CLASS</th> </tr> </thead> <tbody> <tr> <td rowspan="5">NZM...1-S...</td> <td>40</td> <td>30</td> </tr> <tr> <td>50</td> <td>30</td> </tr> <tr> <td>63</td> <td>30</td> </tr> <tr> <td>80</td> <td>20</td> </tr> <tr> <td>100</td> <td>15</td> </tr> <tr> <td rowspan="7">NZM...2-S...</td> <td>40</td> <td>30</td> </tr> <tr> <td>50</td> <td>30</td> </tr> <tr> <td>63</td> <td>30</td> </tr> <tr> <td>80</td> <td>30</td> </tr> <tr> <td>100</td> <td>30</td> </tr> <tr> <td>125</td> <td>30</td> </tr> <tr> <td>160</td> <td>20</td> </tr> <tr> <td>200</td> <td>10</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Tripping class</th> <th>Tripping time T_p with load on all poles of 7.2 times current setting value</th> </tr> </thead> <tbody> <tr> <td>10 A</td> <td>$2 s < T_p \leq 10 s$</td> </tr> <tr> <td>10</td> <td>$4 s < T_p \leq 10 s$</td> </tr> <tr> <td>20</td> <td>$6 s < T_p \leq 20 s$</td> </tr> <tr> <td>30</td> <td>$9 s < T_p \leq 30 s$</td> </tr> </tbody> </table> Motor-starter combination of classification types 1 and 2 can be found in the "Fuse-less motor-starter combinations" section.		I_n in A	Maximum permissible tripping class CLASS	NZM...1-S...	40	30	50	30	63	30	80	20	100	15	NZM...2-S...	40	30	50	30	63	30	80	30	100	30	125	30	160	20	200	10	Tripping class	Tripping time T_p with load on all poles of 7.2 times current setting value	10 A	$2 s < T_p \leq 10 s$	10	$4 s < T_p \leq 10 s$	20	$6 s < T_p \leq 20 s$	30	$9 s < T_p \leq 30 s$
	I_n in A	Maximum permissible tripping class CLASS																																												
NZM...1-S...	40	30																																												
	50	30																																												
	63	30																																												
	80	20																																												
	100	15																																												
NZM...2-S...	40	30																																												
	50	30																																												
	63	30																																												
	80	30																																												
	100	30																																												
	125	30																																												
	160	20																																												
200	10																																													
Tripping class	Tripping time T_p with load on all poles of 7.2 times current setting value																																													
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NZMH2-S50 265743		NZML2-S50 265751																																												
NZMH2-S63 265744		NZML2-S63 265752																																												
NZMH2-S80 265745		NZML2-S80 265753																																												
NZMH2-S100 265746		NZML2-S100 265754																																												
NZMH2-S125 265747		NZML2-S125 265755																																												
NZMH2-S160 265748		NZML2-S160 265756																																												
NZMH2-S200 265749		NZML2-S200 265757																																												



NZM...2, NZM...3, NZM...4

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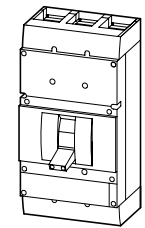
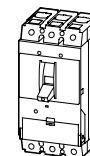
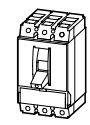
Rated current = rated uninterrupted current $I_n = I_u$	Setting range		Motor rating AC-3 at 400 V 50/60 Hz P	Rated operational current AC-3 at 400 V 50/60 Hz I_e	Part no. Article no.	Price see price list
	Overload releases I_r	Short-circuit releases I_i				
A	A	A	kW	A		

Normal switching capacity 50 kA at 415 V 50/60 Hz

Motor protection

3 pole

Terminal screws standard, terminals as accessories



90	45...90	90...1260	45	81	NZMN2-ME90 265778
140	70...140	140...1960	75	134	NZMN2-ME140 265779
220	110...220	220...3080	110	196	NZMN2-ME220 265780
220	110...220	220...3080	110	196	NZMN3-ME220 265781
350	175...350	350...4900	200	349	NZMN3-ME350 265782
450	225...450	450...6300	250	437	NZMN3-ME450 284468
550	275...550	550...7700	315 ¹⁾	544 ¹⁾	NZMN4-ME550 265783
875	438...875	875...12250	500 ¹⁾	820 ¹⁾	NZMN4-ME875 265784
1400	700...1400	1400...19600	630 ¹⁾	1066 ¹⁾	NZMN4-ME1400 265785

Notes

Notes for terminals → 10/51

- At 690 V AC
 NZM...4-ME550: $P = 560$ kW; $I_e = 550$ A
 NZM...4-ME875: $P = 600$ kW; $I_e = 588$ A
 NZM...4-ME1400: $P = 600$ kW; $I_e = 588$ A

²⁾ High switching capacity for NZMH4-ME...: 85 kA

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NZM...2, NZM...3, NZM...4



High switching capacity ²⁾ 150 kA at 415 V 50/60 Hz Part no. Article no.	Price see price list	Std. pack	Notes

NZMH2-ME90 265786	1 off	IEC/EN 60947-2 and IEC/EN 60947-4-1 The circuit-breaker fulfills all requirements for AC-3 switching category. Adjustable overload releases I_r • $0.5 - 1 \times I_n$ (ex-works $0.8 \times I_n$) R.m.s. value measurement and "thermal memory" Adjustable time delay setting to overcome current peaks t_r • $2 \dots 20$ s with $6 \times I_r$ as well as infinity (without overload release) (ex-factory 10 s) Phase-failure sensitivity Adjustable short-circuit releases I_i • $2 - 14 \times I_r$ (ex-works $12 \times I_r$)
NZMH2-ME140 265787		
NZMH2-ME220 265788		
NZMH3-ME220 265789		
NZMH3-ME350 265790		
NZMH3-ME450 284469		
NZMH4-ME550 265791		
NZMH4-ME875 265792		
NZMH4-ME1400 265793		



NZM...1

Moeller HPL0211-2007/2008

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Rated current = rated uninterrupted current

Setting range

$I_n = I_u$

Overload releases

Short-circuit releases

A

Main pole

Neutral conductor

I_r

I_r

I_i

A

A

A



Basic switching capacity 25 kA at 415 V 50/60 Hz

Part no. Article no. Price see price list

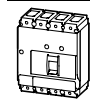
Normal switching capacity 50 kA at 415 V 50/60 Hz

Part no. Article no. Price see price list

Protection of systems and cables

4 pole

Terminals standard, terminal screws as accessories



Rated current	Overload release range	Neutral conductor range	Short-circuit release range	Basic switching capacity	Part no. Article no.	Price	Normal switching capacity	Part no. Article no.	Price
20	15...20	15...20	350	25 kA	NZMB1-4-A20 281237		50 kA	NZMN1-4-A20 281245	
25	20...25	20...25	350	25 kA	NZMB1-4-A25 281239		50 kA	NZMN1-4-A25 281247	
32	25...32	25...32	350	25 kA	NZMB1-4-A32 281241		50 kA	NZMN1-4-A32 281249	
40	32...40	32...40	320...400	25 kA	NZMB1-4-A40 265799		50 kA	NZMN1-4-A40 265811	
50	40...50	40...50	300...500	25 kA	NZMB1-4-A50 265801		50 kA	NZMN1-4-A50 265813	
63	50...63	50...63	380...630	25 kA	NZMB1-4-A63 265803		50 kA	NZMN1-4-A63 265815	
80	63...80	63...80	480...800	25 kA	NZMB1-4-A80 265805		50 kA	NZMN1-4-A80 265817	
100	80...100	80...100	600...1000	25 kA	NZMB1-4-A100 265807		50 kA	NZMN1-4-A100 265819	
125	100...125	100...125	750...1250	25 kA	NZMB1-4-A125 265809		50 kA	NZMN1-4-A125 265821	
160	125...160	125...160	1280	25 kA	NZMB1-4-A160 281243		50 kA	NZMN1-4-A160 281251	

Notes

Notes for terminals → 10/47



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Moeller HPL0211-2007/2008

NZM...1



High switching capacity 100 kA at 415 V 50/60 Hz

Part no. Article no. Price see price list

Std. pack Notes

NZMH1-4-A20 284416	1 off	IEC/EN 60947-2 Adjustable overload releases I_r • $0.8 - 1 \times I_n$ (ex-works $0.8 \times I_n$) Setting on neutral pole implemented via the main pole setting I_r of the main pole. Adjustable short-circuit releases I_i • $6 - 10 \times I_n$ (ex-works $6 \times I_n$) – NZM...1-4-A40: $8 - 10 \times I_n$ (ex-works $8 \times I_n$) Fixed short-circuit release I_i • 350 A at $I_n = 20 - 32$ A • 1280 A at $I_n = 160$ A ($8 \times I_n$) NZM...1-4-A... • With 100 % overload and short-circuit protection in 4th pole
NZMH1-4-A25 284418		
NZMH1-4-A32 284420		
NZMH1-4-A40 284422		
NZMH1-4-A50 284424		
NZMH1-4-A63 284426		
NZMH1-4-A80 284428		
NZMH1-4-A100 284430		
NZMH1-4-A125 284432		
NZMH1-4-A160 284434		



Rated current = rated uninterrupted current

Setting range

Overload releases

Short-circuit releases

Main pole Neutral conductor

$I_n = I_u$

I_r

I_r

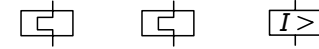
I_i

A

A

A

A



Basic switching capacity 25 kA at 415 V 50/60 Hz

Part no. Article no.

Price see price list

Normal switching capacity 50 kA at 415 V 50/60 Hz

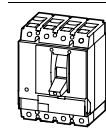
Part no. Article no.

Price see price list

Protection of systems and cables

4 pole

Terminal screws standard, terminals as accessories



20	15...20	15...20	350		
25	20...25	20...25	350		
32	25...32	25...32	350		
40	32...40	32...40	320...400		
50	40...50	40...50	300...500		
63	50...63	50...63	380...630		
80	63...80	63...80	480...800		
100	80...100	80...100	600...1000		
125	100...125	100...125	750...1250		
160	125...160	125...160	960...1600	NZMB2-4-A160 265849	NZMN2-4-A160 265860
160	125...160	80...100	960...1600	NZMB2-4-A160/100 265850	NZMN2-4-A160/100 265861
200	160...200	160...200	1200...2000	NZMB2-4-A200 265852	NZMN2-4-A200 265863
200	160...200	100...125	1200...2000	NZMB2-4-A200/125 265853	NZMN2-4-A200/125 265864
250	200...250	200...250	1500...2500	NZMB2-4-A250 265855	NZMN2-4-A250 265866
250	200...250	125...160	1500...2500	NZMB2-4-A250/160 265856	NZMN2-4-A250/160 265867

Notes

Notes for terminals → 10/51

High switching capacity 150 kA at 415 V 50/60 Hz

Part no. Article no.

Price see price list

Std. pack

Notes

NZMH2-4-A20 281287			
NZMH2-4-A25 281289			
NZMH2-4-A32 281291			
NZMH2-4-A40 265823			
NZMH2-4-A50 265825			
NZMH2-4-A63 265827			
NZMH2-4-A80 265829			
NZMH2-4-A100 265831			
NZMH2-4-A125 265833			
NZMH2-4-A160 265871			
NZMH2-4-A160/100 265872			
NZMH2-4-A200 265874			
NZMH2-4-A200/125 265875			
NZMH2-4-A250 265877			
NZMH2-4-A250/160 265878			

1 off

IEC/EN 60947-2

Adjustable overload releases I_r
• $0.8 - 1 \times I_n$ (ex-works $0.8 \times I_n$)

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

Adjustable short-circuit releases I_i
• $6 - 10 \times I_n$ (ex-works $6 \times I_n$)

Fixed short-circuit release I_i
• 350 A at $I_n = 20 - 32$ A

NZM...2-4-A...

- With 100 % overload and short-circuit protection in 4th pole NZM...2-4-A.../60
- With 60 % overload and short-circuit protection in 4th pole



Rated current = rated
uninterrupted current

Setting range

Overload releases

Short-circuit releases

$I_n = I_u$

A

I_r

A



Neutral
conductor

I_r

A



I_i

A



Normal switching capacity 50 kA at 415 V
50/60 Hz

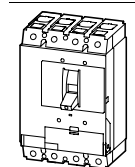
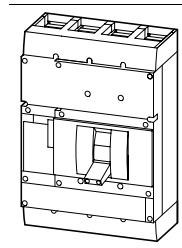
Part no.
Article no.

Price
see price list

Protection of systems and cables

4 pole

Terminal screws standard, terminals as accessories

	400	200...400	200...400	800...4400	NZMN3-4-AE400 265891
	400	200...400	125...250	800...4400	NZMN3-4-AE400/250 265892
	630	315...630	315...630	1260...5040	NZMN3-4-AE630 265894
	630	315...630	200...400	1260...5040	NZMN3-4-AE630/400 265895
	800	400...800	400...800	1600...9600	NZMN4-4-AE800 265909
	800	400...800	250...500	1600...9600	NZMN4-4-AE800/500 265910
	1000	500...1000	500...1000	2000...12000	NZMN4-4-AE1000 265912
	1000	500...1000	315...630	2000...12000	NZMN4-4-AE1000/630 265913
	1250	630...1250	630...1250	2500...15000	NZMN4-4-AE1250 265915
	1250	630...1250	400...800	2500...15000	NZMN4-4-AE1250/800 265916
	1600	800...1600	800...1600	3200...19200	NZMN4-4-AE1600 265918
	1600	800...1600	500...1000	3200...19200	NZMN4-4-AE1600/1000 265919

Notes

Notes for terminals → 10/55



High switching capacity 150 kA at 415 V
50/60 Hz

Part no.
Article no.

Price
see price list

Std. pack

Notes

NZMH3-4-AE400 265897	1 off	<p>IEC/EN 60947-2 Adjustable overload releases I_r</p> <ul style="list-style-type: none"> • $0.5 - 1 \times I_n$ (ex-works $0.8 \times I_n$) <p>Setting on neutral pole implemented via the main pole setting I_r of the main pole.</p> <p>R.m.s. value measurement and "thermal memory"</p> <p>Adjustable short-circuit releases I_i</p> <ul style="list-style-type: none"> • NZM...3-4-AE400: $2 - 11 \times I_n$ (ex-works $6 \times I_n$) • NZM...3-4-AE630: $2 - 8 \times I_n$ (ex-works $6 \times I_n$) • NZM...4-4-AE...: $2 - 12 \times I_n$ (ex-works $6 \times I_n$) <p>NZM...4-AE...</p> <ul style="list-style-type: none"> • With 100 % overload and short-circuit protection in 4th pole <p>NZM...4-AE.../...</p> <ul style="list-style-type: none"> • With 60 % overload and short-circuit protection in 4th pole <p>Higher switching capacity for NZMH4-4-AE...: 100 kA</p>
NZMH3-4-AE400/250 265898		
NZMH3-4-AE630 265900		
NZMH3-4-AE630/400 265901		
NZMH4-4-AE800 265921		
NZMH4-4-AE800/500 265922		
NZMH4-4-AE1000 265924		
NZMH4-4-AE1000/630 265925		
NZMH4-4-AE1250 265927		
NZMH4-4-AE1250/800 265928		
NZMH4-4-AE1600 265930		
NZMH4-4-AE1600/1000 265931		



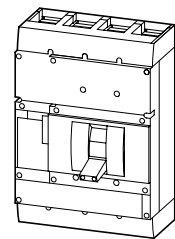
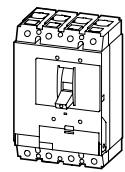
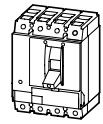
Normal switching capacity 50 kA at 415 V 50/60 Hz
Part no. Article no. Price see price list

Rated current = rated uninterrupted current	Setting range Overload releases		Short-circuit releases	
	Main pole	Neutral conductor	Non-delayed	Delayed short-circuit release
$I_n = I_u$ A	I_r A	I_r A	I_i A	I_{sd} A

Systems and cable protection, selectivity and generator protection

4 pole

Terminal screws standard, terminals as accessories



100	50...100	50...100	1200	100...1000
160	80...160	80...160	1920	160...1600
160	80...160	50...100	1920	160...1600
250	125...250	125...250	3000	250...2500
250	125...250	80...160	3000	250...2500
400	200...400	200...400	800...4400	400...4000
400	200...400	125...250	800...4400	400...4000
630	315...630	315...630	1260...5040	472...4410
630	315...630	200...400	1260...5040	472...4410
800	400...800	400...800	1600...9600	800...8000
800	400...800	250...500	1600...9600	800...8000
1000	500...1000	500...1000	2000...12000	1000...10000
1000	500...1000	315...630	2000...12000	1000...10000
1250	630...1250	630...1250	2500...15000	1250...12500
1250	630...1250	400...800	2500...15000	1250...12500
1600	800...1600	800...1600	3200...19200	1600...16000
1600	800...1600	500...1000	3200...19200	1600...16000

NZMN2-4-VE100 265933
NZMN2-4-VE160 265935
NZMN2-4-VE160/100 265936
NZMN2-4-VE250 265938
NZMN2-4-VE250/160 265939
NZMN3-4-VE400 265957
NZMN3-4-VE400/250 265958
NZMN3-4-VE630 265960
NZMN3-4-VE630/400 265961
NZMN4-4-VE800 265975
NZMN4-4-VE800/500 265976
NZMN4-4-VE1000 265978
NZMN4-4-VE1000/630 265979
NZMN4-4-VE1250 265981
NZMN4-4-VE1250/800 265982
NZMN4-4-VE1600 265984
NZMN4-4-VE1600/1000 265985

Notes

Notes for terminals → 10/51


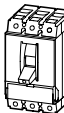
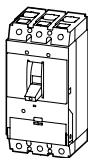
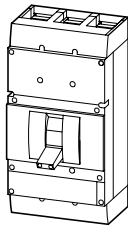
High switching capacity¹⁾ 150 kA at 415 V 50/60 Hz
Part no. Article no. Price see price list

Std. pack Notes

NZMH2-4-VE100 265941
NZMH2-4-VE160 265943
NZMH2-4-VE160/100 265944
NZMH2-4-VE250 265946
NZMH2-4-VE250/160 265947
NZMH3-4-VE400 265963
NZMH3-4-VE400/250 265964
NZMH3-4-VE630 265966
NZMH3-4-VE630/400 265967
NZMH4-4-VE800 265987
NZMH4-4-VE800/500 265988
NZMH4-4-VE1000 265990
NZMH4-4-VE1000/630 265991
NZMH4-4-VE1250 265993
NZMH4-4-VE1250/800 265994
NZMH4-4-VE1600 265996
NZMH4-4-VE1600/1000 265997

1 off

IEC/EN 60947-2
Adjustable overload releases I_r
• $0.5 - 1 \times I_n$ (ex-works $0.8 \times I_n$)
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
• $2 \dots 20$ s with $6 \times I_r$ as well as infinity (without overload release) (ex-factory 10 s)
– NZM...3-4-VE630: $2 - 14$ s at $6 \times I_r$ also infinity (without overload release)
Adjustable delayed short-circuit releases I_{sd}
• $2 - 10 \times I_r$ (ex-works $6 \times I_r$)
– NZM...3-4-VE630: $1.5 - 7 \times I_r$ (ex-works $6 \times I_r$)
Adjustable delay time t_{sd}
• Steps: 0, 20, 60, 100, 200, 300, 500, 750, 1000 ms (ex-works 0 ms)
Adjustable non-delayed short-circuit releases I_i
• NZM2 fixed $12 \times I_n$
• NZM...3-4-VE400: $2 - 11 \times I_n$ (ex-works $6 \times I_n$)
• NZM...3-4-VE630: $2 - 8 \times I_n$ (ex-works $6 \times I_n$)
• NZM...4-4-VE...: $2 - 12 \times I_n$ (ex-works $12 \times I_n$)
 i^2t constant function (ex-works OFF)
• NZM2 fixed OFF
• NZM3, NZM4 switched (ex-works 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
¹⁾ High switching capacity for NZMH4-4-VE...: 100 kA

	Rated current = rated uninterrupted current $I_n = I_u$ A	Short-circuit protection max. fuse gL- characteristic A gL	2 switch positions I, 0. Cannot be remotely operated. Part no. Article no.	Price see price list	3 switch positions I, +, 0; can be tripped remotely with shunt/undervoltage release Part no. Article no.	Price see price list	Std. pack
Switch-disconnectors							
3 pole							
Terminals standard, terminal screws as accessories							
	63	125	PN1-63 259140		N1-63 259143		1 off
	100	125	PN1-100 259141		N1-100 259144		
	125	125	PN1-125 259142		N1-125 259145		
	160	160	PN1-160 281235		N1-160 281236		
Terminal screws standard, terminals as accessories							
	160	250	PN2-160 266005		N2-160 266008		1 off
	200	250	PN2-200 266006		N2-200 266009		
	250	250	PN2-250 266007		N2-250 266010		
	400	630	PN3-400 266017		N3-400 266019		1 off
	630	630	PN3-630 266018		N3-630 266020		
	630	1600			N4-630 107273		1 off
	800	1600			N4-800 266025		
	1000	1600			N4-1000 266026		
	1250	1600			N4-1250 266027		
	1600	1600			N4-1600 266028		

Notes

Main switch characteristics including positive drive to IEC/EN 60204 and VDE 0113

Isolating characteristics to IEC/EN 60947-3 and VDE 0660

Protection against accidental contact according to IEC 100

With the switch-disconnector N additional voltage releases NZM...-XU, NZM...-XA and trip-indicating auxiliary contacts (HIA) can be used.

N2..., N3... and N4... can also be combined with the NZM...-XR... remote operator.

Notes for terminals → 10/47

	Rated current = rated uninterrupted current $I_n = I_u$ A	Short-circuit protection max. fuse gL-characteristic A gL	2 switch positions I, 0. Cannot be remotely operated.	3 switch positions I, +, 0; can be tripped remotely with shunt/undervoltage release	Std. pack		
			Part no. Article no.	Price see price list	Part no. Article no.	Price see price list	
Switch-disconnectors							
4 pole							
Terminals standard, terminal screws as accessories							
	63	125	PN1-4-63 265999		N1-4-63 266002		1 off
	100	125	PN1-4-100 266000		N1-4-100 266003		
	125	125	PN1-4-125 266001		N1-4-125 266004		
	160	160	PN1-4-160 281253		N1-4-160 281254		
Terminal screws standard, terminals as accessories							
	160	250	PN2-4-160 266011		N2-4-160 266014		1 off
	200	250	PN2-4-200 266012		N2-4-200 266015		
	250	250	PN2-4-250 266013		N2-4-250 266016		
	400	630	PN3-4-400 266021		N3-4-400 266023		
	630	630	PN3-4-630 266022		N3-4-630 266024		
	800	1600			N4-4-800 266029		
	1000	1600			N4-4-1000 266030		
	1250	1600			N4-4-1250 266031		
	1600	1600			N4-4-1600 266032		

Notes

Main switch characteristics including positive drive to IEC/EN 60204 and VDE 0113
 Isolating characteristics to IEC/EN 60947-3 and VDE 0660
 Protection against accidental contact according to IEC 100
 With the switch-disconnector N additional voltage releases NZM...-XU, NZM...-XA and trip-indicating auxiliary contacts (HIA) can be used.
 N2..., N3... and N4... can also be combined with the NZM...-XR... remote operator.
 Notes for terminals → 10/47



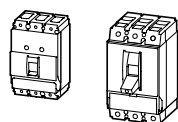
NZM...1, NZM...2, NZM...3

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Circuit-breaker

UL/CSA approved to UL 489, CSA 22.2 No. 5.1 as well as IEC/EN 60947



With main switch characteristics to IEC/EN 60204 and isolating characteristics to IEC/EN 60947, VDE 0660

Rated uninterrupted current $I_u =$
 Rated current I_n
 Adjustable overload release I_r
 Adjustable short-circuit release I_{sd}
 Delayed short-circuit release I_{sd}

Thermomagnetic releases

Overload releases

Fixed		Adjustable		Without	
I_u	A	I_u	A	I_u	A
NZM1		NZM2		NZM1	NZM2

15 – 125	15 – 250	20 – 125	20 – 250	$0.8 - 1 \times I_n$	1.2 – 100	1.6 – 250
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Basic switching capacity¹⁾

		NZMB1-...-NA		NZMB2-...-NA		
NEMA Test Procedure	240 V 60 Hz	sym. rms kA	35	35		
	480 V 60 Hz	sym. rms kA	25 ²⁾	25		
	600 V 60 Hz	sym. rms kA	–	18		
IEC/EN 60947	400/415 V	kA/cos φ	25	0.25	25	0.25
	440 V	kA/cos φ	25	0.25	25	0.25
	525 V	kA/cos φ	15	0.30	15	0.30

Normal switching capacity¹⁾

		NZMN1-...-NA		NZMN2-...-NA		
NEMA Test Procedure	240 V 60 Hz	sym. rms kA	85	85		
	480 V 60 Hz	sym. rms kA	35 ²⁾	35		
	600 V 60 Hz	sym. rms kA	–	25		
IEC/EN 60947	400/415 V	kA/cos φ	50	0.25	50	0.25
	440 V	kA/cos φ	35	0.25	35	0.25
	525 V	kA/cos φ	20	0.30	25	0.25
	690 V	kA/cos φ	10	0.50	20	0.30

High switching capacity¹⁾

		NZMH2-...-NA		
NEMA Test Procedure	240 V 60 Hz	sym. rms kA	150	
	480 V 60 Hz	sym. rms kA	100	
	600 V 60 Hz	sym. rms kA	50	
IEC/EN 60947	400/415 V	kA/cos φ	150	0.20
	440 V	kA/cos φ	130	0.20
	525 V	kA/cos φ	50	0.25
	690 V	kA/cos φ	20	0.30

Notes

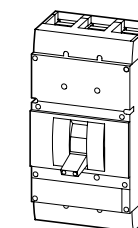
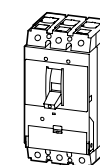
¹⁾ Switches correspond with both UL/CSA as well as IEC regulations
 IEC switching performance values contained on type label → Technical data
²⁾ With NZM...1-...-NA > 50 A 480Y/277V



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NZM...1, NZM...2, NZM...3



Electronic releases

Overload releases

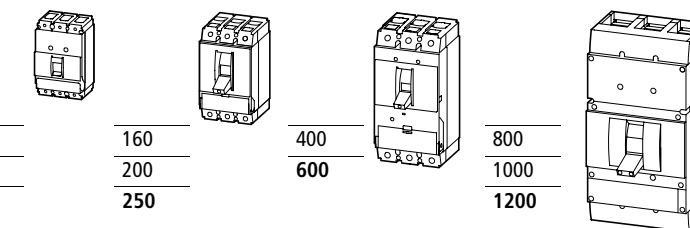
Fixed			Adjustable			Without			Short-circuit releases			
I_u	I_u	I_r	I_u	I_u	I_r	I_u	I_u	I_u	I_r	System protection		Motor
A	A	A	A	A	A	A	A	A	A	I_{sd}	I_i	I_i

150 – 250	100 – 250	$0.5 - 1 \times I_n$	90 – 220	250 – 600	250 – 600	$0.5 - 1 \times I_n$	220 – 450	600 – 1200	800 – 1200	$0.5 - 1 \times I_n$	$2 - 10 \times I_r$	$2 - 12 \times I_n$	$2 - 14 \times I_n$
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NZMN2-...E...-NA		NZMN3-...E...-NA		NZMN4-...E...-NA	
85		85		85	
35		42		42	
25		35		35	
50	0.25	50	0.25	50	0.25
35	0.25	35	0.25	35	0.25
25	0.25	25	0.25	25	0.25
20	0.30	20	0.30	20	0.30
NZMH2-...E...-NA		NZMH3-...E...-NA		NZMH4-...E...-NA	
150		150		125	
100		100		85	
50		50		50	
150	0.20	150	0.20	85 ¹⁾	0.20
130	0.20	130	0.20	85	0.20
50	0.25	65	0.25	65	0.25
20	0.30	35	0.25	50	0.25

The approved switches are suitable for world-wide use. The UL and CSA certificates can be found at www.ul.com and www.csa.com
 UL certificate: File No.: E 31593 (NZM1-4), E 148671 (N(S)1-4)
 CSA certificate: File No. 165628 (NZM1-4)
¹⁾ Higher switching capacity on request



Molded case switch
 UL/CSA approved to UL 489, CSA 22.2 No. 5.1 as well as IEC/EN 60947-2 annex L



With main switch characteristics to IEC/EN 60204 and VDE 0113
 isolating characteristics to IEC/EN 60947
without overcurrent
With short-circuit release
 Rated uninterrupted current $I_u = I_n$

63	160	400	800
100	200	600	1000
125	250		1200

Switching capacity		NS1-...-NA	NS2-...-NA	NS3-...-NA	NS4-...-NA
according to UL 489, CSA 22.2	240 V	85	150	150	85
	480 V	35	100	100	65
	600 V	–	50	50	42
IEC/EN 60947	400/415 V	50	150	150	70
	440 V	35	130	130	65
	525 V	20	50	65	40
	690 V	10	20	35	35

Rated current = uninterrupted current	Setting range	
	Overload releases	Short-circuit releases
$I_n = I_u$	I_r	I_i
A	 A	 A

Basic switching capacity 35 kA 240 V 60 Hz ¹⁾ 25 kA 480 V 60 Hz ²⁾ 18 kA 600 V 60 Hz ²⁾		Normal switching capacity 85 kA 240 V 60 Hz ¹⁾ 35 kA 480 V 60 Hz ²⁾ 25 kA 600 V 60 Hz ²⁾	
Part no. Article no.	Price see price list	Part no. Article no.	Price see price list

Protection of systems and cables

3 pole
Fixed overload releases
Terminals standard, terminal
screws as accessories



15	15	350	NZMB1-AF15-NA 281553	NZMN1-AF15-NA 281564
20	20	350	NZMB1-AF20-NA 281554	NZMN1-AF20-NA 281565
25	25	350	NZMB1-AF25-NA 281555	NZMN1-AF25-NA 281566
30	30	350	NZMB1-AF30-NA 281556	NZMN1-AF30-NA 281567
35	35	320...400	NZMB1-AF35-NA 272204	NZMN1-AF35-NA 274220
40	40	320...400	NZMB1-AF40-NA 272205	NZMN1-AF40-NA 274223
45	45	300...500	NZMB1-AF45-NA 272206	NZMN1-AF45-NA 274230
50	50	300...500	NZMB1-AF50-NA 272207	NZMN1-AF50-NA 274231
60	60	380...630	NZMB1-AF60-NA 272208	NZMN1-AF60-NA 274232
70	70	480...800	NZMB1-AF70-NA 272209	NZMN1-AF70-NA 274233
80	80	480...800	NZMB1-AF80-NA 272250	NZMN1-AF80-NA 274234
90	90	600...1000	NZMB1-AF90-NA 272251	NZMN1-AF90-NA 274235
100	100	600...1000	NZMB1-AF100-NA 272252	NZMN1-AF100-NA 274236
110	110	750...1250	NZMB1-AF110-NA 281557	NZMN1-AF110-NA 281568
125	125	750...1250	NZMB1-AF125-NA 281558	NZMN1-AF125-NA 281569

Terminal screws standard,
terminals as accessories



15	15	350	NZMB2-AF15-NA 269142	NZMN2-AF15-NA 269170
20	20	350	NZMB2-AF20-NA 269143	NZMN2-AF20-NA 269171
25	25	350	NZMB2-AF25-NA 269144	NZMN2-AF25-NA 269172
30	30	350	NZMB2-AF30-NA 269145	NZMN2-AF30-NA 269173
35	35	320...400	NZMB2-AF35-NA 269146	NZMN2-AF35-NA 269174
40	40	320...400	NZMB2-AF40-NA 269147	NZMN2-AF40-NA 269175
45	45	300...500	NZMB2-AF45-NA 269148	NZMN2-AF45-NA 269176
50	50	300...500	NZMB2-AF50-NA 269149	NZMN2-AF50-NA 269177
60	60	380...630	NZMB2-AF60-NA 269160	NZMN2-AF60-NA 269178
70	70	480...800	NZMB2-AF70-NA 269161	NZMN2-AF70-NA 269179
80	80	480...800	NZMB2-AF80-NA 269162	NZMN2-AF80-NA 269180
90	90	600...1000	NZMB2-AF90-NA 269163	NZMN2-AF90-NA 269181
100	100	600...1000	NZMB2-AF100-NA 269164	NZMN2-AF100-NA 269182
110	110	750...1250	NZMB2-AF110-NA 269165	NZMN2-AF110-NA 269183

Notes

Notes for terminals → 10/47

High switching capacity 150 kA 240 V 60 Hz 100 kA 480 V 60 Hz 50 kA 600 V 60 Hz		Std. pack	Notes
Part no. Article no.	Price see price list		

		1 off	Switches conform to UL/CSA as well as the IEC regulations. IEC switching performance values are contained on the rating plate. UL 489, CSA-C22.2-5.1, IEC/EN 60947-2 Fixed overload releases I_r Adjustable short-circuit releases I_i • ca. $6 - 10 \times I_n$ (ex-works $6 \times I_n$) – NZM...-AF35/40-NA: approx. $8 - 10 \times I_n$ Fixed short-circuit releases I_i • 350 A at $I_n = 15 - 30$ A ¹⁾ Basic switching capacity 25 kA 480 V and normal switching capacity 35 kA 480 V for NZM...1-...-NA: 480 Y/277 V AC from 60 A.
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NZMH2-AF15-NA 269188		1 off	Switches conform to UL/CSA as well as the IEC regulations. IEC switching performance values are contained on the rating plate. UL 489, CSA-C22.2-5.1, IEC/EN 60947-2 Fixed overload releases I_r Adjustable short-circuit releases I_i • ca. $6 - 10 \times I_n$ (ex-works $6 \times I_n$) – NZM...-AF35/40-NA: approx. $8 - 10 \times I_n$ Fixed short-circuit releases I_i • 350 A at $I_n = 15 - 30$ A ²⁾ Basic switching capacity 18 kA 600 V and Normal switching capacity 25 kA 600 V for NZM2.
NZMH2-AF20-NA 269189			
NZMH2-AF25-NA 269190			
NZMH2-AF30-NA 269191			
NZMH2-AF35-NA 269192			
NZMH2-AF40-NA 269193			
NZMH2-AF45-NA 269194			
NZMH2-AF50-NA 269195			
NZMH2-AF60-NA 269196			
NZMH2-AF70-NA 269197			
NZMH2-AF80-NA 269198			
NZMH2-AF90-NA 269199			
NZMH2-AF100-NA 269200			
NZMH2-AF110-NA 269201			



NZM...1, NZM...2

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Rated current = rated uninterrupted current $I_n = I_u$ A	Setting range		Basic switching capacity 35 kA 240 V 60 Hz 25 kA 480 V 60 Hz ¹⁾ 18 kA 600 V 60 Hz ²⁾	Part no. Article no.	Price see price list	Normal switching capacity 85 kA 240 V 60 Hz 35 kA 480 V 60 Hz ¹⁾ 25 kA 600 V 60 Hz ²⁾	Part no. Article no.	Price see price list
	Overload releases I_r A	Short-circuit releases I_i A						

Protection of systems and cables

3 pole

Fixed overload releases

Terminal screws standard, terminals as accessories

Rated current	Setting range	Switching capacity	Part no.	Price	Part no.	Price
125	125	750...1250	NZMB2-AF125-NA 269166		NZMN2-AF125-NA 269184	
150	150	960...1600	NZMB2-AF150-NA 269167		NZMN2-AF150-NA 269185	
175	175	1200...2000	NZMB2-AF175-NA 269168		NZMN2-AF175-NA 269186	
200	200	1200...2000	NZMB2-AF200-NA 269169		NZMN2-AF200-NA 269187	
225	225	1500...2500	NZMB2-AF225-NA 271089		NZMN2-AF225-NA 271101	
250	250	1500...2500	NZMB2-AF250-NA 271100		NZMN2-AF250-NA 271102	

Adjustable overload releases

Terminals standard, terminal screws as accessories

Rated current	Setting range	Switching capacity	Part no.	Price	Part no.	Price
20	15...20	350	NZMB1-A20-NA 281559		NZMN1-A20-NA 281570	
25	20...25	350	NZMB1-A25-NA 281560		NZMN1-A25-NA 281571	
32	25...32	350	NZMB1-A32-NA 281561		NZMN1-A32-NA 281572	
40	32...40	320...400	NZMB1-A40-NA 272253		NZMN1-A40-NA 274237	
50	40...50	300...500	NZMB1-A50-NA 272254		NZMN1-A50-NA 274239	
63	50...63	380...630	NZMB1-A63-NA 272255		NZMN1-A63-NA 274240	
80	63...80	480...800	NZMB1-A80-NA 272256		NZMN1-A80-NA 274241	
100	80...100	600...1000	NZMB1-A100-NA 272258		NZMN1-A100-NA 274242	
125	100...125	750...1250	NZMB1-A125-NA 281562		NZMN1-A125-NA 281573	

Adjustable overload releases

Terminal screws standard, terminals as accessories

Rated current	Setting range	Switching capacity	Part no.	Price	Part no.	Price
20	15...20	350	NZMB2-A20-NA 269206		NZMN2-A20-NA 269217	
25	20...25	350	NZMB2-A25-NA 269207		NZMN2-A25-NA 269218	
32	25...32	350	NZMB2-A32-NA 269208		NZMN2-A32-NA 269219	
40	32...40	320...400	NZMB2-A40-NA 269209		NZMN2-A40-NA 269220	
50	40...50	300...500	NZMB2-A50-NA 269210		NZMN2-A50-NA 269221	
63	50...63	380...630	NZMB2-A63-NA 269211		NZMN2-A63-NA 269222	
80	63...80	480...800	NZMB2-A80-NA 269212		NZMN2-A80-NA 269223	
100	80...100	600...1000	NZMB2-A100-NA 269213		NZMN2-A100-NA 269224	
125	100...125	750...1250	NZMB2-A125-NA 269214		NZMN2-A125-NA 269225	
160	125...160	960...1600	NZMB2-A160-NA 269215		NZMN2-A160-NA 269226	
200	160...200	1200...2000	NZMB2-A200-NA 269216		NZMN2-A200-NA 269227	
250	200...250	1500...2500	NZMB2-A250-NA 271105		NZMN2-A250-NA 271106	

Notes

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NZM...1, NZM...2



High switching capacity 150 kA 240 V 60 Hz 100 kA 480 V 60 Hz 50 kA 600 V 60 Hz	Part no. Article no.	Price see price list	Std. pack	Notes

Part no.	Price	Std. pack	Notes
NZMH2-AF125-NA 269202		1 off	Switches conform to UL/CSA as well as the IEC regulations. IEC switching performance values are contained on the rating plate. UL 489, CSA-C22.2-5.1, IEC/EN 60947-2 Fixed overload releases I_r Adjustable short-circuit releases I_i • ca. $6 - 10 \times I_n$ (ex-works $6 \times I_n$) – NZM...-AF35/40-NA: approx. $8 - 10 \times I_n$ Fixed short-circuit releases I_i • 350 A at $I_n = 15 - 30$ A ²⁾ Basic switching capacity 18 kA 600 V and Normal switching capacity 25 kA 600 V for NZM2.
NZMH2-AF150-NA 269203			
NZMH2-AF175-NA 269204			
NZMH2-AF200-NA 269205			
NZMH2-AF225-NA 271103			
NZMH2-AF250-NA 271104			

Part no.	Price	Std. pack	Notes
NZMH2-A20-NA 269228		1 off	Switches conform to UL/CSA as well as the IEC regulations. IEC switching performance values are contained on the rating plate. UL 489, CSA-C22.2-5.1, IEC/EN 60947-2 Adjustable overload releases I_r • $0.8 - 1 \times I_n$ (ex-works $0.8 \times I_n$) Adjustable short-circuit releases I_i • $6 - 10 \times I_n$ (ex-works $6 \times I_n$) – NZM...-A40-NA: $8 - 10 \times I_n$ Fixed short-circuit releases I_i • 350 A at $I_n = 20 - 32$ A ¹⁾ Basic switching capacity 25 kA 480 V and normal switching capacity 35 kA 480 V for NZM...1-...-NA: 480 V/277 V AC from 60 A.
NZMH2-A25-NA 269229			
NZMH2-A32-NA 269230			
NZMH2-A40-NA 269231			
NZMH2-A50-NA 269232			
NZMH2-A63-NA 269233			
NZMH2-A80-NA 269234			
NZMH2-A100-NA 269235			
NZMH2-A125-NA 269236			

Part no.	Price	Std. pack	Notes
NZMH2-A20-NA 269228		1 off	Switches conform to UL/CSA as well as the IEC regulations. IEC switching performance values are contained on the rating plate. UL 489, CSA-C22.2-5.1, IEC/EN 60947-2 Adjustable overload releases I_r • $0.8 - 1 \times I_n$ (ex-works $0.8 \times I_n$) Adjustable short-circuit releases I_i • $6 - 10 \times I_n$ (ex-works $6 \times I_n$) – NZM...-A40-NA: $8 - 10 \times I_n$ Fixed short-circuit releases I_i • 350 A at $I_n = 20 - 32$ A ²⁾ Basic switching capacity 18 kA 600 V and normal switching capacity 25 kA 600 V for NZM2.
NZMH2-A25-NA 269229			
NZMH2-A32-NA 269230			
NZMH2-A40-NA 269231			
NZMH2-A50-NA 269232			
NZMH2-A63-NA 269233			
NZMH2-A80-NA 269234			
NZMH2-A100-NA 269235			
NZMH2-A125-NA 269236			
NZMH2-A160-NA 269237			
NZMH2-A200-NA 269238			
NZMH2-A250-NA 271107			



NZM...1

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Basic switching capacity
240 V 60 Hz
480 V 60 Hz ¹⁾

Normal switching capacity
240 V 60 Hz
480 V 60 Hz ¹⁾

Rated current = rated
uninterrupted current

Setting range
Short-circuit releases

Part no.
Article no.

Price
see price
list

Part no.
Article no.

Price
see price
list

Std.
pack

$I_n = I_u$

I_i

A

A



Short-circuit protection
Motor protection in conjunction with contactor and overload relay

- with short-circuit release
- without overload release

3 pole

Terminals standard, terminal screws as accessories



Rated current I_n	Setting range I_i	Part no. Article no.	Price see price list	Part no. Article no.	Price see price list	Std. pack
1.2	8...14	NZMB1-S1,2-CNA 102906		NZMN1-S1,2-CNA 103025		1 off
2	12.8...22.4	NZMB1-S2-CNA 102907		NZMN1-S2-CNA 103026		
3	19.2...33.6	NZMB1-S3-CNA 102908		NZMN1-S3-CNA 103027		
5	32...56	NZMB1-S5-CNA 102909		NZMN1-S5-CNA 103028		
8	48...84	NZMB1-S8-CNA 103020		NZMN1-S8-CNA 103029		
12	80...140	NZMB1-S12-CNA 103021		NZMN1-S12-CNA 103030		
18	128...224	NZMB1-S18-CNA 103022		NZMN1-S18-CNA 103031		
26	200...350	NZMB1-S26-CNA 103023		NZMN1-S26-CNA 103032		
33	256...448	NZMB1-S33-CNA 103024		NZMN1-S33-CNA 103033		
40	320...560	NZMB1-S40-CNA 281263		NZMN1-S40-CNA 281276		
50	400...700	NZMB1-S50-CNA 281264		NZMN1-S50-CNA 281277		
63	504...882	NZMB1-S63-CNA 281265		NZMN1-S63-CNA 281278		
80	640...1120	NZMB1-S80-CNA 281266		NZMN1-S80-CNA 281279		
100	800...1250	NZMB1-S100-CNA 281267		NZMN1-S100-CNA 281280		

Notes

Notes for terminals → 10/47

Circuit-breakers, switch-disconnectors, UL/CSA IEC



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NZM...1



Notes

Switches conform to UL/CSA as well as the IEC regulations.
IEC switching performance values from 40 A are contained on the rating plate.
UL 489, CSA-C22.2-5.1, IEC/EN 60947-4-1

- Adjustable short-circuit releases I_i
- $8 - 14 \times I_n$ (ex-works $12 \times I_n$)
 - NZM...1-S1,2...33-CNA: approx. $8 - 14 \times I_n$
 - NZM...1-S100-CNA: $8 - 12.5 \times I_n$ (ex-works $12 \times I_n$)

Without overload release I_r



CNA: The device has components approved to UL, the conditions of approval must be observed during use.
I.e. the device must be combined with a suitable contactor and overload relay.
A switching capacity is stated for the complete motor-starter combination.
The device is approved as a CSA approved single device.

¹⁾ Basic switching capacity and Normal switching capacity: 480V/277 V AC from 60 A.

Circuit-breakers, switch-disconnectors, UL/CSA IEC



Basic switching capacity
240 V 60 Hz
480 V 60 Hz
600 V 60 Hz

Normal switching capacity
240 V 60 Hz
480 V 60 Hz
600 V 60 Hz

Rated current = rated uninterrupted current

Setting range

Part no.
Article no.

Price
see price list

Part no.
Article no.

Price
see price list

$I_n = I_u$

Short-circuit releases

A

I_i

A



Short-circuit protection
Motor protection in conjunction with contactor and overload relay

- With short-circuit release
- Without overload release

3 pole

Terminal screws standard, terminals as accessories



Rated current	Setting range	Part no. Article no.	Price see price list	Part no. Article no.	Price see price list
1.6	12.8...22.4	NZMB2-S1,6-CNA 269472		NZMN2-S1,6-CNA 269478	
2.4	19.2...33.6	NZMB2-S2,4-CNA 269473		NZMN2-S2,4-CNA 269479	
5	32...56	NZMB2-S5-CNA 103034		NZMN2-S5-CNA 103040	
8	48...84	NZMB2-S8-CNA 103035		NZMN2-S8-CNA 103041	
12	80...140	NZMB2-S12-CNA 103036		NZMN2-S12-CNA 103042	
18	128...224	NZMB2-S18-CNA 103037		NZMN2-S18-CNA 103043	
26	200...350	NZMB2-S26-CNA 103038		NZMN2-S26-CNA 103044	
33	256...448	NZMB2-S33-CNA 103039		NZMN2-S33-CNA 103045	
40	320...560	NZMB2-S40-CNA 269243		NZMN2-S40-CNA 269255	
50	400...700	NZMB2-S50-CNA 269244		NZMN2-S50-CNA 269256	
63	504...882	NZMB2-S63-CNA 269245		NZMN2-S63-CNA 269257	
80	640...1120	NZMB2-S80-CNA 269246		NZMN2-S80-CNA 269258	
100	800...1400	NZMB2-S100-CNA 269247		NZMN2-S100-CNA 269259	
125	1000...1750	NZMB2-S125-CNA 269248		NZMN2-S125-CNA 269260	
160	1280...2240	NZMB2-S160-CNA 269249		NZMN2-S160-CNA 269261	
200	1600...2500	NZMB2-S200-CNA 269250		NZMN2-S200-CNA 269262	
250	2000...2500	NZMB2-S250-CNA 102478		NZMN2-S250-CNA 102479	

Notes Notes for terminals → 10/51

Std. pack Notes

1 off

Switches conform to UL/CSA as well as the IEC regulations.
IEC switching performance values from 40 A are contained on the rating plate.
UL 489, CSA-C22.2-5.1, IEC/EN 60947-4-1

- NZM...2-S250-CNA: IEC/EN 60947-2

Adjustable short-circuit releases I_i

- $8 - 14 \times I_n$ (ex-works $12 \times I_n$)
 - NZM...2-S4...33-CNA: $8 - 10 \times I_n$ (ex-works $10 \times I_n$)
 - NZM...2-S250-CNA: $8 - 10 \times I_n$ (ex-works $10 \times I_n$)



Without overload release I_r



CNA: The device has components approved to UL, the conditions of approval must be observed during use.
I.e. the device must be combined with a suitable contactor and overload relay.
A switching capacity is stated for the complete motor-starter combination.
The device is approved as a CSA approved single device.



Normal switching capacity
85 kA 240 V 60 Hz
42 kA 480 V 60 Hz
35 kA 600 V 60 Hz

Rated current = rated uninterrupted current	Setting range Overload releases	Short-circuit releases Non-delayed
$I_n = I_u$ A	I_r A 	I_i A 

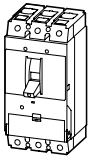
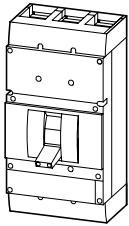
Part no.
Article no.

Price
see price list

Protection of systems and cables

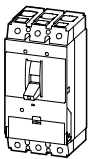
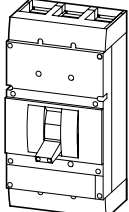
3 pole

Fixed overload releases
Terminal screws standard, terminals as accessories

	250	250	500...2750	NZMN3-AEF250-NA 269275
	300	300	600...3300	NZMN3-AEF300-NA 269276
	350	350	700...3850	NZMN3-AEF350-NA 269277
	400	400	800...4400	NZMN3-AEF400-NA 269278
	450	450	900...3600	NZMN3-AEF450-NA 269279
	500	500	1000...4000	NZMN3-AEF500-NA 269280
	550	550	1100...4400	NZMN3-AEF550-NA 269281
	600	600	1200...4800	NZMN3-AEF600-NA 269282
	600	600	1200...7200	NZMN4-AEF600-NA 271108
	700	700	1400...8400	NZMN4-AEF700-NA 271109
	800	800	1600...9600	NZMN4-AEF800-NA 271110
	900	900	1800...10800	NZMN4-AEF900-NA 271111
	1000	1000	2000...12000	NZMN4-AEF1000-NA 271112
	1200	1200	2400...14400	NZMN4-AEF1200-NA 271113

3 pole

Adjustable overload releases
Terminal screws standard, terminals as accessories

	250	125...250	500...2750	NZMN3-AE250-NA 269299
	400	200...400	800...4400	NZMN3-AE400-NA 269300
	600	300...600	1200...4800	NZMN3-AE600-NA 269301
	800	400...800	1600...9600	NZMN4-AE800-NA 271120
	1000	500...1000	2000...12000	NZMN4-AE1000-NA 271121
	1200	600...1200	2400...14400	NZMN4-AE1200-NA 271122

Notes Notes for terminals → 10/58

High switching capacity
125 kA 240 V 60 Hz
100 kA 480 V 60 Hz¹⁾
50 kA 600 V 60 Hz

Part no.
Article no.

Price
see price list

Std. pack Notes

NZMH3-AEF250-NA 269283		1 off	Switches conform to UL/CSA as well as the IEC regulations. IEC switching performance values are contained on the rating plate. UL 489, CSA-C22.2-5.1, IEC/EN 60947-2 Fixed overload releases I_r R.m.s. value measurement and "thermal memory" Adjustable short-circuit releases I_i • With NZM...3-AEF250...400-NA: $2 - 11 \times I_n$ (ex-works $6 \times I_n$) • With NZM...3-AEF450...600-NA: $2 - 8 \times I_n$ (ex-works $6 \times I_n$) • With NZM...4-AEF...-NA: $2 - 12 \times I_n$ (ex-works $6 \times I_n$) ¹⁾ High switching capacity for NZMH4: 85 kA/480 V
NZMH3-AEF300-NA 269284			
NZMH3-AEF350-NA 269285			
NZMH3-AEF400-NA 269286			
NZMH3-AEF450-NA 269287			
NZMH3-AEF500-NA 269288			
NZMH3-AEF550-NA 269289			
NZMH3-AEF600-NA 269290			
NZMH4-AEF600-NA 271114			
NZMH4-AEF700-NA 271115			
NZMH4-AEF800-NA 271116			
NZMH4-AEF900-NA 271117			
NZMH4-AEF1000-NA 271118			
NZMH4-AEF1200-NA 271119			

NZMH3-AE250-NA 269302		1 off	Switches conform to UL/CSA as well as the IEC regulations. IEC switching performance values are contained on the rating plate. UL 489, calibration to UL 508, CSA-C22.2-5.1, IEC/EN 60947-2 Use in motor control circuits only in conjunction with a suitable contactor. Motor protection characteristic to UL 508 for NZM4 on request. Adjustable overload releases I_r • $0.5 - 1 \times I_n$ (ex-factory $0.8 \times I_n$) R.m.s. value measurement and "thermal memory" Adjustable short-circuit releases I_i • With NZM...3-AE250/400-NA: $2 - 11 \times I_n$ (ex-works $6 \times I_n$) • With NZM...3-AE600-NA: $2 - 8 \times I_n$ (ex-works $6 \times I_n$) • With NZM...4-AE...-NA: $2 - 12 \times I_n$ (ex-works $6 \times I_n$) High switching capacity for NZMH4: 85 kA/480 V
NZMH3-AE400-NA 269303			
NZMH3-AE600-NA 269304			
NZMH4-AE800-NA 271123			
NZMH4-AE1000-NA 271124			
NZMH4-AE1200-NA 271125			



NZM...2, NZM...3, NZM...4

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Normal switching capacity
85 kA 240 V 60 Hz¹⁾
42 kA 480 V 60 Hz²⁾
35 kA 600 V 60 Hz

Rated current = rated uninterrupted current

Setting range
Overload releases

Short-circuit releases

$I_n = I_u$

I_r

I_i

I_{sd}

A

A

A

A


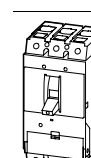
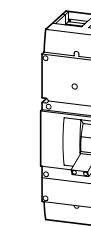


Part no.
Article no.

Price
see price list

Systems, cable, transformer and generator protection

3 pole
Fixed overload releases
Terminal screws standard, terminals as accessories

	150	150	1800	300...1500	NZMN2-VEF150-NA 271126
	175	175	2100	350...1750	NZMN2-VEF175-NA 271127
	200	200	2400	400...2000	NZMN2-VEF200-NA 271128
	225	225	2700	450...2250	NZMN2-VEF225-NA 271129
	250	250	3000	500...2500	NZMN2-VEF250-NA 271130
	250	250	500...2750	500...2500	NZMN3-VEF250-NA 269308
	300	300	600...3300	600...3000	NZMN3-VEF300-NA 269309
	350	350	700...3850	700...3500	NZMN3-VEF350-NA 269310
	400	400	800...4400	800...4000	NZMN3-VEF400-NA 269311
	450	450	900...3600	675...3150	NZMN3-VEF450-NA 269312
	500	500	1000...4000	750...3500	NZMN3-VEF500-NA 269313
	550	550	1100...4400	825...3850	NZMN3-VEF550-NA 269314
	600	600	1200...4800	900...4200	NZMN3-VEF600-NA 269315
	600	600	1200...7200	1200...6000	NZMN4-VEF600-NA 271136
	700	700	1400...8400	1400...7000	NZMN4-VEF700-NA 271137
	800	800	1600...9600	1600...8000	NZMN4-VEF800-NA 271138
	900	900	1800...10800	1800...9000	NZMN4-VEF900-NA 271139
	1000	1000	2000...12000	2000...10000	NZMN4-VEF1000-NA 271140
	1200	1200	2400...14400	2400...12000	NZMN4-VEF1200-NA 271141

Notes Notes for terminals → 10/51

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NZM...2, NZM...3, NZM...4



High switching capacity
150 kA 240 V 60 Hz³⁾
100 kA 480 V 60 Hz⁴⁾
50 kA 600 V 60 Hz





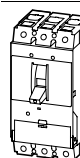
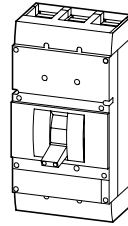
Part no.
Article no.

Price
see price list


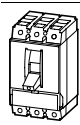
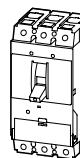
Std. pack

Notes

NZMH2-VEF150-NA 271131	1 off	Switches conform to UL/CSA as well as the IEC regulations. IEC switching performance values are contained on the rating plate. UL 489, CSA-C22.2-5.1, IEC/EN 60947-2 Fixed overload releases I_r R.m.s. value measurement and 'thermal memory' Adjustable time delay setting to overcome current peaks t_r • 2 – 20 s with $6 \times I_r$ (ex-works 10 s) Adjustable delayed short-circuit releases I_{sd} • 2 – 10 $\times I_r$ (ex-works 6 $\times I_r$) – NZM...3-VEF450...600-NA: 1.5 – 7 $\times I_r$ (ex-works 6 $\times I_r$) Adjustable delay time t_{sd} • Steps 0, 20, 60, 100, 200, 300, 500, 750, 1000 ms (ex-works 0 ms) Adjustable non-delayed short-circuit releases I_i • NZM2: fixed $12 \times I_n$ • NZM...3-VEF250...400-NA: 2 – 11 $\times I_n$ (ex-works 11 $\times I_n$) • NZM...3-VEF450...600-NA: 2 – 8 $\times I_n$ (ex-works 8 $\times I_n$) • NZM...4-VEF...-NA: 2 – 12 $\times I_n$ (ex-works 12 $\times I_n$) i^2t constant function • NZM2: fixed OFF • NZM3, NZM4 switched (ex-works OFF) 1) Normal switching capacity for NZMN2-...-NA: 35 kA/480 V 2) Normal switching capacity for NZMN2-...-NA: 25 kA/600 V 3) High switching capacity for NZMH4-...-NA: 125 kA/240 V 4) High switching capacity for NZMH4-...-NA: 85 kA/480 V
NZMH2-VEF175-NA 271132		
NZMH2-VEF200-NA 271133		
NZMH2-VEF225-NA 271134		
NZMH2-VEF250-NA 271135		
NZMH3-VEF250-NA 269316		
NZMH3-VEF300-NA 269317		
NZMH3-VEF350-NA 269318		
NZMH3-VEF400-NA 269319		
NZMH3-VEF450-NA 269320		
NZMH3-VEF500-NA 269321		
NZMH3-VEF550-NA 269322		
NZMH3-VEF600-NA 269323		
NZMH4-VEF600-NA 271142		
NZMH4-VEF700-NA 271143		
NZMH4-VEF800-NA 271144		
NZMH4-VEF900-NA 271145		
NZMH4-VEF1000-NA 271146		
NZMH4-VEF1200-NA 271147		


Rated current = rated uninterrupted current	Setting range		Normal switching capacity 85 kA 240 V 60 Hz 42 kA 480 V 60 Hz ¹⁾ 35 kA 600 V 60 Hz ²⁾	Part no. Article no.	Price see price list
	Overload releases	Short-circuit releases			
$I_n = I_u$ A	I_r A 	Non-delayed I_i A 	Delayed I_{sd} A 		
Systems, cable, transformer and generator protection					
3 pole					
Adjustable overload releases					
Terminal screws standard, terminals as accessories					
	100	50...100	1200	100...1000	NZMN2-VE100-NA 271148
	160	80...160	1920	160...1600	NZMN2-VE160-NA 271149
	250	125...250	3000	250...2500	NZMN2-VE250-NA 271150
	250	125...250	500...2750	250...2500	NZMN3-VE250-NA 269332
	400	200...400	800...4400	400...4000	NZMN3-VE400-NA 269333
	600	300...600	1200...4800	450...4200	NZMN3-VE600-NA 269334
	800	400...800	1600...9600	800...8000	NZMN4-VE800-NA 271154
	1000	500...1000	2000...12000	1000...10000	NZMN4-VE1000-NA 271155
	1200	630...1200	2400...14400	1260...12000	NZMN4-VE1200-NA 271156


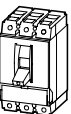
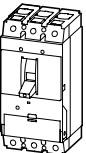
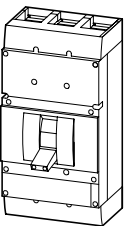
Notes Notes for terminals → 10/55

Rated current = rated uninterrupted current	Setting range		Normal switching capacity 240 V 60 Hz 480 V 60 Hz 600 V 60 Hz	Part no. Article no.	Price see price list
	Short-circuit releases				
$I_n = I_u$ A	I_i A 				
Short-circuit protection					
Motor protection in conjunction with contactor and overload relay					
• With short-circuit release					
• Without overload release					
3 pole					
Terminal screws standard, terminals as accessories					
	90	180...1260		NZMN2-SE90-CNA 271160	
	140	280...1960		NZMN2-SE140-CNA 271161	
	220	440...3080		NZMN2-SE220-CNA 271162	
	220	440...3080		NZMN3-SE220-CNA 269341	
	350	700...4900		NZMN3-SE350-CNA 269342	
	450	900...6300		NZMN3-SE450-CNA 284465	

Notes Notes for terminals → 10/51

High switching capacity 150 kA 240 V 60 Hz 100 kA 480 V 60 Hz ³⁾ 50 kA 600 V 60 Hz ⁴⁾	Part no. Article no.	Price see price list	Std. pack	Notes
	NZMH2-VE100-NA 271151		1 off	Switches conform to UL/CSA as well as the IEC regulations. IEC switching performance values are contained on the rating plate. UL 489, CSA-C22.2-5.1, IEC/EN 60947-2 Use in motor control circuits only in conjunction with a suitable contactor. Adjustable overload releases I_r • $0.5 - 1 \times I_n$ R.m.s. value measurement and "thermal memory" Adjustable time delay setting to overcome current peaks t_r • $2 - 20$ s with $6 \times I_r$ (ex-works 10 s) Adjustable delayed short-circuit releases I_{sd} • $2 - 10 \times I_r$ (ex-works $6 \times I_r$) – NZM...3-VE600-NA: $1.5 - 7 \times I_r$ (ex-works $6 \times I_r$) Adjustable delay time t_{sd} • Steps: 0, 20, 60, 100, 200, 300, 500, 750, 1000 ms (ex-works 0 ms) Adjustable non-delayed short-circuit releases I_i • NZM2: fixed $12 \times I_n$ • NZM...3-VE250/400-NA: $2 - 11 \times I_n$ (ex-works $11 \times I_n$) • NZM...3-VE600-NA: $2 - 8 \times I_n$ (ex-works $8 \times I_n$) • NZM...4-VE...-NA: $2 - 12 \times I_n$ (ex-works $12 \times I_n$) i ² t constant function • NZM2 fixed OFF • NZM3, NZM4 switched (ex-works OFF) 1) Normal switching capacity for NZMN2-...-NA: 35 kA/480 V 2) Normal switching capacity for NZMN2-...-NA: 25 kA/600 V 3) High switching capacity for NZMH4-...-NA: 125 kA/240 V 4) High switching capacity for NZMH4-...-NA: 85 kA/480 V
	NZMH2-VE160-NA 271152			
	NZMH2-VE250-NA 271153			
	NZMH3-VE250-NA 269335			
	NZMH3-VE400-NA 269336			
	NZMH3-VE600-NA 269337			
	NZMH4-VE800-NA 271157			
	NZMH4-VE1000-NA 271158			
	NZMH4-VE1200-NA 271159			

Std. pack	Notes
1 off	Switches conform to UL/CSA as well as the IEC regulations. IEC switching performance values are contained on the rating plate. UL 489, CSA-C22.2-5.1, IEC/EN 60947-2 and IEC/EN 60947-4 Adjustable short-circuit releases I_i • $2 - 14 \times I_n$ (ex-works $12 \times I_n$) Without overload release I_r  CNA: The device has components approved to UL, the conditions of approval must be observed during use. I.e. the device must be combined with a suitable contactor and overload relay. A switching capacity is stated for the complete motor-starter combination. The device is approved as a CSA approved single device.

	Rated current = rated uninterrupted current	Switching capacity		Response range of the short-circuit releases	Part no. Article no.	Price see price list	Std. pack	Notes
		At 480 V 60 Hz	At 600 V 60 Hz					
	$I_n = I_u$			I_i				
	A	kA	kA	A				
Molded case switches								
These switches are especially recommended as incoming switches for the North American market. 3 pole								
Terminals standard, terminal screws as accessories								
	63	35		1250	NS1-63-NA 102681		1 off	The switches are equipped with a fixed set short-circuit release (own protection) and correspond to UL 489/CSA 22.2 No 5.1 regulation. Also the switches are tested to IEC/EN 60947-2 as circuit-breakers without overload protection (CBI-X) main-switch characteristics according to IEC/EN 60204 and isolating characteristics according to IEC 60947.
	100	35		1250	NS1-100-NA 102682		1 off	
	125	35		1250	NS1-125-NA 102683		1 off	
Terminal screws standard terminals as accessories								
	160	100	50	2500	NS2-160-NA 102684		1 off	The switches are equipped with a fixed set short-circuit release (own protection) and correspond to UL 489/CSA 22.2 No 5.1 regulation. Also the switches are tested to IEC/EN 60947-2 as circuit-breakers without overload protection (CBI-X) main-switch characteristics according to IEC/EN 60204 and isolating characteristics according to IEC 60947.
	200	100	50	2500	NS2-200-NA 102685			
	250	100	50	2500	NS2-250-NA 102686			
	400	100	50	6600	NS3-400-NA 102687			
	600	100	50	6600	NS3-600-NA 102688			
	800	65	42	25000	NS4-800-NA ¹⁾ 102689			
	1000	65	42	25000	NS4-1000-NA ¹⁾ 102690			
	1200	65	35	25000	NS4-1200-NA ¹⁾ 102691			

Notes

Notes for terminals → 10/47

N2, NS3 and N4 can also be combined with the NZM...-XR... remote operator.
Undervoltage and shunt releases NZM...-XU, NZM...-XA and trip indicating auxiliary contacts (HIA) can be used.

¹⁾ Product available only on request.

Circuit-breaker, switch-disconnector for 1000 V AC, 3-pole

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NZM-...-S1, N-...-S1



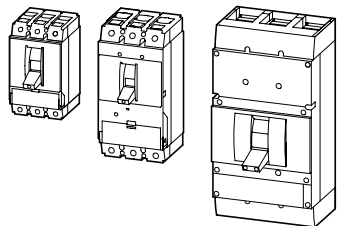
With main switch characteristics to IEC/EN 60204 and isolating characteristics to IEC/EN 60947, VDE 660

Circuit-breakers
3-pole

Switch-disconnectors
3-pole

Without overload and short-circuit release

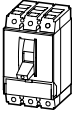
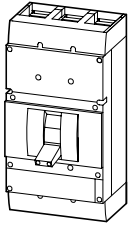
Switching capacity	kA/cos φ	System and cable protection			Selectively-opening circuit-breakers		Motor protection		Switch-disconnectors		
		I _{cu}	101)/0.5	10/0.5	20/0.3	101)/0.5	20/0.3	10/0.5	20/0.3	I _u	I _u
1000 V		I _{cs}	3/0.5	10/0.5	15/0.3	3/0.5	15/0.3	10/0.5	15/0.3		
Rated uninterrupted current I _u = rated current I _n			I _u	I _u	I _u	I _u	I _u	I _u	I _u	I _u	I _u
Ambient temperature at 100% I _u min./max. -25/+50			A	A	A	A	A	A	A	A	A
			NZMH2-A...-S1	NZMN3-AE...-S1	NZMH4-AE...-S1	NZMH2-VE...-S1	NZMH4-VE...-S1	NZMN3-ME...-S1	NZMH4-ME...-S1	N2-...-S1	N4-...-S1
			20	250	630	100	630	220	550	160	800
			25	400	800	160	800	350	875	200	1000
			32	630	1000	250	1000	450	1400	250	1250
			40		1250		1250				1600
			50		1600		1600				
			63								
			80								
			100								
			125								
			160								
			200								
			250								
Rated short-circuit making capacity I _{cm}	kA									5.5	53
Rated short-circuit - making capacity I _{cw} (1s curr eff)	kA									3.5	25





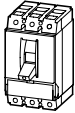
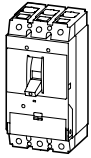
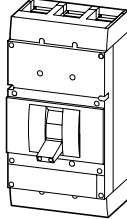
Circuit-breakers, switch-disconnectors, IEC 1000 V

Notes ¹⁾ Please enquire

Rated current = rated uninterrupted current	Short-circuit protection max. fuse gG/gL-characteristic	3 switch positions I, +, 0; can be tripped remotely with shunt/ under voltage release	Std. pack	Notes
I _n = I _u A	A gL	Part no. Article no.	Price see price list	

Switch-disconnector				1 off	IEC/EN 60947-3 Main switch characteristics including positive drive to IEC/EN 60204 and VDE 0113. Isolating characteristics to IEC/EN 60947 and VDE 0660. Protection against electric shock to VDE 0160 Part 100. Undervoltage and shunt releases NZM...-XU, NZM...-XA and trip indicating auxiliary contacts can also be with N switch-disconnectors. N2...and N4... can also be combined with the NZM...-XR... remote operator. Connection types N2: NZM2-XKSA cover necessary N4: insulated busbar connection (screw terminal NZM4-XKS)
3-pole					
Terminal screws standard terminals as accessories					
	160	250	N2-160-S1 290386		
	200	250	N2-200-S1 290387		
	250	250	N2-250-S1 290388		
	800	1600	N4-800-S1 290391		
	1000	1600	N4-1000-S1 290392		
	1250	1600	N4-1250-S1 290393		
	1600	1600	N4-1600-S1 290394		

Notes Accessories → plug-in/withdrawable unit on request

	Rated current = rated uninterrupte d current $I_n = I_u$ A	Setting range		Part no. Article no.	Price see price list	Std. pack	Notes
		Overload releases I_r A 	Short-circuit releases I_{rm} A 				
Protection of systems and cables							
3 pole							
Terminal screws standard, terminals as accessories							
	20	15...20	350	NZMH2-A20-S1 290355		1 off	IEC/EN 60947-2 Adjustable overload releases I_r <ul style="list-style-type: none"> • NZMH2-A...-S1: $0.8 - 1 \times I_n$ (ex-works $0.8 \times I_n$) • NZMN3-AE...-S1: $0.5 - 1 \times I_n$ (ex-works $0.5 \times I_n$) • NZMH4-AE...-S1: $0.5 - 1 \times I_n$ (ex-works $0.5 \times I_n$) Adjustable short-circuit releases I_i <ul style="list-style-type: none"> • NZMH2-A40-S1: $8 - 10 \times I_n$ (ex-works $8 \times I_n$) • NZMH2-A50...250-S1: $6 - 10 \times I_n$ (ex-works $6 \times I_n$) • NZMN3-AE250/400-S1: $2 - 11 \times I_n$ (ex-works $6 \times I_n$) • NZMN3-AE630-S1: $2 - 8 \times I_n$ (ex-works $6 \times I_n$) • NZMH4-AE...-S1: $2 - 12 \times I_n$ (ex-works $6 \times I_n$) Fixed short-circuit release I_i <ul style="list-style-type: none"> • 350 A at $I_n = 20 - 32$ A Connection types NZM2: NZM2-XKSA cover required NZM3: Cover NZM3-XKSA necessary NZM4: insulated busbar connection (screw terminal NZM4-XKS)
	25	20...25	350	NZMH2-A25-S1 290356			
	32	25...32	350	NZMH2-A32-S1 290357			
	40	32...40	320 - 400	NZMH2-A40-S1 290358			
	50	40...50	300 - 500	NZMH2-A50-S1 290359			
	63	50...63	380 - 630	NZMH2-A63-S1 290360			
	80	63...80	480 - 800	NZMH2-A80-S1 290361			
	100	80...100	600 - 1000	NZMH2-A100-S1 290362			
	125	100...125	750 - 1250	NZMH2-A125-S1 290363			
	160	125...160	960 - 1600	NZMH2-A160-S1 290364			
	200	160...200	1200 - 2000	NZMH2-A200-S1 290365			
	250	200...250	1500 - 2500	NZMH2-A250-S1 290366			
	250	125...250	500 - 2750	NZMN3-AE250-S1 290367			
	400	200...400	800 - 4400	NZMN3-AE400-S1 290368			
	630	315...630	1260 - 5040	NZMN3-AE630-S1 290369			
	630	315...630	1260 - 7560	NZMH4-AE630-S1 290370			
	800	400...800	1600 - 9600	NZMH4-AE800-S1 290371			
	1000	500...1000	2000 - 12000	NZMH4-AE1000-S1 290372			
	1250	630...1250	2500 - 15000	NZMH4-AE1250-S1 290373			
	1600	800...1600	3200 - 19200	NZMH4-AE1600-S1 290374			

Notes

Accessories → Plug in and withdrawable units on request

Circuit-breaker, switch-disconnector for 1000 V AC, 3-pole

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NZM...2, NZM...3, NZM...4



	Rated current = rated uninterrupted current $I_n = I_u$ A	Setting range Overload releases I_r A 	Short-circuit releases		Part no. Article no.	Price see price list	Std. pack
			Non-delayed I_i A 	Delayed I_{sd} A 			
Protection of systems and cables							
3 pole							
Terminal screws standard, terminals as accessories							
	100	50...100	1200	100...1000	NZMH2-VE100-S1 100777		1 off
	160	80...160	1920	160...1600	NZMH2-VE160-S1 100778		
	250	125...250	2000	250...2500	NZMH2-VE250-S1 100779		
	630	315...630	1260 – 7560	630...6300	NZMH4-VE630-S1 290375		
	800	400...800	1600 – 9600	800...8000	NZMH4-VE800-S1 290376		
	1000	500...1000	2000 – 2000	1000...10000	NZMH4-VE1000-S1 290377		
	1250	630...1250	2500 – 15000	1250...12500	NZMH4-VE1250-S1 290378		
	1600	800...1600	3200 – 19200	1600...16000	NZMH4-VE1600-S1 290379		
Motor protection							
3 pole							
Terminal screws standard, terminals as accessories							
	220	110...220	220...3080		NZMN3-ME220-S1 290380		1 off
	350	175...350	350...4900		NZMN3-ME350-S1 290381		
	450	225...450	450...6300		NZMN3-ME450-S1 290382		
	550	275...550	550...7700		NZMH4-ME550-S1 290383		
	875	438...875	875...1250		NZMH4-ME875-S1 290384		
	1400	700...1400	1400...19600		NZMH4-ME1400-S1 290385		

Notes

Accessories → Plug in and withdrawable units on request

IEC/EN 60947-2

Adjustable overload releases I_r

- $0.5 - 1 \times I_n$ (ex-works $0.8 \times I_n$)

R.m.s. value measurement and "thermal memory"

Adjustable time delay setting to overcome current peaks t_r

- $2 \dots 20$ s with $6 \times I_r$ as well as infinity (without overload release) (ex-factory 10 s)

Adjustable delayed short-circuit releases I_{sd}

- $2 - 10 \times I_r$ (ex-works $6 \times I_r$)

Adjustable delay time t_{sd}

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

Adjustable non-delayed short-circuit releases I_i

- NZM2 fixed $12 \times I_n$
- NZM4: $2 - 12 \times I_n$ (ex-works $12 \times I_n$)

i^2t constant function

- NZM2 fixed OFF
- NZM4 switched (OFF ex-works)

2) IEC/EN 60947-2

Trip block with motor protection characteristic

Adjustable overload releases I_r

- $0.5 - 1 \times I_n$ (ex-works $0.8 \times I_n$)

R.m.s. value measurement and thermal memory

Adjustable time delay setting to overcome current peaks t_r

- $2 - 20$ s with $6 \times I_r$ also infinity (without overload release) (ex-works 10 s)

Phase failure sensitivity

Adjustable short-circuit releases I_i

- $2 - 14 \times I_r$ (ex-works $12 \times I_r$)

Connections:

NZM3: NZM3-XKSA cover necessary

NZM4: Insulated busbar connection (NZM4-XKS screw terminal)


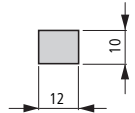
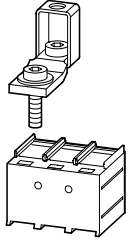
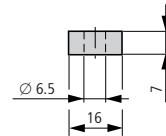
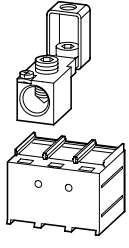


Connection types

NZM2: NZM2-XKSA cover required

NZM4: insulated busbar connection (screw terminal NZM4-XKS)


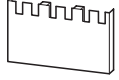


Circuit-breakers, switch-disconnectors, IEC 1000 V



Max. cable connection area	For use with	Terminal capacities Type of conductor	AWG/kcmil
Box terminal			
Standard equipment			
		NZM1(-4), PN1(-4), N(S)1(-4)	Three- and four-pole Cu cable 1 × 10 – 70 ¹⁾ 2 × 6 – 25
Screw connection			
		NZM1(-4), PN1(-4), N(S)1(-4)	Three- and four-pole Copper cable lugs 1 × 10 – 70 2 × 6 – 25 Aluminium cable lug 1 × 10 – 35 2 × 10 – 35
Tunnel terminal			
		NZM1(-4), PN1(-4), N(S)1(-4)	Three- and four-pole Copper cable 1 × 16 – 95 Al cable 1 × 6 – 3/0
Connection on rear			
not UL/CSA approved			
		NZM1(-4), PN1(-4), N(S)1(-4)	Three- and four-pole Copper cable lugs 1 × 2.5 – 25 2 × 2.5 – 25 Aluminium cable lug 1 × 10 – 35 2 × 10 – 35

Notes ¹⁾ Up to 240 mm² can be connected depending on the cable manufacturer.

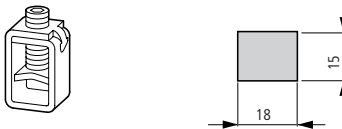
Terminal capacities Cu strip (number of segments × width × segment thickness)	Copper busbar width × thickness	Part no. Article no. when ordered separately	Std. pack	Notes
mm	mm			
2 × 9 × 0.8 9 × 9 × 0.8		NZM1-XKC 260015	1 off	Standard connection with all switches NZM1, PN1 and N(S)1.
		NZM1-4-XKC 267075	1 off	Conversion kit for circuit-breaker with screw connection. Type contains parts for a 3 or 4-pole switch side. Fitted within the switch housing
	min. 12 × 5 max. 16 × 5	NZM1-XKS 260019	1 off	Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers.
	min. 12 × 5 max. 16 × 5	NZM1-4-XKS 266725	1 off	Fitted outside the switch housing Mounting of the cover NZM1(-4)-XKSA obligatory (supplied).
		NZM1-XKA 266730	1 off	Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers.
		NZM1-4-XKA 266731	1 off	A standard with control circuit terminal for 1 × 0.75 – 2.5 mm ² (18 – 14 AWG) or 2 × 0.75 – 1.5 mm ² (18 – 14 AWG) copper conductors. Fitted outside the switch housing Use with flexible and highly flexible conductors ferrules. Maximum specified cross-section can only be connected when stranded and without ferrules. Mounting of the cover NZM1(-4)-XKSA obligatory (supplied).
	≡ 12 × 5 ≡ 16 × 5	NZM1-XKR 266734	1 off	Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers.
		NZM1-4-XKR 266737	1 off	

	Max. cable connection area	For use with	Terminal capacities Type of conductor	mm ²	AWG/kcmil
Control circuit terminal					
	–	NZM1(-4), PN1(-4), N(S)1(-4)	Three- and four-pole	Screw connection	1 × 0.75 – 2.5 2 × 0.75 – 1.5
	–			Box terminal	1 × 18 – 14 2 × 18 – 16
Cover					
	–	NZM1(-4), PN1(-4), N(S)1(-4)	3 pole		
	–		4 pole		
Terminal cover, knockout, not UL/CSA approved					
For box terminals					
	–	NZM1, PN1, N1	3-pole		
	–	NZM1(-4), PN1(-4), N1(-4)	4 pole		
IP2X protection against contact with a finger					
For box terminals					
	–	NZM1, PN1, N1	3 pole		
	–	NZM1(-4), PN1(-4), N1(-4)	4 pole		
For cover NZM1(-4)-XKSA or NZM1...(C)NA, N(S)1...NA					
	–	NZM1, PN1, NS1	3 pole		
	–	NZM1(-4), PN1(-4), N1(-4)	4 pole		

Part no. Article no. when ordered separately	Std. pack	Notes
NZM1-XSTS 260150	1 off	Type contains parts for two terminal locations located at top or bottom for 3 or 4-pole circuit-breakers. Included as standard with tunnel terminal Degree of protection IP1X
NZM-XSTK 266739	1 off	NZM-XSTK cannot be combined with NZM1(-4)-XIPK IP2X protection against contact with a finger. Height or thickness of the control terminals: NZM-XSTK = 2 mm NZM-XSTS = 2 mm
NZM1-XKSA 260021	1 off	Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers. Protection against direct contact where cable lugs, busbars or tunnel terminals are used
NZM1-4-XKSA 266741	1 off	Contained in kit with tunnel terminals or screw connection terminals. Degree of protection IP1X on the connection side when using insulated conductor material.
NZM1-XKSFA 100780	1 off	Type contains parts for a terminal located at top or bottom for 3 or 4 pole circuit-breakers. Enhancement of the protection against direct contact (simple finger protection).
NZM1-4-XKSFA 100781	1 off	
NZM1-XIPK 266744	1 off	Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers. Enhancement of the protection against direct contact to IP2X.
NZM1-4-XIPK 266745	1 off	Protection when reaching into the cable connection area with the connection of cables in the box terminal. Cannot be combined with NZM-XSTK control circuit terminal.
NZM1-XIPA 266748	1 off	Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers. Enhancement of the protection against direct contact to IP2X.
NZM1-4-XIPA 266749	1 off	

Max. cable connection area	For use with	Terminal capacities			Terminal capacities
		Type of conductor	Terminal capacities	AWG/kcmil	Cu strip (number of segments × width × segment thickness)
		mm ²			mm

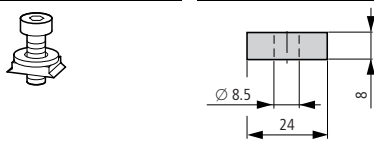
Box terminal



NZM2(-4), PN2(-4), N(S)2(-4)	Three- and four-pole	Copper conductors Cu cable	1 × 4 – 185 2 × 4 – 70	1 × 11 – 350 2 × 12 – 2/0	≧ 2 × 9 × 0.8
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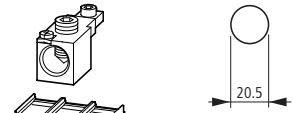
Screw connection

Standard equipment



NZM2(-4), PN2(-4), N(S)2(-4)	Three- and four-pole	Copper cable lugs	1 × 4 – 185 2 × 4 – 70 1 × 10 – 50	1 × 11 – 3/0 2 × 12 1 × 8 – 1/0	≧ 2 × 16 × 0.8
		Aluminium cable lug	2 × 10 – 50	2 × 8 – 1/0	

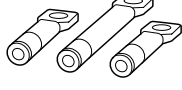
Tunnel terminal



NZM2(-4), PN2(-4), N(S)2(-4)	Three- and four-pole	Copper cable	1 × 16 ... 185	1 × 6 – 350	
		Al cable	1 × 16 ... 185	–	

Connection on rear

not UL/CSA approved
When using cable lugs **without** NZM3(-4)-XKSA cover, they must be insulated.



NZM2(-4), PN2(-4), N2(-4)	Three- and four-pole	Copper cable lugs	1 × 4 – 185 2 × 4 – 70 1 × 10 – 50		≧ 2 × 16 × 0.8 ≧ 6 × 24 × 0.5
		Aluminium cable lug	2 × 10 – 50		

Notes ¹⁾ Up to 240 mm² can be connected depending on the cable manufacturer.

Copper busbar width × thickness	Part no. Article no. when ordered with basic unit	Part no. Article no. when ordered separately	Std. pack	Notes
mm				
	+NZM2-160-XKCO 262218	NZM2-160-XKC 262240	1 off	Type suffix and type contain parts for a circuit-breaker side at top or bottom for 3 or 4 pole circuit-breakers. Conversion kit for circuit-breaker with screw connection. Fitted within the switch housing O = for fitting at the top U = for fitting at the bottom U _e ≧ 525 V AC: • Use cover NZM2(4)-XKSA. Use ferrules with flexible and highly flexible conductors. Max. cross section shown can only be connected when flexible and without ferrules.
	+NZM2-160-XKCU 262223			
	+NZM2-250-XKCO 262242	NZM2-250-XKC 262244		
	+NZM2-250-XKCU 262243			
	+NZM2-4-160-XKCO 266751	NZM2-4-160-XKC 266755		
	+NZM2-4-160-XKCU 266753			
	+NZM2-4-250-XKCO 266752	NZM2-4-250-XKC 266756		
	+NZM2-4-250-XKCU 266754			
≧ 16 × 5		NZM2-XKS 260030	1 off	Type contains parts for a terminal located at top or bottom for 3 or 4 pole circuit-breakers. Standard connection with all NZM2, PN2 and N2 circuit-breakers.
		NZM2-4-XKS 266750	1 off	Conversion kit for circuit-breaker with box terminal. Use special cable lug narrow version, 059775 Fitted within the switch housing If a busbar is used, insulation (400 mm) e.g sleeving and a NZM2(-4)-XKSA cover are required. U _e ≧ 525 V AC: • For all other connection material a NZM2(-4)-XKSA shroud must be used.
		NZM2-XKA 271457	1 off	Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers. A standard with control circuit terminal for 1 × 0.75 – 2.5 mm ² (18 – 14 AWG) or 2 × 0.75 – 1.5 mm ² (18 – 16 AWG) copper conductors.
		NZM2-4-XKA 271458	1 off	Fitted outside the switch housing Use with flexible and highly flexible conductors ferrules. Maximum specified cross-section can only be connected when stranded and without ferrules. Mounting of the cover NZM2(-4)-XKSA obligatory (supplied).
≧ 16 × 5 ≧ 20 × 5	+NZM2-XKRO 266763	NZM2-XKR 266765	1 off	Type suffix and type contain parts for a circuit-breaker side at top or bottom for 3 or 4-pole circuit-breakers. O = for fitting at the top U = for fitting at the bottom
	+NZM2-XKRU 266764	NZM2-4-XKR 266768		
	+NZM2-4-XKRO 266766			
	+NZM2-4-XKRU 266767			



NZM2

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http://catalog.moeller.net

Max. cable connection area

For use with

Terminal capacities

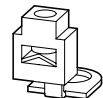
Type of conductor

Terminal capacities

AWG/kcmil

mm²

Control circuit terminal



NZM2(-4), PN2(-4), N(S)2(-4)

Three- and four-pole

Screw connection

1 × 0.75 – 2.5
2 × 0.75 – 1.5

1 × 18 – 14
2 × 18 – 16



NZM3(-4), PN3, N(S)3(-4)

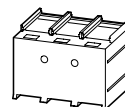
Three- and four-pole

Box terminal

1 × 0.75 – 2.5
2 × 0.75 – 1.5

1 × 18 – 14
2 × 18 – 16

Cover



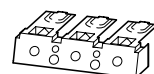
NZM2, PN2, NS2
DS6-340-75K...110K

3 pole

NZM2(-4), PN2(-4), N2(-4)

4 pole

Connection cover, knockout



NZM2, PN2, N(S)2
DS6-340-75K...110K

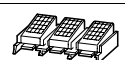
3 pole

NZM2(-4), PN2(-4), N2(-4)

4 pole

IP2X protection against contact with a finger

For box terminals



NZM2, PN2, N(S)2
DS6-340-75K...110K

3 pole

NZM2(-4), PN2(-4), N2(-4)

4 pole

For covers NZM2(-4)-XKSA or NZM2(-4) or NZM2...(C)NA and N(S)2...NA



NZM2, PN2, N(S)2
DS6-340-75K...110K

3 pole

NZM2(-4), PN2(-4), N2(-4)

4 pole

Copper cable lug

not UL/CSA approved

When using cable lugs **without** NZM3(-4)-XKSA cover, they must be insulated.



95 mm²

NZM2(-4), PN2(-4), N2(-4)

Three- and four-pole

120 mm²

150 mm²

185 mm²

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NZM2



Copper busbar width × thickness mm

Part no. Article no. when ordered separately

Std. pack

Notes

NZM2-XSTS
260156

1 off

Type contains parts for two terminal locations located at top or bottom for 3 or 4-pole circuit-breakers. Included as standard with tunnel terminal Degree of protection IP1X NZM-XSTK cannot be combined with NZM2(-4)-XIPK IP2X protection against contact with a finger. Height or thickness of the control circuit terminals: NZM-XSTK = 2 mm NZM-XSTS = 2 mm

NZM-XSTK
266739

1 off

NZM2-XKSA
260038

1 off

Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers. Protection against direct contact where cable lugs, busbars or tunnel terminals are used Degree of protection IP1X on the connection side when using insulated conductor material.

NZM2-4-XKSA
266770

1 off

NZM2-XKSFA
104640

1 off

Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers. Enhancement of the protection against direct contact (simplified protection against contact with a finger).

NZM2-4-XKSFA
104641

1 off

NZM2-XIPK
266773

1 off

Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers. Enhancement of the protection against direct contact to IP2X. Protection when reaching into the cable connection area with the connection of cables in the box terminal.

NZM2-4-XIPK
266774

1 off

With 2 conductors minimum cross-section 25 mm² or AWG4. Cannot be combined with NZM-XSTK control circuit terminal.

NZM2-XIPA
266777

1 off

Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers. Enhancement of the protection against direct contact to IP2X.

NZM2-4-XIPA
266778

1 off

When mounting NZM2...(C)NA or NZM...-NA the following applies: With 2 conductors minimum cross-section 25 mm² or AWG4.

KS95-NZM7
059775

3 off

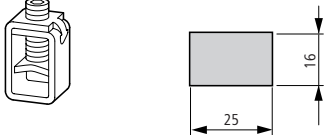
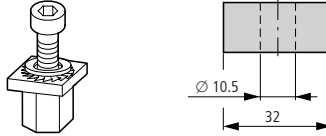
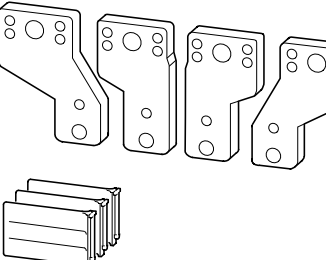
Type contains a cable lug for 3-pole or 4-pole switches. Special cable lug, narrow style

KS120-NZM7
059776

KS150-NZM7
059777

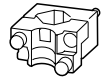
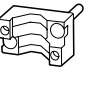
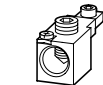
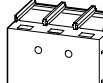
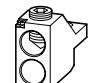
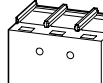
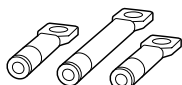



NZM2-XKS185
260032



Max. cable connection area	Rated current ¹⁾ I _n A	For use with For use with	For use with	Terminal capacities		
				Type of conductor	Terminal capacities mm ²	AWG/kcmil
Box terminal						
	max. 500 400 UL/CSA	NZM3(-4), PN3(-4), N(S)3(-4)	Three- and four-pole	Copper conductors Cu cable	1 × 35 – 240 2 × 16 – 120	1 × 2 – 500
	630				1 × 35 – 240 2 × 16 – 120	1 × 2 – 500
Screw connection						
	630 max. 400	NZM3(-4), PN3(-4), N(S)3(-4)	Three- and four-pole	Copper cable lugs	1 × 16 – 240 2 × 16 – 240 1 × 10 – 120	1 × 4 – 350 2 × 350
					Aluminium cable lug	2 × 10 – 120
Connection width extension						
	630	NZM3(-4), PN3(-4), N(S)3(-4)	Three- and four-pole	Copper cable lugs	2 × 300	2 × 500
					Aluminium cable lug	

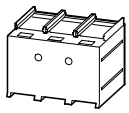
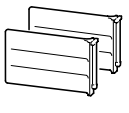
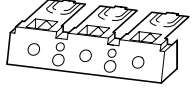



Notes ¹⁾ The following applies for the rated current: The values have been determined conform to IEC/EN 60947 (switchgear standard) and generally relate to the max. defined cross-sections and are intended for the purpose of orientation.

Terminal capacities Cu strip (number of segments × width × segment thickness) mm	Copper busbar width × thickness mm	Part no. Article no. when ordered with basic unit	Part no. Article no. when ordered separately	Std. pack	Notes
min. 6 × 16 × 0.8 max. 20 × 24 × 0.5 or max. 11 × 21 × 1		+NZM3-4-XKCO 266781 +NZM3-4-XKCU 266782	NZM3-4-XKC 266783		
10 × 32 × 1.0 + 5 × 32 × 1.0	30 × 10 + 30 × 5		NZM3-XKS 260039 NZM3-4-XKS 266780	1 off 1 off	Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers. Standard connection with all NZM3, PN3 and N3 circuit-breakers. Conversion kit for circuit-breaker with box terminal. Use special cable lugs narrow version, → 10/53 Fitted within the switch housing When a busbar is used insulation is required (400 mm) e.g. using heat shrink and a shroud NZM3(-4)-XKSA. U _e ≥ 525 V AC: A shroud NZM3(-4)-XKSA must be used with all other connection types.
(2 ×) 10 × 50 × 1.0	(2 ×) 10 × 50		NZM3-XKV70 100514 NZM3-4-XKV70 100515	1 off 1 off	Type contains parts for a terminal located at top or bottom for 3 or 4 pole circuit-breakers. Central drill holes, e.g. for up to 2 cable lugs per phase. Can be fitted to circuit-breaker with screw termination Phase isolator supplied. Distance between pole centres with NZM3(-4)-XKV70: 70 mm Drill hole available for control cable. Connection terminals NZM3(-4)-XK300 and NZM3(-4)-XK22X21 can be installed.

Max. cable connection area	Rated current ¹⁾ I_n A	For use with	For use with	Terminal capacities		
				Type of conductor	Terminal capacities mm ²	AWG/kcmil
Terminals for connection width extension						
	max. 500	NZM3, PN3, N(S)3	3 pole	Cu cable	1 × 120 – 300	
		NZM3(-4), PN3(-4), N3(-4)	4 pole			
not UL/CSA approved	630	NZM3, PN3, N(S)3	3 pole			
		NZM3(-4), PN3(-4), N3(-4)	4 pole			
Tunnel terminal						
	max. 350	NZM3(-4), PN3(-4), N(S)3(-4)	Three- and four-pole	Copper conductors Cu cable Al conductors Al cable	1 × 16 – 185 ²⁾	1 × 6 – 350
						
	max. 630				1 × 50 – 240 2 × 50 – 240	1 × 0 – 500 2 × 0 – 500
						
Connection on rear						
not UL/CSA approved	max. 630	NZM3(-4), PN3(-4), N3(-4)	Three- and four-pole	Copper cables Cu cable	1 × 16 – 240 2 × 16 – 240	
						
	max. 500				1 × 10 – 120 2 × 10 – 120	
						
Control circuit terminal						
		NZM3(-4), PN3, N(S)3(-4)	Three- and four-pole	Screw connection	1 × 0.75 – 2.5 2 × 0.75 – 1.5	1 × 18 – 14 2 × 18 – 16
		NZM3(-4), PN3, N(S)3(-4)		Box terminal		

Notes
¹⁾ The following applies for the rated current: The values have been determined conform to IEC/EN 60947 (switchgear standard) and generally relate to the max. defined cross-sections and are intended for the purpose of orientation.
 The engineering standards which apply in each case must be observed.

Terminal capacities	Cu strip (number of segments × width × segment thickness) mm	Copper busbar width × thickness mm	Part no. Article no. when ordered with basic unit	Part no. Article no. when ordered separately	Std. pack	Notes
				NZM3-XK300 100782	1 off	Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers.
				NZM3-4-XK300 100783	1 off	Only in conjunction with connection width extension NZM3(-4)-XKV70.
(2 ×) 11 × 21 × 1.0				NZM3-XK22X21 100784	1 off	Use with flexible and highly flexible conductors ferrules.
(2 ×) 11 × 21 × 1.0				NZM3-4-XK22X21 100785	1 off	Standard with control circuit terminal for 1 × 0.75 – 2.5 mm ² or 2 × 0.75 – 1.5 mm ² copper conductors.
				NZM3-XKA1 271459	1 off	Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers.
				NZM3-4-XKA1 271460	1 off	A standard with control circuit terminal for 1 × 0.75 – 2.5 mm ² (18 – 14 AWG) or 2 × 0.75 – 1.5 mm ² (18 – 16 AWG) copper conductors.
				NZM3-XKA2 271461	1 off	Fitted outside the switch housing
				NZM3-4-XKA2 271462	1 off	Use with flexible and highly flexible conductors ferrules. Maximum specified cross-section can only be connected when stranded and without ferrules.
						Mounting of the cover NZM3(-4)-XKSA obligatory (supplied).
			+NZM3-XKRO 266790	NZM3-XKR 266792	1 off	Type suffix and type contain parts for a circuit-breaker side at top or bottom for 3 or 4-pole circuit-breakers.
			+NZM3-XKRU 266791	NZM3-4-XKR 266795	1 off	O = for fitting at the top U = for fitting at the bottom
			+NZM3-4-XKRO 266793			
			+NZM3-4-XKRU 266794			
min. 6 × 16 × 0.8 Max. 10 × 32 × 1.0		Min. 20 × 5 Max. 30 × 10				
				NZM3/4-XSTS 266797	1 off	Type contains parts for two terminal locations located at top or bottom for 3 or 4 pole circuit-breakers.
				NZM-XSTK 266739	1 off	Included as standard with tunnel terminal Degree of protection IP1X Height or thickness of the control circuit terminals NZM-XSTS = 2 mm

	Max. cable connection area	For use with	For use with	For use with	Part no. Article no. when ordered separately
Cover					
	-	-	NZM3(-4), PN3(-4), N(S)3(-4)	3 pole	NZM3-XKSA 260045
	-	-	-	4 pole	NZM3-4-XKSA 266801
Phase isolator					
	-	-	NZM3(-4), PN3(-4), N(S)3(-4)	3 pole	NZM3-XKP 100512
	-	-	-	4 pole	NZM3-4-XKP 100513
Connection cover, knockout					
	-	-	NZM3(-4), PN3(-4), N(S)3(-4)	3 pole	NZM3-XKSFA 104642
	-	-	-	4 pole	NZM3-4-XKSFA 104643
IP2X protection against contact with a finger					
	-	-	NZM3(-4), PN3(-4), N3(-4)	3 pole	NZM3-XIPK 266804
	-	-	-	4 pole	NZM3-4-XIPK 266805
For cover NZM3(-4)-XKSA or NZM3...(C)NA and N(S)3...NA					
	-	-	NZM3(-4), PN3(-4), N(S)3(-4)	3 pole	NZM3-XIPA 266808
	-	-	-	4 pole	NZM3-4-XIPA 266809
Copper cable lug					
not UL/CSA approved When using cable lugs without NZM3(-4)-XKSA cover, they must be insulated.					
	185 mm ²	-	NZM3(-4), PN3, N(S)3(-4)	3 and 4 pole	NZM3-XKS185 260040
	900 mm ²	-	NZM4(-4), N(S)4(-4)	3 and 4 pole	NZM3-XKS240 260041

Std. pack	Notes
1 off	Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers. Insulation/protection against direct contact where cable lugs, busbars or tunnel terminals are used.
1 off	Included in set with tunnel terminals Degree of protection IP1X on the connection side when using insulated conductor material.
1 off	Type contains parts for a terminal located at top or bottom for 3 or 4 pole circuit-breakers. Included with the connection width extension.
1 off	Cannot be combined with the NZM3(-4)-XKA tunnel terminal, NZM3(-4)-XKR connection on rear. Insulation protection with connection of cable lugs, busbars or braid.
1 off	Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers. Enhancement of the protection against direct contact to (simplified protection against contact with a finger).
1 off	Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers. Enhancement of the protection against direct contact to IP2X.
1 off	Protection when reaching into the cable connection area with the connection of cables in the box terminal. With 2 conductors minimum cross-section 70 mm ² 00 or AW00. Cannot be combined with NZM-XSTK control circuit terminal.
1 off	Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers. Enhancement of the protection against direct contact to IP2X.
1 off	When mounting NZM3...(C)NA or N3...-NA the following applies: With 2 conductors minimum cross-section 70 mm ² 00 or AW00.
3 off	Type contains a cable lug for 3-pole or 4-pole switches. Special cable lug, narrow style
3 off	



Circuit-breakers, switch-disconnectors

Circuit-breakers, switch-disconnectors

Max. cable connection area	Rated current I_n A	For use with	Terminal capacities		
			Type of conductor	Terminal capacities mm ²	AWG/kcmil

Screw connection

Standard equipment

2-hole	3-hole
max. 1250 1600	2000
NZM4(-4) N4(-4) N(S)4	NZM4
Three- and four-pole	3 pole
Cu cable lugs	Cu cable lugs
1 × 120 – 185 4 × 50 – 185	
1 × 250 – 350 4 × 0 – 350	

Module plate

Single hole	Double hole	Double hole
max. 1250	max. 1400	max. 1250
NZM4, N(S)4	NZM4, N(S)4	NZM4, N(S)4
3 pole	3 pole	3 pole
4 pole	4 pole	4 pole
Copper cable lugs	Copper cable lugs	Copper cable lugs
1 × 120 – 300 2 × 95 – 300	2 × 95 – 185 4 × 35 – 185 4 × 50	2 × 95 – 300
1 × 250 – 600 2 × 000 – 600	2 × 000 – 350 4 × 2 – 350	2 × 000 – 600
		max. 1600
		NZM4, N(S)4
		3 pole
		4 pole
		Copper cable lugs
		2 × 95 – 300
		2 × 000 – 500
		NZM4, N(S)4
		3 pole
		4 pole
		Copper cable lugs
		2 × 95 – 300
		2 × 000 – 500

Connection width extension


max. 1600	NZM4, N(S)4	3 pole	Cu cable lugs	4 × 300 6 × 95 – 240	4 × 600 6 × 000 ... 500
	NZM4-4, N4-4	4 pole			

Notes 1) The following applies for the rated current: The values have been determined conform to IEC/EN 60947 (switchgear standard) and generally relate to the max. defined cross-sections and are intended for the purpose of orientation.



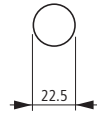
Terminal capacities	Copper busbar width × thickness	Part no. Article no. when ordered separately	Std. pack	Notes
Cu strip (number of segments × width × segment thickness)	mm	mm		
(2 ×) 10 × 50 × 1.0	(2 ×) 50 × 10		off	Double hole fitting for M10 screws with 25 mm clearance. Use special cable lug narrow version. $U_e \geq 525$ V or cross-section > 185 mm ² : Use of shroud NZM4(-4)-XKSA required.
			off	
	(2 ×) 80 × 10		off	Triple hole fitting for M10 screws with 25 mm pitch. Phase divider for insulation above is supplied.
(2 ×) 10 × 40 × 1.0 (2 ×) 10 × 50 × 1.0	(2 ×) 40 × 10 (2 ×) 50 × 10	NZM4-XKM1 266814 NZM4-4-XKM1 266815 NZM4-XKM2 266820 NZM4-4-XKM2 266821 NZM4-XKM2S-1250 284471 NZM4-4-XKM2S-1250 284472 NZM4-XKM2S-1600 284473 NZM4-4-XKM2S-1600 284474	1 off 1 off 1 off 1 off 1 off 1 off 1 off	Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers. For M10 screws. Can be enlarged for M12 screws. Use special cable lug narrow version. Can be fitted to circuit-breaker with screw termination Insulation through NZM4(-4)-XKSA cover or NZM4(-4)-XKP phase separator necessary
min. 10 × 50 × 1.0	max. (2 ×) 80 × 10	NZM4-XKV95 281591 NZM4-XKV110 281593 NZM4-4-XKV95 281592 NZM4-4-XKV120 281594	1 off 1 off 1 off 1 off	Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers. Five way holes, e.g. for up to 9 cable lugs per phase. Can be fitted to circuit-breaker with screw termination Phase isolator supplied. Distance between pole centres with NZM4(-4)-XKV95: 95 mm Installation conditions for current transformer up to 130 mm width with 80 mm busbar width. Distance between pole centres with NZM4-XKV110: 107.5 mm Installation conditions for current transformer up to 135 mm width with 80 mm busbar width. Distance between pole centres with NZM4-4-XKV120: 122 mm Installation conditions for current transformer up to 164 mm width with 80 mm busbar width. 4 mm drilled holes for control circuit terminal available.

Max. cable connection area	Rated current I_n	For use with			Terminal capacities		AWG/kcmil
		For use with	For use with	Type of conductor	Terminal capacities		
	A				mm ²		

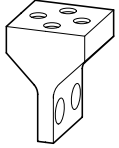
Flat cable terminal

	-	max. 1100	NZM4, N(S)4	3 pole			
	-		NZM4-4, N4-4	4 pole			

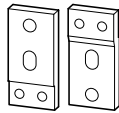
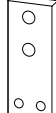
Tunnel terminal

	-	max. 1400	NZM4, N(S)4	3 pole	Copper conductors	1 × 50 – 240	1 × 0 – 500
	-		NZM4-4, N4-4	4 pole	Cu cable	4 × 50 – 240	4 × 0 – 500
					Al conductors	1 × 50 – 240	1 × 0 – 500
					Al cable	4 × 50 – 240	4 × 0 – 500

Connection on rear

not UL/CSA approved							
	-	max. 1250	NZM4(-4), N4(-4)	Three- and four-pole	Copper cable lugs	1 × 120 – 185	
	-					2 × 95 – 185	
					Aluminium cable lug	4 × 35 – 185	
						1 × 185	
						2 × 70 – 185	
		1600				4 × 50 – 185	

NZM4/NZM14 adapter kit

not UL/CSA approved							
	-	max. 1250	NZM4, N4	3 pole			
	-						
		1600	NZM4, N4	3 pole			

Notes ¹⁾ The following applies for the rated current: The values have been determined conform to IEC/EN 60947 (switchgear standard) and generally relate to the max. defined cross-sections and are intended for the purpose of orientation.

Terminal capacities	Copper busbar width × thickness	Part no. Article no. when ordered separately	Std. pack	Notes
Cu strip (number of segments × width × segment thickness)	mm			
mm				

min. 6 × 16 × 0.8 max. (2 ×) 10 × 32 × 1.0		NZM4-XKB 266829	1 off	Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers.
min. 6 × 16 × 0.8 max. (2 ×) 10 × 32 × 1.0		NZM4-4-XKB 266831	1 off	Conversion kit for circuit-breaker with screw connection. Insulation through cover NZM4(-4)-XKSA or phase isolator NZM4(4)-XKP necessary. With switch mounting on conductive mounting plates use of the shroud NZM4(-4)-XKSA necessary (supplied item).

		NZM4-XKA 266836	1 off	Type contains parts for a terminal located at top or bottom for 3 or 4 pole circuit-breakers.
		NZM4-4-XKA 266837	1 off	A standard with control circuit terminal for 1 × 0.75 ... 2.5 mm ² (18 ... 14 AWG) or 2 × 0.75 ... 1.5 mm ² (18 ... 16 AWG) copper conductors. Can be fitted to circuit-breaker with screw termination. Use ferrules with flexible and highly flexible conductors. Max. cross section shown can only be connected when flexible and without ferrules. Use of the NZM4(-4)-XKSA cover obligatory (supplied).

(2 ×) 10 × 50 × 1.0	(2 ×) 50 × 10	NZM4-XKR 266842	1 off	Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers. Can also be retrofitted: NZM4...-XKM... module plate or NZM4...-XKV... connection width extension
		NZM4-4-XKR 266843	1 off	
			off	

		NZM4-XAS14-1250 283291	1 off	Conversion kit for NZM14 to NZM4. Same connections as NZM14. Part no. contains parts for both sides of switch. 3 connection extensions on outlet side 3 connection extensions on trip block side 1 long shroud for the outlet side
		NZM4-XAS14-1600 283292	1 off	Paper drilling template in the assembly instructions (AWA) Cannot be combined with the module plate (NZM4-XKM...), flat cable terminal (NZM4-XKB), connection width extension (NZM4-XKV...), tunnel terminal (NZM4-XKA), connection on rear (NZM4-XKR) and withdrawable unit (NZM4-XAV...).

Circuit-breakers, switch-disconnectors

Circuit-breakers, switch-disconnectors





NZM4

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Max. cable connection area

Rated current

For use with

I_n
A

Adapter set N(ZM)4/N(ZM)12 not UL/CSA approved

	max. 1000	N4	3-pole
	max. 1250	N4	3-pole
	max. 1600	N4	3-pole
	max. 1000	NZM4	3-pole
	max. 1250	NZM4	3-pole
	max. 1600	NZM4	3-pole

NZM4



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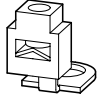
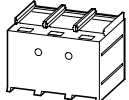
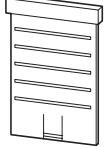
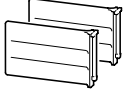
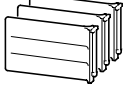

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Part no.
Article no. when ordered
separately

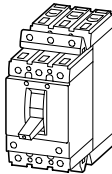
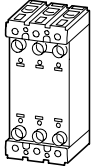
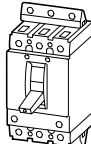

Std. pack

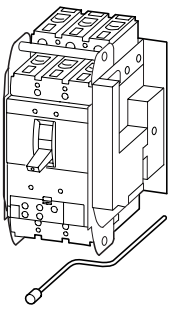
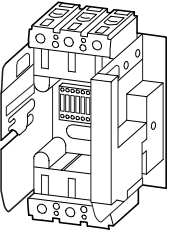
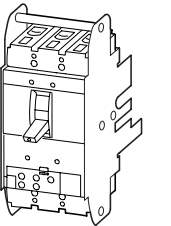
Notes

N4-XAS12-1000 285609	1 off	Kit for conversion of N(ZM)12 to N(ZM)4. Using the connection lugs of the exchange kit all 3-pole NZM12 or N12 can be adapted to the connection dimensions of the NZM4 or N4, which have been manufactured since 1983. Non-exchangable are 4-pole base units as well as devices with withdrawable units and remote operators.
N4-XAS12-1250 285610	1 off	Scope of the exchange kits N(ZM)4-XAS12...: 3 connection extensions on outlet side 3 connection extensions on trip block side 2 mounting brackets 4 fixing screws 4 phase isolators 6 fixing screws, nuts and washers Paper drilling template in the assembly instructions (AWA)
N4-XAS12-1600 285611	1 off	The exchange kits have identical dimensions to the types N(ZM)12..., which correspond to the types manufactured from 02/97 onwards. Special feature: The N(ZM)12-800 manufactured before 02/97 features 10 mm connection lugs instead of the 8 mm connections lugs currently used. With these types the customer must determine the year of manufacture of the device by measuring the thickness of the connection lugs and order the exchange kit N(ZM)4-XAS12-1250.
NZM4-XAS12-1000 285612	1 off	Example: N(ZM)12-800...(1000) > N(ZM)4-XAS12-1000 N(ZM)12-800 vor 02/97 > N(ZM)4-XAS12-1250 N(ZM)12-1250 > N(ZM)4-XAS12-1250 N(ZM)12-1600 > N(ZM)4-XAS12-1600
NZM4-XAS12-1250 285613	1 off	Expansion for devices manufactured before 1983! The exchange kit for switch-disconnector can be used completely here. The adapters will only fit on top on the circuit-breaker with the longer "ZM" version! The devices are about 65 mm longer at the bottom and the lower connection is about 26 mm lower. Accordingly, the adapters are too short for the bottom and the height does not correspond either.
NZM4-XAS12-1600 285614	1 off	

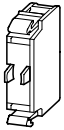



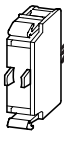



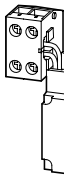



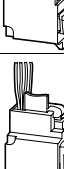





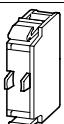



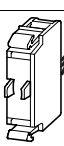



	Max. cable connection area	For use with	Terminal capacities			
			Type of conductor	Terminal capacities mm ²	AWG/kcmil	
Control circuit terminal						
	-	NZM3(-4), PN3, N(S)3(-4)	Three- and four-pole	Screw connection	1 × 0.75 – 2.5 2 × 0.75 – 1.5	1 × 18 – 14 2 × 18 – 16
Cover						
	-	NZM4, N(S)4	3 pole			
	-	NZM4-4, N4-4	4 pole			
Connection cover, knockout						
	-	NZM4, N(S)4	3 pole			
	-	NZM4-4, N4-4	4 pole			
Phase isolators						
	-	NZM4 N(S)4	3 pole			
	-	NZM4-4, N4-4	4 pole			
Cable lug						
	not UL/CSA approved					
	185 mm ²	NZM3(-4), PN3, N(S)3(-4) NZM4(-4), N(S)4(-4)	3 and 4 pole			
	900 mm ²					

Part no. Article no. when ordered separately	Std. pack	Notes
NZM3/4-XSTS 266797	1 off	Type contains parts for two terminal locations located at top or bottom for 3 or 4 pole circuit-breakers. Included as standard with tunnel terminal Degree of protection IP1X Height or thickness of the control circuit terminals NZM-XSTS = 2 mm
NZM4-XKSA 266846 NZM4-4-XKSA 266847	1 off	Type contains parts for a terminal located at top or bottom for 3 or 4 pole circuit-breakers. Protection against direct contact where cable lugs, busbars, flat cable terminals or tunnel terminals are used. With module plates, flat braid terminals and tunnel terminals included in the kit. When using insulated conductor material to degree of protection: IP1X.
NZM4-XKSFA 292193 NZM4-4-XKSFA 292194	1 off	Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers. Enhancement of the protection against direct contact to (simplified protection against contact with a finger).
NZM4-XKP 281595 NZM4-4-XKP 281596	1 off	Type contains parts for a terminal located at top or bottom for 3 or 4-pole circuit-breakers. Included with the connection width extension. Cannot be combined with the tunnel terminal NZM4(-4)-XKA, connection NZM4-XKR on rear. Insulation protection where cable lugs, busbars, module plates or flat cable terminals are used.
NZM3-XKS185 260040 NZM3-XKS240 260041	3 off	Type contains a cable lug for 3-pole or 4-pole switches. Special cable lug, narrow style

For use with	Number of poles	Part no. Article no. when ordered with basic unit	Price see price list	Part no. Article no. when ordered separately	Price see price list	Std. pack	Notes	
Plug-in and withdrawable units								
For circuit-breakers NZM and switch-disconnectors N not UL/CSA approved								
Plug-in adapter elements Complete Only in combination with circuit-breaker								
Terminal screws standard, terminals as accessories								
	NZM2-4 N2-4	4 pole	+NZM2-4-XSV 266698			1 off	$I_{nmax.}$ at: 20 °C: 250 A 40 °C: 230 A (NZM...2-...) 250 A (NZM...2-E...) Mounting position: vertical, 90° right, 90° left Order control circuit plug unit separately!	
	NZM2-4 N(S)2-4	3 pole	+NZM2-XSV 266697					
Sockets e.g. for reserved slots Retrofit of circuit-breaker with plug-in module.								
Terminal screws standard, terminals as accessories								
	NZM2 N(S)2	3 pole		NZM2-XSVS 266699		1 off		
	NZM2-4 N2-4	4 pole		NZM2-4-XSVS 266700				
Removable module Fits socket base Only in combination with circuit-breaker								
	NZM2 N(S)2	3 pole	+NZM2-XSVE 266701			1 off		
	NZM2-4 N2-4	4 pole	+NZM2-4-XSVE 266702					
Control circuit plug unit								
	NZM2(-4) N(S)2(-4)	for auxiliary contact, shunt/undervoltage release		NZM2-XSVHI 266705		1 off	-	
	NZM2(-4) N(S)2(-4)	for remote operator		NZM2-XSVR 266706			-	

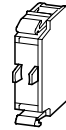

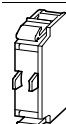

	For use with	Number of poles	Part no. Article no. when ordered with basic unit	Price see price list	Part no. Article no. when ordered separately	Price see price list	Std. pack	Notes
Withdrawable unit with control circuit plug unit								
For circuit-breakers NZM and switch-disconnectors N not UL/CSA approved								
Withdrawable unit with auxiliary plug-in adapter Complete Only in combination with circuit-breaker								
Terminal screws standard, terminals as accessories								
	NZM3 N(S)3	3 pole	+NZM3-XAV 266707				1 off	I_{nmax} at: 20 °C: 605 A (NZM3), 1600 A (NZM4) 40 °C: 550 A (NZM3), 1500 A (NZM4) Mounting position NZM3: vertical, 90 ° left NZM4: vertical 3 positions Connected, test, disconnected The 3 positions are indicated mechanically.
	NZM3-4 N3-4	4 pole	+NZM3-4-XAV 266708					
	NZM4 N(S)4	3 pole	+NZM4-XAV 266709					
	NZM4-4 N4-4	4 pole	+NZM4-4-XAV 266710					
Socket base e.g. for reserved slots Retrofit of circuit-breaker with withdrawable carrier.								
Terminal screws standard, terminals as accessories								
	NZM3 N(S)3	3 pole			NZM3-XAVS 266711		1 off	Additionally, auxiliary contacts are used for remote signalling. An optional M22-(C)K01 normally closed contact or M22-(C)K10 normally open contact per position Also see the RMQ-Titan control circuit device range All connections of auxiliary switches (HIA, HIN, HIV) and voltage releases to the control circuit plug units are already present. Cannot be combined with adapter kit NZM4/NZM14 (NZM4-XSAS14-...) or N(ZM)4/N(ZM)12.
	NZM3-4 N3-4	4 pole			NZM3-4-XAVS 266712			
	NZM4 N(S)4	3 pole			NZM4-XAVS 266713			
	NZM4-4 N4-4	4 pole			NZM4-4-XAVS 266714			
Withdrawable carrier Not UL/CSA approved.								
	NZM3 N(S)3	3 pole	+NZM3-XAVE 266715				1 off	
	NZM3-4 N3-4	4 pole	+NZM3-4-XAVE 266716					
	NZM4 N(S)4	3 pole	+NZM4-XAVE 266717					
	NZM4-4 N4-4	4 pole	+NZM4-4-XAVE 266718					

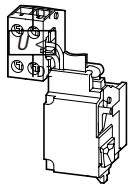
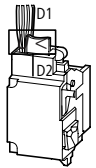


xEnergy		NZM1, M22-...	Moeller HPL0211-2007/2008		http://catalog.moeller.net	
For use with		Auxiliary contacts: ⊕ = safety function, by positive opening to IEC/EN 60947-5-1		Contact sequence	Part no. Article no. when ordered separately	Price see price list
		N/O = Normally open	N/C = Normally closed			
Auxiliary contacts						
Standard auxiliary contact Switching with the main contacts Used for indicating and interlocking tasks						
		NZM1(-4), 2(-4), 3(-4), 4(-4) PN1(-4), 2(-4), 3(-4) N(S)1(-4), 2(-4), 3(-4), 4(-4)	1 N/O	1 N/C ⊕	  	M22-K10 216376 M22-K01 216378
	With 3 m connection cable instead of screw termination.	NZM1(-4), 2(-4), 3(-4), 4(-4) PN1(-4), 2(-4), 1(-4) N(S)1(-4), 2(-4), 3(-4), 4(-4)	1 N/O	1 N/C ⊕	  	NZM-XH111L¹⁾ 266098 NZM-XH120L¹⁾ 266099 NZM-XH102L¹⁾ 266170
Early-make auxiliary contact For interlocking and load shedding circuits, as well as for early make of the undervoltage release in main switch/Emergency-stop applications						
	With clamp terminal on the left-hand switch side.	NZM1(-4) PN1(-4) N(S)1(-4)	2 N/O			NZM1-XHIV 259426
	With clamp terminal on the right-hand switch side.		2 N/O			NZM1-XHIVR 292195
	With 3 m connection cable instead of screw termination.		2 N/O			NZM1-XHIVL 259432
		NZM2(-4), 3(-4) PN2(-4), 3(-4) N(S)2(-4), 3(-4)	2 N/O			NZM2/3-XHIV 259430
		NZM4(-4) N(S)4(-4)	2 N/O			NZM4-XHIV 266172
Trip indicating auxiliary contact (HIA), (HIAFI) General trip indication '+', when tripped by voltage release, overload release, short-circuit release or by the residual-current release due to residual-current.						
		NZM1(-4), 2(-4), 3(-4), 4(-4) N(S)1(-4), 2(-4), 3(-4), 4(-4)	1 N/O	1 N/C ⊕	  	M22-K10 216376 M22-K01 216378
	With 3 m connection cable instead of screw termination.	NZM1(-4), 2(-4), 3(-4), 4(-4) N(S)1(-4), 2(-4), 3(-4), 4(-4)	1 N/O	1 N/C ⊕	  	NZM-XH111L¹⁾ 266098 NZM-XH120L¹⁾ 266099 NZM-XH102L¹⁾ 266170

Circuit-breakers, switch-disconnectors



http://catalog.moeller.net		Moeller HPL0211-2007/2008		NZM1, M22-...		xEnergy	
Part no. Article no. when ordered separately	Price see price list	Std. pack	Notes	Notes			
	M22-CK10 216384	20 off	For Std. pack: M22-(C)K... : Std. pack = 20 off	The following can be clipped into the switches: • NZM1, N(S)1, PN1 - one standard auxiliary contact • NZM2, N(S)2, PN2 - up to 2 standard auxiliary contacts M22-(C)K... • NZM3, N(S)3, PN3 and NZM4, N(S)4 - up to 3 standard auxiliary contacts M22-(C)K... Any combinations of the auxiliary contact types is possible. Marking on switch: HIN			
	M22-CK01 216385	20 off					
		20 off	¹⁾ please inquire				
			¹⁾ please inquire				
			¹⁾ please inquire				
		1 off		Not in conjunction with NZM...-XU... undervoltage release or NZM...-XA... shunt release Early make with switch on and switch off (manual actuation): approx. 20 ms			
				Not in conjunction with undervoltage release NZM...-XU, shunt release NZM...-XA... or remote operator NZM...-XR... Early make with switch on (manual actuation): approx. 90 ms			
	M22-CK10 216384	20 off	For Std. pack: M22-(C)K... : Std. pack = 20 off	The following can be clipped into the switches: • NZM1 - one trip-indicating auxiliary switch • NZM2 - one M22-(C)K... trip-indicating auxiliary switch • NZM3 - one M22-(C)K... trip-indicating auxiliary switch • NZM4 - up to two M22-(C)K... trip-indicating auxiliary switches Any combinations of the auxiliary contact types is possible. Not in combination with switch-disconnector PN... Marking on switch: HIA Labeling in FI-Block: HIAFI.			
	M22-CK01 216385						
			¹⁾ please inquire				
			¹⁾ please inquire				
			¹⁾ please inquire	If the trip-indicating auxiliary contact in the fault-current block is used, the N/C contacts operates as a N/O contact and the N/C contact operates as an N/O contact (circuit symbol)			

	For use with	Rated control voltage	Part no. Article no. when ordered separately	Price see price list	Std. pack	Notes
		U_s				
		V				
Undervoltage releases						
Without auxiliary contact						
Non-delayed disconnection of NZM circuit-breakers or N switch-disconnectors when the control voltage sinks below 35 – 70% U_s .						
For use with Emergency-Stop devices in conjunction with Emergency-Stop button.						
	With clamp terminal on the left-hand switch side.	NZM1(-4), N(S)1(-4)	24 V 50/60 Hz	NZM1-XU24AC 259434	1 off	When the undervoltage release is de-energized, accidental contact with the main contacts of the switch during attempts to switch on, is safely prevented . Undervoltage release cannot be installed simultaneously with NZM...-XHIV... early-make auxiliary contact or NZM...-XA... shunt release.
			110 V – 130 V 50/60 Hz	NZM1-XU110-130AC 259440		
			208 V 240 V 50/60 Hz	NZM1-XU208-240AC 259442		
			380 V – 440 V 50/60 Hz	NZM1-XU380-440AC 259444		
			480 V – 525 V 50/60 Hz	NZM1-XU480-525AC 259446		
			600 V 50/60 Hz	NZM1-XU600AC 259448		
			12 V DC	NZM1-XU12DC 259450		
			24 V DC	NZM1-XU24DC 259452		
			110 V – 130 V DC	NZM1-XU110-130DC 259458		
			220 V – 250 V DC	NZM1-XU220-250DC 259460		
	With 3 m connection cable instead of screw termination.	NZM1(-4), N(S)1(-4)	24 V 50/60 Hz	NZM1-XUL24AC 259462	1 off	
			110 V – 130 V 50/60 Hz	NZM1-XUL110-130AC 259468		
			208 V 240 V 50/60 Hz	NZM1-XUL208-240AC 259471		
			380 V – 440 V 50/60 Hz	NZM1-XUL380-440AC 259473		
			480 V – 525 V 50/60 Hz	NZM1-XUL480-525AC 259475		
			600 V 50/60 Hz	NZM1-XUL600AC 259477		
			12 V DC	NZM1-XUL12DC 259479		
			24 V DC	NZM1-XUL24DC 259481		
			110 V 130 V DC	NZM1-XUL110-130DC 259487		
			220 V – 250 V DC	NZM1-XUL220-250DC 259489		

Undervoltage release with screw terminal

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NZM2/3..., NZM4



Circuit-breakers, switch-disconnectors

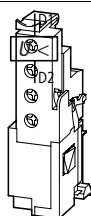
For use with	Rated control voltage	Part no. Article no. when ordered separately	Price see price list	Std. pack	Notes
	U_s				
	V				

Undervoltage releases

Without auxiliary contact

Non-delayed disconnection of NZM circuit-breakers or N switch-disconnectors when the control voltage sinks below 35 – 70% U_s .

For use with Emergency-Stop devices in conjunction with Emergency-Stop button.



NZM2(-4), N(S)2(-4)
NZM3(-4), N(S)3(-4)

24 V 50/60 Hz

NZM2/3-XU24AC
259491

1 off

When the undervoltage release is de-energized, accidental contact with the main contacts of the switch during attempts to switch on, is safely prevented .

110 V – 130 V 50/60 Hz

NZM2/3-XU110-130AC
259497

208 V 240 V 50/60 Hz

NZM2/3-XU208-240AC
259499

380 V – 440 V 50/60 Hz

NZM2/3-XU380-440AC
259501

480 V – 525 V 50/60 Hz

NZM2/3-XU480-525AC
259503

600 V 50/60 Hz

NZM2/3-XU600AC
259505

12 V DC

NZM2/3-XU12DC
259507

24 V DC

NZM2/3-XU24DC
259509

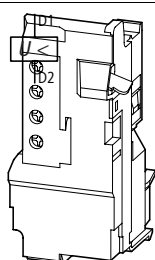
110 V 130 V DC

NZM2/3-XU110-130DC
259515

220 V – 250 V DC

NZM2/3-XU220-250DC
259517

Undervoltage release cannot be installed simultaneously with NZM...-XHIV... early-make auxiliary contact or NZM...-XA... shunt release.



NZM4(-4), N(S)4(-4)

24 V 50/60 Hz

NZM4-XU24AC
266189

1 off

110 V – 130 V 50/60 Hz

NZM4-XU110-130AC
266192

208 V – 240 V 50/60 Hz

NZM4-XU208-240AC
266193

380 V – 440 V 50/60 Hz

NZM4-XU380-440AC
266194

480 V – 525 V 50/60 Hz

NZM4-XU480-525AC
266195

600 V 50/60 Hz

NZM4-XU600AC
266196

12 V DC

NZM4-XU12DC
266203

24 V DC

NZM4-XU24DC
266204

110 V – 130 V DC

NZM4-XU110-130DC
266207

220 V – 250 V DC

NZM4-XU220-250DC
266208



Ordering

Undervoltage release with screw terminal

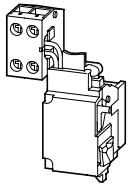
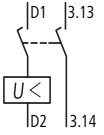
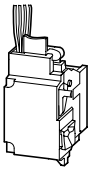
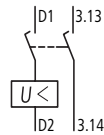
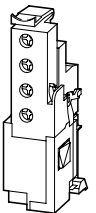
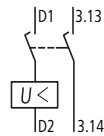


NZM1, NZM2/3

Moeller HPL0211-2007/2008

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Circuit-breakers, switch-disconnectors

	For use with	Rated control voltage U_s V	Part no. Article no. when ordered separately	Price see price list	Std. pack	Notes
Undervoltage releases						
With two early-make auxiliary contacts For interlocking and load-shedding circuits, as well as for early-make of the undervoltage release in main-switch applications.						
 	With clamp terminal on the left-hand switch side.	NZM1(-4), N(S)1(-4)	24 V 50/60 Hz	NZM1-XUHIV24AC 259531	1 off	When the undervoltage release is de-energized, accidental contact with the main contacts of the switch during attempts to switch on is safely prevented. Early-make of the auxiliary contacts with on and off switching (manual operation): approx. 20 ms. Undervoltage releases cannot be installed simultaneously with NZM...-XHIV... early-make auxiliary contact or NZM...-XA... shunt release.
		110 V – 130 V 50/60 Hz	NZM1-XUHIV110-130AC 259537			
		208 V – 240 V 50/60 Hz	NZM1-XUHIV208-240AC 259539			
		380 V – 440 V 50/60 Hz	NZM1-XUHIV380-440AC 259541			
		480 V – 525 V 50/60 Hz	NZM1-XUHIV480-525AC 259543			
		12 V DC	NZM1-XUHIV12DC 259545			
		24 V DC	NZM1-XUHIV24DC 259547			
		110 V – 130 V DC	NZM1-XUHIV110-130DC 259553			
		220 V – 250 V DC	NZM1-XUHIV220-250DC 259555			
		 	With 3 m connection cable instead of screw termination.	NZM1(-4), N(S)1(-4)		
110 V – 130 V 50/60 Hz	NZM1-XUHIVL110-130AC 259563					
208 V – 240 V 50/60 Hz	NZM1-XUHIVL208-240AC 259565					
380 V – 440 V 50/60 Hz	NZM1-XUHIVL380-440AC 259567					
480 V – 525 V 50/60 Hz	NZM1-XUHIVL480-525AC 259569					
12 V DC	NZM1-XUHIVL12DC 259571					
24 V DC	NZM1-XUHIVL24DC 259573					
110 V – 130 V DC	NZM1-XUHIVL110-130DC 259579					
220 V – 250 V DC	NZM1-XUHIVL220-250DC 259581					
 	With 3 m connection cable instead of screw termination.			NZM2(-4), N(S)2(-4), NZM3(-4), N(S)3(-4)	24 V 50/60 Hz	NZM2/3-XUHIV24AC 259583
		110 V – 130 V 50/60 Hz	NZM2/3-XUHIV110-130AC 259589			
		208 V – 240 V 50/60 Hz	NZM2/3-XUHIV208-240AC 259591			
		380 V – 440 V 50/60 Hz	NZM2/3-XUHIV380-440AC 259594			
		480 V – 525 V 50/60 Hz	NZM2/3-XUHIV480-525AC 259598			
		12 V DC	NZM2/3-XUHIV12DC 259600			
		24 V DC	NZM2/3-XUHIV24DC 259602			
		110 V – 130 V DC	NZM2/3-XUHIV110-130DC 259608			
		220 V – 250 V DC	NZM2/3-XUHIV220-250DC 259610			

Undervoltage release with screw terminal

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NZM1, NZM2/3..., NZM4



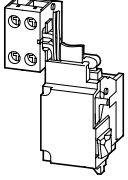
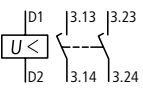
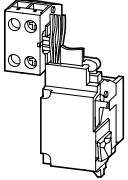
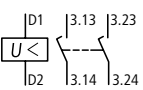
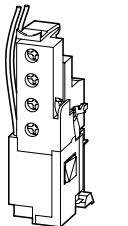
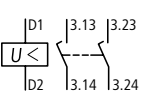
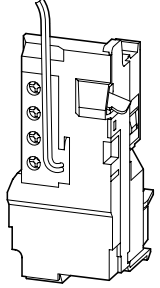
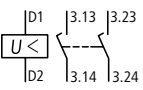
Circuit-breakers, switch-disconnectors

For use with	Rated control voltage	Part no. Article no. when ordered separately	Price see price list	Std. pack	Notes
	U_s V				
Undervoltage releases					
With two early-make auxiliary contacts					
For interlocking and load-shedding circuits, as well as for early-make of the undervoltage release in main-switch applications.					
	NZM4(-4), N(S)4(-4)	24 V 50/60 Hz	NZM4-XUHIV24AC 266217	1 off	When the undervoltage release is de-energized, accidental contact with the main switches of the switch during attempts to switch on is safely prevented. Early-make of the auxiliary contacts with switch on (manual operation): approx. 90 ms. Cannot be used in conjunction with NZM...-XR... remote operator. Undervoltage releases cannot be installed simultaneously with NZM...-XHIV... early-make auxiliary contact or NZM...-XA... shunt release.
		110 V – 130 V 50/60 Hz	NZM4-XUHIV110-130AC 266220		
		208 V – 240 V 50/60 Hz	NZM4-XUHIV208-240AC 266221		
		380 V – 440 V 50/60 Hz	NZM4-XUHIV380-440AC 266222		
		480 V – 525 V 50/60 Hz	NZM4-XUHIV480-525AC 266223		
		12 V DC	NZM4-XUHIV12DC 266231		
		24 V DC	NZM4-XUHIV24DC 266232		
		110 V – 130 V DC	NZM4-XUHIV110-130DC 266235		
		220 V – 250 V DC	NZM4-XUHIV220-250DC 266236		

For use with	Rated control voltage	Part no. Article no. when ordered separately	Price see price list	Std. pack
	U_s V			
Undervoltage releases				
With two separate early-make auxiliary contacts				
With 3 m connection cable instead of screw termination.				
	NZM1(-4), N(S)1(-4)	24 V 50/60 Hz	NZM1-XUHIV20L24AC 259612	1 off
		110 V – 130 V 50/60 Hz	NZM1-XUHIV20L110-130AC 259620	
		208 V – 240 V 50/60 Hz	NZM1-XUHIV20L208-240AC 259622	
		380 V – 440 V 50/60 Hz	NZM1-XUHIV20L380-440AC 259624	
		24 V DC	NZM1-XUHIV20L24DC 259630	
Contacts 3.23 and 3.24 with separate 3 m connection cables.				
	NZM2(-4), N(S)2(-4) NZM3(-4), N(S)3(-4)	24 V 50/60 Hz	NZM2/3-XUHIV2024AC 259640	1 off
		110 V – 130 V 50/60 Hz	NZM2/3-XUHIV20110-130AC 259648	
		208 V – 240 V 50/60 Hz	NZM2/3-XUHIV20208-240AC 259651	
		380 V – 440 V 50/60 Hz	NZM2/3-XUHIV20380-440AC 259653	
		24 V DC	NZM2/3-XUHIV2024DC 259659	

Notes

When the undervoltage release is de-energized, accidental contact with the main switches of the switch during attempts to switch on is safely prevented.
 Early-make of the auxiliary contacts with on and off switching (manual operation): approx. 20 ms.
 Cannot be used in conjunction with NZM...-XR... remote operator.
 Undervoltage releases cannot be installed simultaneously with NZM...-XHIV... early-make auxiliary contact or NZM...-XA... shunt release.

	For use with	Rated control voltage U_s V	Part no. Article no. when ordered separately	Price see price list	Std. pack
Undervoltage releases					
With two separate early-make auxiliary contacts					
Coil connection wired to clamp terminal, auxiliary switch connections wired with 3 m loose connection cables					
 	NZM1(-4), N(S)1(-4)	24 V 50/60 Hz	NZM1-XUHIV20KL24AC 284388		1 off
		110 V – 130 V 50/60 Hz	NZM1-XUHIV20KL110-130AC 284389		
		208 V – 240 V 50/60 Hz	NZM1-XUHIV20KL208-240AC 284400		
		24 V DC	NZM1-XUHIV20KL24DC 284387		
Coil connection with 3 m loose connection cables, auxiliary switch connections wired to clamp terminal					
 	NZM1(-4), N(S)1(-4)	24 V 50/60 Hz	NZM1-XUHIV20LK24AC 284402		1 off
		110 V – 130 V 50/60 Hz	NZM1-XUHIV20LK110-130AC 284403		
		208 V ... 240 V 50/60 Hz	NZM1-XUHIV20LK208-240AC 284404		
		24 V DC	NZM1-XUHIV20LK24DC 284401		
Coil connection with 3 m loose connection cables, auxiliary switch connections wired to clamp terminal					
 	NZM2(-4), N(S)2(-4) NZM3(-4), N(S)3(-4)	24 V 50/60 Hz	NZM2/3-XUHIV20LK24AC 285291		1 off
		110 V – 130 V 50/60 Hz	NZM2/3-XUHIV20LK110-130AC 284407		
		208 V – 240 V 50/60 Hz	NZM2/3-XUHIV20LK208-240AC 284408		
		24 V DC	NZM2/3-XUHIV20LK24DC 284405		
Contacts 3.23 and 3.24 with separate 3 m connection cables.					
 	NZM4(-4), N(S)4(-4)	24 V 50/60 Hz	NZM4-XUHIV2024AC 266244		1 off
		110 V – 130 V 50/60 Hz	NZM4-XUHIV20110-130AC 266247		
		208 V 240 V 50/60 Hz	NZM4-XUHIV20208-240AC 266248		
		380 V – 440 V 50/60 Hz	NZM4-XUHIV20380-440AC 266249		
		24 V DC	NZM4-XUHIV2024DC 266258		

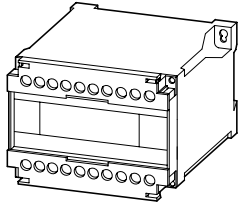

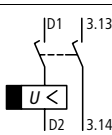
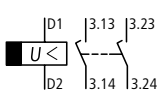
Notes

When the undervoltage release is de-energized, accidental contact with the main switches of the switch during attempts to switch on is safely prevented.

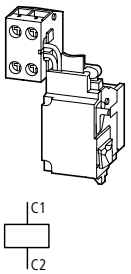
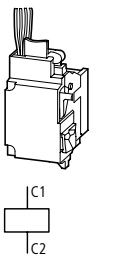
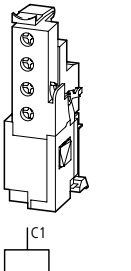
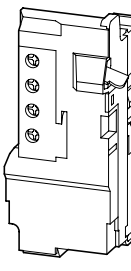
Early-make of the auxiliary contacts with on and off switching (manual operation): approx. 20 ms.

Cannot be used in conjunction with NZM...-XR... remote operator.

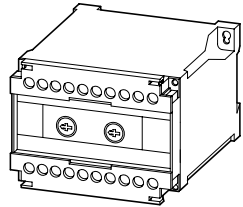
Undervoltage releases cannot be installed simultaneously with NZM...-XHIV... early-make auxiliary contact or NZM...-XA... shunt release.

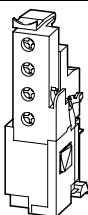

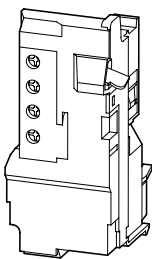

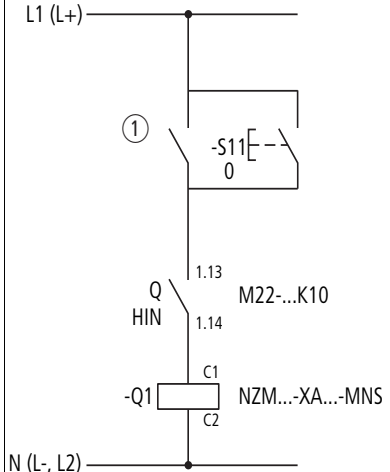
For use with	Part no. Article no. when ordered separately	Price see price list	Std. pack	Notes
Undervoltage releases, off-delayed				
Combination of separate delay unit and special tripping device. Not UL/CSA approved.				
Delay unit Voltage dips of less than the setting between 0.06 – 16 s do not cause disconnection of the NZM circuit-breaker or N switch-disconnector.				
	NZM1(-4), 2(-4), 3(-4), 4(-4) N(S)1(-4), 2(-4), 3(-4), 4(-4) 50/60 Hz 220 V – 240 V 380 V – 440 V 480 V – 550 V DC/AC 24 V	UVU-NZM 260154	1 off	Adjustable delay time 70 ms – 4 s. With additional capacitor up to 16 s. A special tripping device is required. Cannot be installed simultaneously with NZM...-XHIV... or NZM...-XA... shunt release. Delay unit for separate installation (Fixing: top-hat rail or screws). For other operating voltages use control transformer.
Special tripping device For combination with separate delay unit				
Without auxiliary contacts				
NZM1 with 3 m separate connection cables instead of screw terminal, NZM2, 3, 4 with screw terminal				
	NZM1(-4) N(S)1(-4)	NZM1-XUVL 271607	1 off	UVU-NZM delay unit is additionally required. Cannot be installed simultaneously with separate NZM...-XHIV early-make auxiliary contact or NZM...-XA... shunt release.
	NZM2(-4), N(S)2(-4) NZM3(-4), N(S)3(-4)	NZM2/3-XUV 259527		
	NZM4(-4) N(S)4(-4)	NZM4-XUV 266588		
With 2 early-make auxiliary contacts				
NZM1 with 3 m separate connection cables instead of screw terminal, NZM2, 3, 4 with screw terminal				
	NZM1(-4) N(S)1(-4)	NZM1-XUVHIVL 271608	1 off	Cannot be used in conjunction with NZM...-XR... remote operator. UVU-NZM delay unit is additionally required. Cannot be installed simultaneously with separate NZM...-XHIV early-make auxiliary contact or NZM...-XA... shunt release. NZM1, 2, 3: Early-make of the auxiliary contacts with on and off switching (manual operation): approx. 20 ms. NZM4: Early-make of the auxiliary contacts with switch on (manual operation): approx. 90 ms.
	NZM2(-4), N(S)2(-4) NZM3(-4), N(S)3(-4)	NZM2/3-XUVHIV 259684		
	NZM4(-4) N(S)4(-4)	NZM4-XUVHIV 266596		
With 2 separately operating early-make auxiliary contacts				
NZM1 with 3 m separate connection cables instead of screw terminal, NZM2, 3, 4 with screw terminal, contact 3.23 and 3.24 with 3 m separate connection cables.				
	NZM1(-4) N(S)1(-4)	NZM1-XUVHIV20L 271609	1 off	Cannot be used in conjunction with NZM...-XR... remote operator. UVU-NZM delay unit is additionally required. Cannot be installed simultaneously with separate NZM...-XHIV early-make auxiliary contact or NZM...-XA... shunt release. NZM1, 2, 3: Early-make of the auxiliary contacts with on and off switching (manual operation): approx. 20 ms. NZM4: Early-make of the auxiliary contacts with switch on (manual operation): approx. 90 ms.
	NZM2(-4), N(S)2(-4) NZM3(-4), N(S)3(-4)	NZM2/3-XUVHIV20 259688		
	NZM4(-4) N(S)4(-4)	NZM4-XUVHIV20 266604		

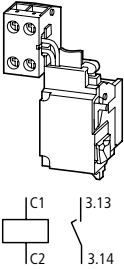
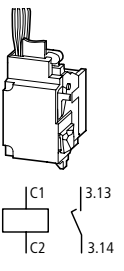
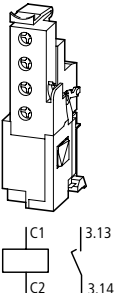
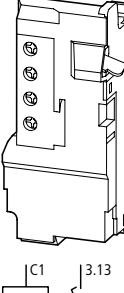


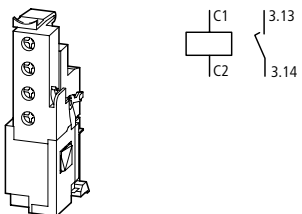
	For use with	Rated control voltage	Part no. Article no. when ordered separately	Price see price list	Std. pack	Notes	
with screw terminals							
<p>Shunt releases</p> <p>Without auxiliary contact Switches are tripped by a voltage pulse or by the application of uninterrupted voltage.</p>							
	With clamp terminal on the left-hand switch side.	NZM1(-4), N(S)1(-4)	12 V AC/DC	NZM1-XA12AC/DC 259706	1 off	When the undervoltage release is de-energized, accidental contact with the main contacts of the switch during attempts to switch on, is safely prevented. Shunt release cannot be installed simultaneously with NZM...-XHIV... early-make auxiliary contact or NZM...-XU... undervoltage release.	
			24 V AC/DC	NZM1-XA24AC/DC 259708			
			110 V – 130 V AC/DC	NZM1-XA110-130AC/DC 259724			
			208 V – 250 V AC/DC	NZM1-XA208-250AC/DC 259726			
			380 V – 440 V AC/DC	NZM1-XA380-440AC/DC 259728			
	With 3 m connection cable instead of screw termination.	NZM1(-4), N(S)1(-4)	12 V AC/DC	NZM1-XAL12AC/DC 259734	1 off		
			24 V AC/DC	NZM1-XAL24AC/DC 259736			
			110 V – 130 V AC/DC	NZM1-XAL110-130AC/DC 259742			
			208 V – 250 V AC/DC	NZM1-XAL208-250AC/DC 259744			
			380 V – 440 V AC/DC	NZM1-XAL380-440AC/DC 259746			
<p>Without auxiliary contact Switches are tripped by a voltage pulse or by the application of uninterrupted voltage.</p>							
		NZM2(-4), N(S)2(-4), NZM3(-4), N(S)3(-4)	12 V AC/DC	NZM2/3-XA12AC/DC 259752	1 off	When the undervoltage release is de-energized, accidental contact with the main contacts of the switch during attempts to switch on, is safely prevented. Shunt release cannot be installed simultaneously with NZM...-XHIV... early-make auxiliary contact or NZM...-XU... undervoltage release.	
				24 V AC/DC			NZM2/3-XA24AC/DC 259754
				110 V – 130 V AC/DC			NZM2/3-XA110-130AC/DC 259760
				208 V – 250 V AC/DC			NZM2/3-XA208-250AC/DC 259763
				380 V – 440 V AC/DC			NZM2/3-XA380-440AC/DC 259766
		NZM4(-4), N(S)4(-4)	12 V AC/DC	NZM4-XA12AC/DC 266446	1 off		
				24 V AC/DC			NZM4-XA24AC/DC 266447
				110 V – 130 V AC/DC			NZM4-XA110-130AC/DC 266450
				208 V – 250 V AC/DC			NZM4-XA208-250AC/DC 266451
				380 V – 440 V AC/DC			NZM4-XA380-440AC/DC 266452

Shunt releases with screw terminal

For use with	Part no. Article no. when ordered separately	Price see price list	Std. pack	Notes
	with screw terminals			
Shunt releases				
Capacitor unit 230 V 50/60 Hz in conjunction with NZM...-XA2082-50AC/DC shunt release Enclosure: degree of protection IP20 not UL/CSA approved				
	NZM1(-4), N(S)1(-4) NZM2(-4), N(S)2(-4) NZM3(-4), N(S)3(-4) NZM4(-4), N(S)4(-4)	NZM-XCM 229413	1 off	Enables the safe use of circuit-breakers as mesh network circuit-breakers in the range from 0 ... 110 % U_n with constant switch-off time of 40 ms. If the mains voltage is absent, the installed capacitor supplies power for actuating the shunt release for at least 12 hours. The configuration of the capacitor unit is undertaken independently of the circuit-breaker. Connect NZM-XCM to the power feed side. Design note: Connect a standard auxiliary contact as N/O in series with the shunt release! Standard auxiliary contact not included as standard.

For use with	Rated control voltage	Part no. Article no. when ordered separately	Price see price list	Std. pack	Notes
	U_s V	with screw terminals			
Shunt releases					
Without auxiliary contacts For mesh-network circuit-breakers For intermittent operation Maximum on time = 1 s Operating range 10 – 110 % U_s not UL/CSA approved					
	 NZM3(-4), N(S)3(-4)	230 V AC	NZM3-XA-230AC-MNS 274097	1 off	Cannot be installed simultaneously with NZM...-XHIV... early-make auxiliary contact or NZM...-XU... undervoltage release. Intermittent operation guaranteed by series connection of an M22-(C)K10 make contact. The maximum operating time of the shunt release for mesh network circuit-breaker is 1 s.
	 NZM4(-4), N(S)4(-4)	230 V AC	NZM4-XA-230AC-MNS 274138	1 off	
 <p>① Reverse-power relay contact -S11 Remote off Q Standard auxiliary contact -Q1 Shunt release</p>					

		For use with	Rated control voltage	with screw terminals Part no. Article no. when ordered separately	Price see price list	Std. pack	Notes
			U_s				
			V				
Shunt releases							
With early-make auxiliary contact Not in combination with remote operator.							
 <p>With clamp terminal on the left-hand switch side.</p>	NZM1(-4), N(S)1(-4)	12 V AC/DC	NZM1-XAHIV12AC/DC 259772		1 off	When the shunt release is energized, accidental contact with the main contacts of the switch during attempts to switch on is safely prevented. Early-make of the auxiliary contact with on and off switching (manual operation): approx. 20 ms. Shunt release cannot be installed simultaneously with NZM...-XHIV.. early-make auxiliary contact or NZM...-XU... undervoltage release.	
		24 V AC/DC	NZM1-XAHIV24AC/DC 259774				
		110 V – 130 V AC/DC	NZM1-XAHIV110-130AC/DC 259780				
		208 V – 250 V AC/DC	NZM1-XAHIV208-250AC/DC 259782				
		380 V – 440 V AC/DC	NZM1-XAHIV380-440AC/DC 259784				
 <p>With 3 m connection cable instead of screw termination.</p>	NZM1(-4), N(S)1(-4)	12 V AC/DC	NZM1-XAHIVL12AC/DC 259790		1 off		
		24 V AC/DC	NZM1-XAHIVL24AC/DC 259792				
		110 V – 130 V AC/DC	NZM1-XAHIVL110-130AC/DC 259798				
		208 V – 250 V AC/DC	NZM1-XAHIVL208-250AC/DC 259800				
		380 V – 440 V AC/DC	NZM1-XAHIVL380-440AC/DC 259802				
With early-make auxiliary contact							
	NZM2(-4), N(S)2(-4), NZM3(-4), N(S)3(-4)	12 V AC/DC	NZM2/3-XAHIV12AC/DC 259808		1 off	When the shunt release is energized, accidental contact with the main contacts of the switch during attempts to switch on is safely prevented. Early-make of the auxiliary contact with on and off switching (manual operation): approx. 20 ms. Cannot be used in conjunction with NZM...-XR... remote operator. Shunt release cannot be installed simultaneously with NZM...-XHIV.. early-make auxiliary contact or NZM...-XU... undervoltage release.	
		24 V AC/DC	NZM2/3-XAHIV24AC/DC 259810				
		110 V – 130 V AC/DC	NZM2/3-XAHIV110-130AC/DC 259816				
		208 V – 250 V AC/DC	NZM2/3-XAHIV208-250AC/DC 259818				
		380 V – 440 V AC/DC	NZM2/3-XAHIV380-440AC/DC 259820				
	NZM4(-4), N(S)4(-4)	12 V AC/DC	NZM4-XAHIV12AC/DC 266470		1 off		
		24 V AC/DC	NZM4-XAHIV24AC/DC 266471				
		110 V – 130 V AC/DC	NZM4-XAHIV110-130AC/DC 266474				
		208 V – 250 V AC/DC	NZM4-XAHIV208-250AC/DC 266475				
		380 V – 440 V AC/DC	NZM4-XAHIV380-440AC/DC 266476				

	For use with	Rated control voltage U_s		with screw terminals Part no. Article no. when ordered separately	Price see price list	Std. pack
Shunt releases						
For mesh-network circuit-breakers For intermittent operation Maximum on time = 1 s Operating range 10 – 110 % U_s not UL/CSA approved						
	With early-make auxiliary contact	NZM3(-4), N(S)3(-4)	230 V AC	NZM3-XAHIV-230AC-MNS 274141		1 off
			230 V AC	NZM4-XAHIV-230AC-MNS 274143		1 off

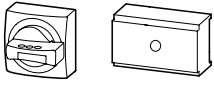
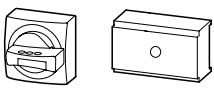
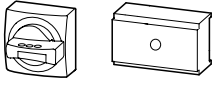
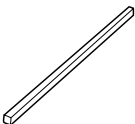
Notes

Cannot be installed simultaneously with NZM...-XHIV... early-make auxiliary contact or NZM...-XU... undervoltage release.
Cannot be used in conjunction with NZM...-XR... remote operator.

Intermittent operation guaranteed by series connection of a N/O contact M22-(C)K10 (standard auxiliary contact).
The maximum operating time of the shunt release for mesh network circuit-breaker is 1 s.
NZM3: Early-make of the auxiliary contact with on and off switching (manual operation): approx. 20 ms.
NZM4: Early-make of the auxiliary contact with switch on (manual operation): approx. 90 ms.

Circuit-breakers, switch-disconnectors

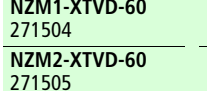
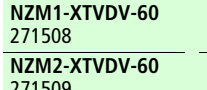
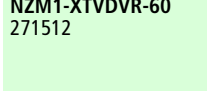


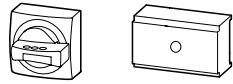
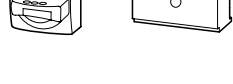
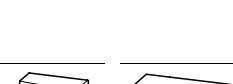
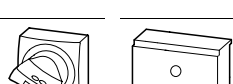
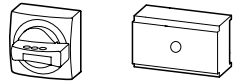



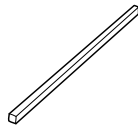
For use with	Part no. Article no.	Price see price list	Std. pack	Notes
Door coupling rotary handle				
Complete including rotary drive and coupling parts An additional extension shaft is necessary with the NZM...-XT(V)D(V)(R)(-60) types. Degree of protection IP66/UL/CSA Type 4X Standard, black/grey				
	Lockable on the 0 position on the handle using up to 3 padlocks. With door interlock	NZM1(-4), PN1(-4), N(S)1(-4) NZM2(-4), PN2(-4), N(S)2(-4) NZM3(-4), PN3(-4), N(S)3(-4) NZM4(-4), N(S)4(-4)	NZM1-XTVD 260166 NZM2-XTVD 260168 NZM3-XTVD 260170 NZM4-XTVD 266614	1 off Door interlock • Not defeated in the locked OFF and ON positions • Can be modified such that it can be defeated from the outside using a screwdriver, when it is in the unlocked ON position. • Door can be opened in OFF NZM...-XTVD(V) • External warning plate/ designation label can be clipped on
	Lockable on the handle on the switch using up to 3 padlocks. Can be locked in 0 position on the handle, with adequate modification also in I position. With door interlock. Lockable in the 0 position	NZM1(-4), PN1(-4), N(S)1(-4) NZM2(-4), PN2(-4), N(S)2(-4) NZM3(-4), PN3(-4), N(S)3(-4) NZM4(-4), N(S)4(-4)	NZM1-XTVDV 260172 NZM2-XTVDV 260174 NZM3-XTVDV 260176 NZM4-XTVDV 266616	
Red-yellow for Emergency-Stop				
	Lockable on the handle on the switch using up to 3 padlocks. Lockable in 0 position on handle. With door interlock. Lockable in the 0 position	NZM1(-4), PN1(-4), N(S)1(-4) NZM2(-4), PN2(-4), N(S)2(-4) NZM3(-4), PN3(-4), N(S)3(-4) NZM4(-4), N(S)4(-4)	NZM1-XTVDVR 260178 NZM2-XTVDVR 260180 NZM3-XTVDVR 260182 NZM4-XTVDVR 266618	1 off Door interlock • Not defeatable in the locked OFF position. • Can be modified such that it can be defeated from the outside using a screwdriver, when it is in the unlocked ON position. • Door can be opened in OFF NZM...-XTVDVR • External warning plate/ designation label can be clipped on
Extension shaft				
	Max. mounting depth: 400 mm	NZM1(-4), PN1(-4), N(S)1(-4) NZM2(-4), PN2(-4), N(S)2(-4) NZM3(-4), PN3(-4), N(S)3(-4) NZM4(-4), N(S)4(-4)	NZM1/2-XV4 261232 NZM3/4-XV4 261234	1 off Can be cut to required length
	Max. mounting depth: 600 mm	NZM1(-4), PN1(-4), N(S)1(-4) NZM2(-4), PN2(-4), N(S)2(-4) NZM3(-4), PN3(-4), N(S)3(-4) NZM4(-4), N(S)4(-4)	NZM1/2-XV6 260191 NZM3/4-XV6 260193	

Notes Circuit-breaker can also be installed in a lying position 90 ° left/right, with the handle still in the same position.

Circuit-breakers, switch-disconnectors















For a max. shaft length of 60 mm	Part no. Article no.	Price see price list	Std. pack	Notes	Extremely narrow fittings	Part no. Article no.	Price see price list	Std. pack	Notes
Door interlock									
	NZM1-XTVD-60 271504 NZM2-XTVD-60 271505 NZM3-XTVD-60 271506 NZM4-XTVD-60 271507		1 off	Door interlock • Not defeated in the locked OFF and ON positions • Can be modified such that it can be defeated from the outside using a screwdriver, when it is in the unlocked ON position. • Door can be opened in OFF NZM...-XTVD(V)-60 • For maximum shaft length 60 mm	NZM1-XTVD-0 279392 NZM2-XTVD-0 279393 NZM3-XTVD-0 279394 NZM4-XTVD-0 279395			1 off	Door interlock • Not defeated in the locked OFF and ON positions • Can be modified such that it can be defeated from the outside using a screwdriver, when it is in the unlocked ON position. • Door can be opened in OFF NZM...-XTVD(V)-0 • For extremely narrow fittings • With special short extension shaft • Cannot be combined with NZM...-XDZ additional handle • External warning plate/ designation label can be clipped on
	NZM1-XTVDV-60 271508 NZM2-XTVDV-60 271509 NZM3-XTVDV-60 271510 NZM4-XTVDV-60 271511			Without shaft support • Cannot be combined with NZM...-XDZ additional handle • External warning plate/ designation label can be clipped on	NZM1-XTVDV-0 279396 NZM2-XTVDV-0 279397 NZM3-XTVDV-0 279398 NZM4-XTVDV-0 279399				Without shaft support • Cannot be combined with NZM...-XDZ additional handle • External warning plate/ designation label can be clipped on
	NZM1-XTVDVR-60 271512 NZM2-XTVDVR-60 271513 NZM3-XTVDVR-60 271514 NZM4-XTVDVR-60 271515		1 off	Door interlock • Not defeatable in the locked OFF position. • Can be modified such that it can be defeated from the outside using a screwdriver, when it is in the unlocked ON position. • Door can be opened in OFF NZM...-XTVDVR-60 • For maximum shaft length 60 mm • Without shaft support • Cannot be combined with NZM...-XDZ additional handle • External warning plate/ designation label can be clipped on	NZM1-XTVDVR-0 279400 NZM2-XTVDVR-0 279401 NZM3-XTVDVR-0 279402 NZM4-XTVDVR-0 279403			1 off	Door interlock • Not defeatable in the locked OFF position. • Can be modified such that it can be defeated from the outside using a screwdriver, when it is in the unlocked ON position. • Door can be opened in OFF NZM...-XTVDVR-0 • For extremely narrow fittings • With special short extension shaft • Cannot be combined with NZM...-XDZ additional handle • External warning plate/ designation label can be clipped on

Divergent to normal IEC handles: Door opening only possible with active rotation beyond the 0 position.		For use with	Standard Part no. Article no. when ordered separately	Price see price list	Std. pack	Notes
Door coupling rotary handle						
Complete including rotary drive and coupling parts Extension shaft additionally required. Degree of protection IP66/UL/CSA Type 4X						
Standard, black/grey						
	Lockable on the handle and switch using up to 3 padlocks. Lockable in 0 position on handle. With door interlock. Lockable on the switch in the 0 position.	NZM1, N(S)1	NZM1-XTVDV-NA 100683		1 off	Door interlock <ul style="list-style-type: none"> • Not defeated in the locked OFF position. • Door opening possible with active rotation beyond the 0 position. Can be defeated from the outside using a screwdriver. • Cannot be combined with mechanical interlock • External warning plate/ designation label can be clipped on
		NZM2, N(S)2	NZM2-XTVDV-NA 100684			
		NZM3, N(S)3	NZM3-XTVDV-NA 100685			
		NZM4, N(S)4	NZM4-XTVDV-NA 100686			
Red-yellow for Emergency-Stop						
	Lockable on the handle and switch using up to 3 padlocks. Lockable in 0 position on handle. With door interlock. Lockable on the switch in the 0 position.	NZM1, N(S)1	NZM1-XTVDVR-NA 271449		1 off	Door interlock <ul style="list-style-type: none"> • Not defeated in the locked OFF position • Door opening possible with active rotation beyond the 0 position. • Cannot be combined with mechanical interlock • External warning plate/ designation label can be clipped on
		NZM2, N(S)2	NZM2-XTVDVR-NA 271450			
		NZM3, N(S)3	NZM3-XTVDVR-NA 271451			
		NZM4, N(S)4	NZM4-XTVDVR-NA 271452			
Extension shaft						
	Max. mounting depth: 400 mm	NZM1(-4), PN1(-4), N(S)1(-4) NZM2(-4), PN2(-4), N(S)2(-4) NZM3(-4), PN3(-4), N(S)3(-4) NZM4(-4), N(S)4(-4)	NZM1/2-XV4 261232 NZM3/4-XV4 261234		1 off	Can be cut to required length
	Max. mounting depth: 600 mm	NZM1(-4), PN1(-4), N(S)1(-4) NZM2(-4), PN2(-4), N(S)2(-4) NZM3(-4), PN3(-4), N(S)3(-4) NZM4(-4), N(S)4(-4)	NZM1/2-XV6 260191 NZM3/4-XV6 260193			

Notes Circuit-breaker can also be installed in a lying position 90 ° left/right, with the handle still in the same position.

For a max. shaft length of 60 mm		Notes	Extremely narrow fittings	Std. pack	Notes
Part no. Article no. when ordered separately	Price see price list		Part no. Article no. when ordered separately		
NZM1-XTVDV-60-NA 100667		Door interlock <ul style="list-style-type: none"> • Not defeated in the locked OFF position. • Door opening possible with active rotation beyond the 0 position. Can be defeated from the outside using a screwdriver. • Cannot be combined with mechanical interlock • External warning plate/ designation label can be clipped on NZM...-XTVDV-60-NA <ul style="list-style-type: none"> • For a maximum shaft length of 60 mm • Without shaft support • Cannot be combined with NZM...-XDZ additional handle • External warning plate/ designation label can be clipped on 	NZM1-XTVDV-0-NA 100675	1 off	Door interlock <ul style="list-style-type: none"> • Not defeated in the locked OFF position. • Door opening possible with active rotation beyond the 0 position. Can be defeated from the outside using a screwdriver. • Cannot be combined with mechanical interlock • External warning plate/ designation label can be clipped on NZM...-XTVDV-0-NA <ul style="list-style-type: none"> • For extremely narrow fittings • With special short extension shaft • Cannot be combined with NZM...-XDZ additional handle. • External warning plate/ designation label can be clipped on
NZM2-XTVDV-60-NA 100668			NZM2-XTVDV-0-NA 100676		
NZM3-XTVDV-60-NA 100669			NZM3-XTVDV-0-NA 100677		
NZM4-XTVDV-60-NA 100670			NZM4-XTVDV-0-NA 100678		
NZM1-XTVDVR-60-NA 100671		Door interlock <ul style="list-style-type: none"> • Not defeated in the locked OFF position • Door opening possible with active rotation beyond the 0 position. • Cannot be combined with mechanical interlock • External warning plate/ designation label can be clipped on NZM...-XTVDVR-60-NA <ul style="list-style-type: none"> • For a maximum shaft length of 60 mm • Without shaft support • Cannot be combined with NZM...-XDZ additional handle • External warning plate/ designation label can be clipped on 	NZM1-XTVDVR-0-NA 100679	1 off	Door interlock <ul style="list-style-type: none"> • Not defeated in the locked OFF position • Door opening possible with active rotation beyond the 0 position. • Cannot be combined with mechanical interlock • External warning plate/ designation label can be clipped on NZM...-XTVDVR-0-NA <ul style="list-style-type: none"> • For extremely narrow fittings • With special short extension shaft • Cannot be combined with NZM...-XDZ additional handle • External warning plate/ designation label can be clipped on
NZM2-XTVDVR-60-NA 100672			NZM2-XTVDVR-0-NA 100680		
NZM3-XTVDVR-60-NA 100673			NZM3-XTVDVR-0-NA 100681		
NZM4-XTVDVR-60-NA 100674			NZM4-XTVDVR-0-NA 100682		

	For use with	Part no. Article no. when ordered separately	Price see price list	Std. pack	Notes
Rotary handle on circuit-breaker					
Complete with rotary drive					
Standard, black/grey					
	Lockable on the 0 position on the switch using up to 3 padlocks.	NZM1(-4), PN1(-4), N(S)1(-4)	NZM1-XDV 260125	1 off	NZM1, 2, 3: Can also be combined with insulating surround. MODAN handle position detection by wire release can be retrofitted.
		NZM2(-4), PN2(-4), N(S)2(-4)	NZM2-XDV 260127		
		NZM3(-4), PN3(-4), N(S)3(-4)	NZM3-XDV 260129		
		NZM4(-4), N(S)4(-4)	NZM4-XDV 266608		
	Lockable on the 0 position on the handle using up to 3 padlocks.	NZM1(-4), PN1(-4), N(S)1(-4)	NZM1-XDVG 285247	1 off	Can also be combined with insulating surround.
		NZM2(-4), PN2(-4), N(S)2(-4)	NZM2-XDVG 285248		
Red-yellow for Emergency-Stop					
	Lockable on the 0 position on the switch using up to 3 padlocks.	NZM1(-4), PN1(-4), N(S)1(-4)	NZM1-XDVR 260135	1 off	NZM1, 2, 3: Can also be combined with insulating surround. MODAN handle position detection by wire release can be retrofitted.
		NZM2(-4), PN2(-4), N(S)2(-4)	NZM2-XDVR 260137		
		NZM3(-4), PN3(-4), N(S)3(-4)	NZM3-XDVR 260140		
		NZM4(-4), N(S)4(-4)	NZM4-XDVR 266610		
	Lockable on the 0 position on the handle using up to 3 padlocks.	NZM1(-4), PN1(-4), N(S)1(-4)	NZM1-XDVGR 285249		Can also be combined with insulating surround.
		NZM2(-4), PN2(-4), N(S)2(-4)	NZM2-XDVGR 285280		

Notes

Circuit-breaker can also be installed in a lying position 90 ° left/right, with the handle still in the same position.









Rotary handles with door interlock

http://catalog.moeller.net

Moeller HPL0211-2007/2008

NZM...-XDTV...



	For use with	Part no. Article no. when ordered separately	Price see price list	Std. pack	Notes	
Rotary handle on switch with door interlock						
Complete with rotary drive and insulating surround						
Standard, black/grey						
	Lockable on the 0 position on the handle using up to 3 padlocks, can also be modified for the I position. Also available with door interlock e.g. for MCC service distribution.	NZM1(-4), PN1(-4), N(S)1(-4)	NZM1-XDTV 260131	1 off	Door interlock <ul style="list-style-type: none"> • In the ON position, can be defeated from the outside using a 1 mm pin • Not defeated in the locked OFF and ON positions • Door can be opened in OFF • Can only be switched ON when the door is closed 	
		NZM2(-4), PN2(-4), N(S)2(-4)	NZM2-XDTV 260133			
Red-yellow for Emergency-Stop						
	Lockable on the 0 position on the handle using up to 3 padlocks. Also available with door interlock e.g. for MCC service distribution	NZM1(-4), PN1(-4), N(S)1(-4)	NZM1-XDTVR 260142	1 off		
		NZM2(-4), PN2(-4), N(S)2(-4)	NZM2-XDTVR 260144			
Rotary handle						
Divergent to normal IEC handles: Door opening only possible with active rotation beyond the 0 position.						
Complete with rotary drive and insulating surround						
Standard, black/grey						
	Lockable on the 0 position on the handle using up to 3 padlocks. Also available with door interlock e.g. for MCC service distribution.	NZM1, N(S)1	NZM1-XDTV-NA 271453	1 off	Door interlock <ul style="list-style-type: none"> • In the ON position, can be defeated from the outside using a 1 mm pin • Not defeated in the locked OFF and ON positions • Door opening only possible with active rotation beyond the 0 position. • Can only be switched ON when the door is closed • Cannot be combined with mechanical interlock 	
		NZM2, N(S)2	NZM2-XDTV-NA 271454			
Red-yellow for Emergency-Stop						
	Lockable on the 0 position on the handle using up to 3 padlocks. Also available with door interlock e.g. for MCC service distribution.	NZM1, N(S)1	NZM1-XDTVR-NA 271455			
		NZM2, N(S)2	NZM2-XDTVR-NA 271456			

Notes

Circuit-breaker can also be installed in a lying position 90 ° left/right, with the handle still in the same position.



Type	For use with	Part no. Article no. when ordered separately	Price see price list	Std. pack	
Main switch assembly kit					
Equipment supplied: • Rotary door-coupling handle • NZM...-XV4 extension shaft • External warning plate/designation label in German/English • Black and yellow flash For enhanced protection against direct contact on the incomer side, IP2X protection against contact with a finger can be ordered → 10/49 Other external warning plates/designation labels can be clipped on.					
With black door coupling rotary handle					
	Lockable on the 0 position on the handle using up to 3 padlocks, can also be modified for the I position. With door interlock.	NZM1(-4)	NZM1-XHB	1 off	
		PN1(-4), N(S)1(-4)	266626		
		NZM2(-4)	NZM2-XHB		
		PN2(-4), N(S)2(-4)	266627		
		NZM3(-4)	NZM3-XHB		
PN3(-4), N(S)3(-4)	266628				
NZM4(-4)	NZM4-XHB				
N(S)4(-4)	271779				
With red door coupling rotary handle for using switch as Emergency-Stop device according to IEC/EN 602041, VDE 0113 Part 1					
	Lockable on the 0 position on the handle using up to 3 padlocks. Lockable door as additional feature, locking facility on circuit-breaker in 0 position.	NZM1(-4)	NZM1-XHBR		
		PN1(-4), N(S)1(-4)	266632		
		NZM2(-4)	NZM2-XHBR		
		PN2(-4), N(S)2(-4)	266633		
		NZM3(-4)	NZM3-XHBR		
PN3(-4), N(S)3(-4)	266634				
NZM4(-4)	NZM4-XHBR				
N(S)4(-4)	271842				
Main switch assembly kit for side panel mounting					
Actuation of the switch on the control panel side wall Switch mounting on mounting plate Equipment supplied: • Door coupling rotary handle • NZM...-XV4 extension shaft • External warning plate/designation label in German/English • Black and yellow flash For enhanced protection against direct contact on the incomer side, IP2X protection against contact with a finger can be ordered → 10/49 Other external warning plates/designation labels can be clipped on.					
Standard, black/grey					
	Lockable on the 0 position on the handle using up to 3 padlocks, can also be modified for the I position.	For operation on the left	NZM1(-4)	NZM1-XS-L	1 off
			PN1(-4), N(S)1(-4)	266641	
			NZM2(-4)	NZM2-XS-L	
			PN2(-4), N(S)2(-4)	266642	
			NZM3(-4)	NZM3-XS-L	
	PN3(-4), N(S)3(-4)	266643			
	NZM4(-4)	NZM4-XS-L			
	N(S)4(-4)	289806			
	For operation on the right	NZM1(-4)	NZM1-XS-R		
		PN1(-4), N(S)1(-4)	266644		
NZM2(-4)		NZM2-XS-R			
PN2(-4), N(S)2(-4)		266645			
NZM3(-4)		NZM3-XS-R			
PN3(-4), N(S)3(-4)	266646				
NZM4(-4)	NZM4-XS-R				
N(S)4(-4)	289807				
Red-yellow for Emergency-Stop					
	Lockable on the 0 position on the handle using up to 3 padlocks.	For operation on the left	NZM1(-4)	NZM1-XSR-L	
			PN1(-4), N(S)1(-4)	266653	
			NZM2(-4)	NZM2-XSR-L	
			PN2(-4), N(S)2(-4)	266654	
			NZM3(-4)	NZM3-XSR-L	
	PN3(-4), N(S)3(-4)	266655			
	NZM4(-4)	NZM4-XSR-L			
	N(S)4(-4)	289808			
	For operation on the right	NZM1(-4)	NZM1-XSR-R		
		PN1(-4), N(S)1(-4)	266656		
NZM2(-4)		NZM2-XSR-R			
PN2(-4), N(S)2(-4)		266657			
NZM3(-4)		NZM3-XSR-R			
PN3(-4), N(S)3(-4)	266658				
NZM4(-4)	NZM4-XSR-R				
N(S)4(-4)	289809				

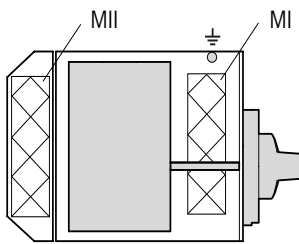
	Type	For use with	Part no. Article no. when ordered separately	Price see price list	Std. pack
Main switch assembly kit for side panel mounting with mounting bracket For direct mounting of circuit-breaker and handle in the side wall of the control cabinet Equipment supplied: <ul style="list-style-type: none"> • Door coupling rotary handle • Mounting bracket • Special short extension shaft • External warning plate/designation label in German/English • Black and yellow flash For enhanced protection against direct contact on the incomer side, IP2X protection against contact with a finger can be ordered → 10/49 Other external warning plates/designation labels can also be clipped on.					
Standard, black/grey					
	Can be locked in 0 position, with adequate modification also in I position. Narrowest minimum clearance between enclosure side plates of control panel and circuit-breaker is defined by mounting bracket. Extensions cannot be used.	For operation on the left	NZM1(-4) PN1(-4), N(S)1(-4)	NZM1-XSM-L 266663	1 off
		For operation on the left	NZM2(-4) PN2(-4), N(S)2(-4)	NZM2-XSM-L 266664	
		For operation on the right	NZM1(-4) PN1(-4), N(S)1(-4)	NZM1-XSM-R 266665	
		For operation on the right	NZM2(-4) PN2(-4), N(S)2(-4)	NZM2-XSM-R 266666	
Red-yellow for Emergency-Stop					
	Lockable in 0 position on handle. Narrowest minimum clearance between enclosure side plates of control panel and circuit-breaker is defined by mounting bracket. Extensions cannot be used.	For operation on the left	NZM1(-4) PN1(-4), N(S)1(-4)	NZM1-XSRM-L 266671	1 off
		For operation on the left	NZM2(-4) PN2(-4), N(S)2(-4)	NZM2-XSRM-L 266672	
		For operation on the right	NZM1(-4) PN1(-4), N(S)1(-4)	NZM1-XSRM-R 266673	
		For operation on the right	NZM2(-4) PN2(-4), N(S)2(-4)	NZM2-XSRM-R 266674	
Add-on plate					
For fitting to the mounting bracket when using N conductor or PE conductor terminals K25, K50, K95 or K150.					
			NZM1(-4), PN1(-4), N(S)1(-4) NZM2(-4), N(S)2(-4)	NZM1/2-XZB 266676	1 off

Additional terminal arrangement for side wall operator with mounting bracket
 NZM1-XS(R)M-..., NZM2-XS(R)M-...
 Additional terminals K25, K50, K95, K150 → 10/99

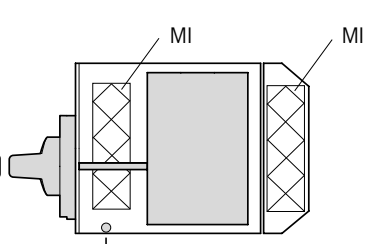
Actuation:

3 pole

For operation on the right

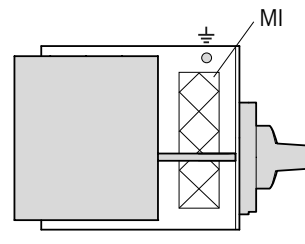


For operation on the left

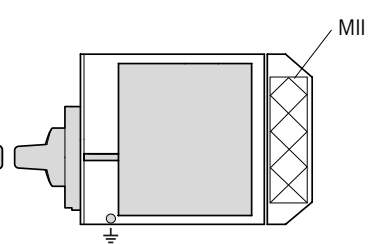


4 pole

For operation on the right



For operation on the left



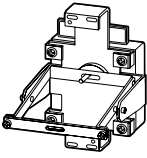
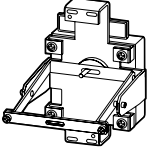
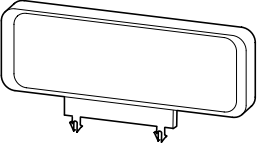

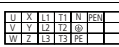

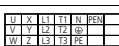
Mounting areas


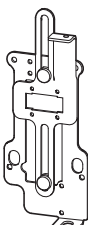
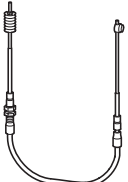
Variation options

Maximum number of additional terminals



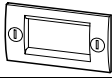
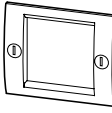
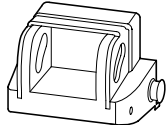

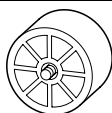
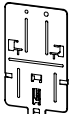
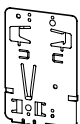
	MI				MII	
	V1	V2	V3	V4	V1	V2
K25	2 ×	–	–	–	–	–
K50	–	2 ×	–	–	–	–
K95	–	–	1 ×	–	1 ×	–
K150	–	–	–	1 ×	–	1 ×

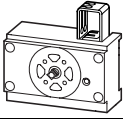
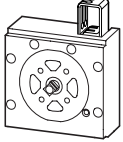
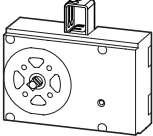

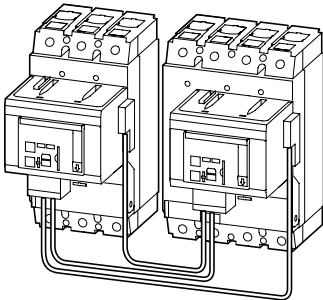
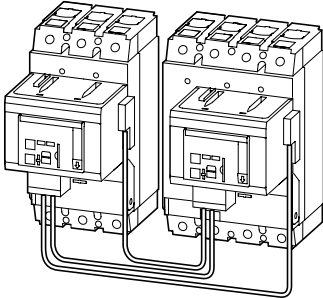
Example: In mounting area MI, variation option 1 allows the K25 additional terminal to be mounted twice.

For use with	Part no. Article no. when ordered separately	Price see price list	Std. pack	Notes	
Rear drive For direct rear connection of the switch to the side of the control panel or control panel door. Switch actuation on rear through side plate or control panel door. For switch with toggle lever. For enhanced protection against direct contact on the incomer side, IP2X protection against contact with a finger can be ordered → 10/47 Degree of protection IP66, UL/CSA Type 4X					
Standard, black/grey					
 <p>Lockable on the 0 position on the handle using up to 3 padlocks.</p>	NZM1, N1, NS1, PN1	NZM1-XRAV 107245	1 off	External warning plate can be clipped on	
	NZM1-4, N1-4, PN1-4	NZM1-4-XRAV¹⁾ 107246			
	NZM2, N2, NS2, PN2	NZM2-XRAV 107247			
	NZM2-4, N2-4, PN2-4	NZM2-4-XRAV¹⁾ 107248			
Red-yellow for Emergency-Stop					
 <p>Lockable on the 0 position on the handle using up to 3 padlocks.</p>	NZM1, N1, NS1, PN1	NZM1-XRAVR 107249	1 off		
	NZM1-4, N1-4, PN1-4	NZM1-4-XRAVR¹⁾ 107260			
	NZM2, N2, NS2, PN2	NZM2-XRAVR 107261			
	NZM2-4, N2-4, PN2-4	NZM2-4-XRAVR¹⁾ 107262			
					
German/English	NZM1(-4), PN1(-4), N(S)1(-4) NZM2(-4), PN2(-4), N(S)2(-4) NZM3(-4), PN3(-4), N(S)3(-4) NZM4(-4), N(S)4(-4)	ZFS61/62-NZM7 272525	1 off	A bilingual external warning plate/ designation label in German/English is already included in the main switch assembly kit.	
German		ZFS61-NZM7 051089			
English		ZFS62-NZM7 065957			
French		ZFS63-NZM7 065958			
Blank (for engraving or printing)		ZFS60-NZM7 065896			
Further languages		ZFS*-NZM7 999978			
External warning plates are available in the following languages: 64 Bulgarian 73 Romanian 65 Danish 74 Russian 66 Finnish 75 Swedish 67 Dutch 76 Serbo-Croatian 68 Italian 77 Spanish 69 Greek 78 Czech 70 Norwegian 79 Turkish 71 Polish 80 Hungarian 72 Portuguese 81 Afrikaans To obtain the order number, insert the language code number into the type reference required. Ordering example External warning plate in Finnish: ZFS66-NZM7					
Lightning symbol					
Including terminal marking for main switch					
Small	 	NZM1(-4), PN1(-4), N(S)1(-4) NZM2(-4), PN2(-4), N(S)2(-4)	BPF-NZM7 217294	10 off	Included as standard in main switch assembly kit
Large	 	NZM3(-4), PN3(-4), N(S)3(-4) NZM4(-4), N(S)4(-4)	BPF-NZM10 231363	10 off	
Notes ¹⁾ please inquire					

		For use with	Part no. Article no.	Price see price list	Std. pack	Std. pack
Side-mounted handle						
For mounting outside the control panel door. Actuation of a switch with toggle lever using a Bowden cable and mechanical components mounted on the front end of the switch. For switch with toggle lever						
Attention! Intended exclusively for use outside the scope of validity of IEC/EN 60947.						
Handle, metal, silver/red						
	Degree of protection UL/CSA Type 12	NZM2...-NA NS2...-NA NZM3...-NA NS3...-NA	NZM-XSHGVR12-NA 107269		1 off	Lockable in 0-position on handle with up to 3 padlocks, for 1 door of an American style control panel door (door plus wide bar beside the door). For each handle 1 additional mechanical unit and 1 Bowden cable is required
	Degree of protection UL/CSA Type 4X	NZM2...-NA NS2...-NA NZM3...-NA NS3...-NA	NZM-XSHGVR4X-NA 107268			
Mechanical unit						
		NZM2...-NA NS2...-NA	NZM2-XSHM-NA 107266		1 off	For mounting on the front end of a switch with toggle lever, including fixing sundries.
		NZM3...-NA NS3...-NA	NZM3-XSHM-NA 107267			
Bowden cables						
	Nominal length 36"	NZM2...-NA NS2...-NA NZM3...-NA NS3...-NA	NZM-XSHBZ36-NA 107263		1 off	
	Nominal length 48"	NZM2...-NA NS2...-NA NZM3...-NA NS3...-NA	NZM-XSHBZ48-NA 107264			
	Nominal length 60"	NZM2...-NA NS2...-NA NZM3...-NA NS3...-NA	NZM-XSHBZ60-NA 107265			



For use with	Part no. Article no. when ordered separately	Price see price list	Std. pack	Notes
Add-on handle				
Enables switching when the control panel door is open				
	NZM1(-4), PN1(-4), N(S)1(-4) NZM2(-4), PN2(-4), N(S)2(-4)	NZM1/2-XDZ 266621	1 off	Push-fits on to the extension shaft 100 mm free extension shaft required. Cannot be combined with NZM...-XT...-60 door coupling rotary handles as well as NZM...-XT...-0.
	NZM3(-4), PN3(-4), N(S)3(-4) NZM4(-4), N(S)4(-4)	NZM3/4-XDZ 266622	1 off	
Insulating surrounds				
For toggle lever, rotary handle with rotary drive and remote operator. Degree of protection IP40				
	NZM1(-4) PN1(-4), N(S)1(-4)	NZM1-XBR 260195	1 off	For oblong cut-out on doors and enclosures with material thicknesses of 1.5 – 5 mm. External warning plate/designation label can be clipped on NZM4-XBR cannot be combined with rotary handle with rotary drive.
	NZM2(-4) PN2(-4), N(S)2(-4)	NZM2-XBR 260197	1 off	
	NZM3(-4) PN3(-4), N(S)3(-4)	NZM3-XBR 284645		
	NZM4(-4) N(S)4(-4)	NZM4-XBR 284646		
Toggle lever locking device				
Off position lockable using up to 3 padlocks (hasp thickness 4 – 8 mm) Not UL/CSA approved				
	NZM1(-4) PN1(-4), N(S)1(-4)	NZM1-XKAV 260199	1 off	Cannot be combined with insulating surround.
	NZM2(-4), PN2(-4), N(S)2(-4) NZM3(-4), PN3(-4), N(S)3(-4)	NZM2/3-XKAV 260201	1 off	
Spacers				
Enables fast and low-priced adjustment of differing frame sizes with/ without rotary handle to the same front depth				
	NZM1(-4), PN1(-4), N(S)1(-4) NZM2(-4), PN2(-4), N(S)2(-4)	NZM1/2-XAB 260203	1 set	Grid depth 17.5 mm, M4 thread Type contains 4 off spacer Maximum component capacity: NZM1: 4 units per fixing screw, NZM2: 2 units per fixing screw 2 (NZM1) or 4 (NZM2) fixing screws contained per circuit-breaker
	NZM3(-4) PN3(-4), N(S)3(-4) NZM4(-4) N(S)4(-4)	NZM3-XAB 260211	1 set	
Clip plate				
Enables snap-fit of the circuit-breaker to a DIN rail				
	NZM1(-4) PN1(-4) N(S)1(-4)	NZM1-XC35 260213	1 off	For top-hat rail 35 mm
	NZM2 PN2 N(S)2	NZM2-XC75 260215	1 off	For top-hat rail 75 mm Not suitable for circuit-breakers with remote operator.

	For use with	Part no. Article no. when ordered separately	Price see price list	Std. pack	Notes
Mechanical interlocking of (door coupling) rotary handles					
	NZM1(-4) PN1(-4), N(S)1(-4)	NZM1-XMV 281581		1 off	Rotary handles on switches or door coupling rotary handles are additionally required. Cannot be combined with paralleling mechanisms, side wall operators and remote operator as well as NZM4-XBR insulating surrounds. Cannot be combined with NZM...-XTV...-NA door coupling rotary handles. In order to establish a mechanical interlock at least 2 interlock modules are required. Possible combinations and interlock variants → Project engineering Order Bowden cable separately
	NZM2(-4) PN2(-4), N(S)2(-4)	NZM2-XMV 281582			
	NZM3(-4) PN3(-4), N(S)3(-4) NZM4(-4) N(S)4(-4)	NZM3-XMV 281583 NZM4-XMV 281584			
Bowden cables					
For mechanical interlocking of (door coupling) rotary handles					
	NZM1(-4), PN1(-4), N(S)1(-4) NZM2(-4), PN2(-4), N(S)2(-4) NZM3(-4), PN3(-4), N(S)3(-4) NZM4(-4), N(S)4(-4)	NZM-XBZ225 281585 NZM-XBZ600 281586 NZM-XBZ1000 281587		1 off	
Mechanical interlock for remote operator					
For 2 switches of the same or next frame size with each other. Mounting beside one another.					
	NZM2(-4), N(S)2(-4) +NZM2(-4), N(S)2(-4) NZM2(-4), N(S)2(-4) +NZM3(-4), N(S)3(-4) NZM3(-4), N(S)3(-4) +NZM3(-4), N(S)3(-4) NZM3(-4), N(S)3(-4) +NZM4(-4), N(S)4(-4) NZM4(-4), N(S)4(-4) +NZM4(-4), N(S)4(-4)	NZM2-XMVR 104543 NZM2/3-XMVR 104544 NZM3-XMVR 104545 NZM3/4-XMVR 104546 NZM4-XMVR 104547		1 off	Type contains parts for both switches. Remote operator also required. Maximum switching distance → engineering Cannot be combined with rotary handles, door coupling rotary handles and early-make auxiliary contacts.
For 2 switches of the same or different type with opposed operation. Extra long Bowden cable for mounting one above the other or in adjacent enclosures.					
	NZM2(-4), N(S)2(-4) +NZM2(-4), N(S)2(-4) NZM2(-4), N(S)2(-4) +NZM3(-4), N(S)3(-4) NZM3(-4), N(S)3(-4) +NZM3(-4), N(S)3(-4) NZM3(-4), N(S)3(-4) +NZM4(-4), N(S)4(-4) NZM4(-4), N(S)4(-4) +NZM4(-4), N(S)4(-4)	NZM2-XMVRL 104548 NZM2/3-XMVRL 104549 NZM3-XMVRL 104550 NZM3/4-XMVRL 104551 NZM4-XMVRL 104552		1 off	Type contains parts for both switches. Remote operator also required. Maximum switching distance → engineering Cannot be combined with rotary handles, door coupling rotary handles and early-make auxiliary contacts.

	For use with	Part no. Article no. when ordered separately	Price see price list	Std. pack	Notes
Paralleling mechanism					
Simultaneous actuation of 2 PN switch-disconnectors of the same type mounted side-by-side. not UL/CSA approved					
	PN1(-4) + PN1(-4)	PN1-XPA 283471		1 off	PN1, PN2 <ul style="list-style-type: none"> • 1 × rotary handle on switch (-XD) supplied. • 1 × door coupling rotary handle (-XTVD) supplied.
	PN2(-4) + PN2(-4)	PN2-XPA 283472			
	PN3(-4) + PN3(-4)	PN3-XPA 283473			

Notes

Extension shaft (-XV4(6)) additionally required for the door coupling rotary handle.
Cannot be combined with mechanical interlock, insulating surrounds, side wall operators or remote operators

For use as Emergency-Stop device

For this the door coupling rotary handle requires an exchange thumb-grip in red/yellow according to the following order nos.

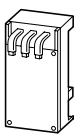
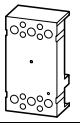
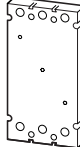
- for PN1 and PN2: NZM2-XDGVR → 100747
- for PN3: NZM3-XDGVR → 100764

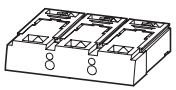
Note: The locking function of these thumb-grips must not be used.

	For use with	Part no. Article no.	Price see price list	Std. pack	Notes
Extension shaft					
	Max. mounting depth: 400 mm	NZM1(-4), PN1(-4), N(S)1(-4) NZM2(-4), PN2(-4), N(S)2(-4)	NZM1/2-XV4 261232	1 off	Can be cut to required length
		NZM3(-4), PN3(-4), N(S)3(-4) NZM4(-4), N(S)4(-4)	NZM3/4-XV4 261234		
	Max. mounting depth: 600 mm	NZM1(-4), PN1(-4), N(S)1(-4) NZM2(-4), PN2(-4), N(S)2(-4)	NZM1/2-XV6 260191		
		NZM3(-4), PN3(-4), N(S)3(-4) NZM4(-4), N(S)4(-4)	NZM3/4-XV6 260193		


Notes

Circuit-breaker can also be installed in a lying position 90° left/right, with the handle still in the same position.

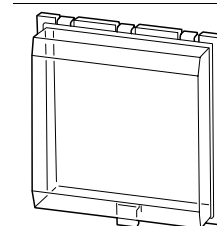
	For use with	Rated current	Part no. Article no. when ordered separately	Price see price list	Std. pack	Notes
		I_e A				
Component adapter for circuit-breakers and switch-disconnectors for 60 mm busbar system For installation on flat copper busbars 12 ... 30 x 5 ... 10, double T and triple T profile Rated operational voltage U_e : 690 V <ul style="list-style-type: none"> • Halogen free • Temperature resistant to 120 °C • Self-extinguishing to UL 94 • Approved for feeder branch circuits to UL508A up to 600 V • 3 pole 						
	NZM1, PN1, N(S)1	160	NZM1-XAD160 104554		1 off	For breakers with box terminal as standard connection Connection to system at top using the supplied connection cable In conjunction with IP2X protection against contact with a finger Enhancement of the protection against direct contact on the switch outgoer side possible
	NZM2, PN2, N(S)2	250	NZM2-XAD250 104555			Connection to the system possible at top or bottom via connection on rear (+)NZM2-XKR4... Mounting using clamp and screw fixing.
	NZM3, PN3, N(S)3	550	NZM3-XAD550 104556			Connection to the system possible at top via connection on rear (+)NZM3-XK13... Mounting using clamp and screw fixing.

	For use with	Rated current	Part no. suffix Article no. when ordered with basic unit	Price see price list	Part no. Article no. when ordered separately	Price see price list	Std. pack
		I_e A					
Component adapter for circuit-breakers and switch-disconnectors for 60 mm busbar system For installation on flat copper busbars 12 ... 30 x 5 ... 10, double T and triple T profile Rated operational voltage U_e : 690 V <ul style="list-style-type: none"> • Halogen free • Temperature resistant to 120 °C • Self-extinguishing to UL 94 • Approved for feeder branch circuits to UL508A up to 600 V • 3 pole 							
Connection on rear for component adapters For component adapters for NZM2, NZM3							
	NZM2, PN2, N(S)2	250	+NZM2-XKR40 281664		NZM2-XKR4 281666		1 off
	NZM2, PN2, N(S)2	250	+NZM2-XKR4U 281665		NZM3-XKR13 281668		
	NZM3, PN3, N(S)3	550	+NZM3-XKR130 281667				

Notes Part no. and part no. suffix include parts for one switch side at top or bottom (with NZM3 top only). Required with component adapter and switch with connection on rear, see for example component adapter 104555 and 104556.
 O = for fitting at the top
 U = for fitting at the bottom

For use with	Rated control voltage U_s V	Part no. Article no. when ordered separately	Price see price list	Std. pack
Remote operator				
For remote switching of circuit-breakers and switch-disconnectors. ON and OFF switching and resetting by means of 2-wire or 3-wire control. Can be synchronized. Local switching by hand possible. Lockable in the 0 position of the remote operator with up to 3 padlocks (hasp thickness: 4 – 8 mm)				
	NZM2(-4) N(S)2(-4)	110 – 130 V 50/60 Hz	NZM2-XR110-130AC 259830	1 off
		208 – 240 V 50/60 Hz	NZM2-XR208-240AC 259832	
		380 – 440 V 50/60 Hz	NZM2-XR380-440AC ¹⁾ 259834	
		24 – 30 V DC	NZM2-XR24-30DC 259836	
		110 – 130 V DC	NZM2-XR110-130DC 259840	
		220 – 250 V DC	NZM2-XR220-250DC 259842	
	NZM3(-4) N(S)3(-4)	110 – 130 V 50/60 Hz	NZM3-XR110-130AC 259848	
		208 – 240 V 50/60 Hz	NZM3-XR208-240AC 259850	
		380 – 440 V 50/60 Hz	NZM3-XR380-440AC ¹⁾ 259852	
		24 – 30 V DC	NZM3-XR24-30DC 259854	
		110 – 130 V DC	NZM3-XR110-130DC 259858	
		220 – 250 V DC	NZM3-XR220-250DC 259860	
	NZM4(-4) N(S)4(-4)	110 – 130 V 50/60 Hz	NZM4-XR110-130AC 266684	
		208 – 240 V 50/60 Hz	NZM4-XR208-240AC 266685	
		380 – 440 V 50/60 Hz	NZM4-XR380-440AC ¹⁾ 266686	
		24 – 30 V DC	NZM4-XR24-30DC 266691	
		110 – 130 V DC	NZM4-XR110-130DC 266693	
		220 – 250 V DC	NZM4-XR220-250DC 266694	
Shroud for 4th pole Additional shroud for mounting the NZM2-XR... and NZM3-XR... on a 4-pole switch.				
NZM2-4 N2-4		NZM2-XAVPR 266677		1 off
NZM3-4 N3-4		NZM3-XAVPR 266678		1 off
Clamp terminal springloaded clamp Control circuit terminal springloaded terminals				
NZM...-XR...		NZM-XRC 266696		1 off
Protective cover for door cutout Transparent protective shroud to increase the degree of protection to IP54				
		RTR-NZM10 034825		1 off

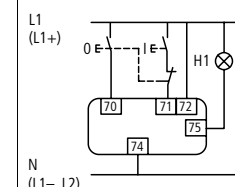
Notes ¹⁾ Not UL/CSA approved.



Notes

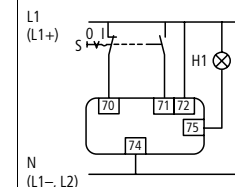
Remote operator are combinable with NZM circuit-breakers and N switch-disconnectors but not with PN switch-disconnectors. A standard auxiliary contact (HIN) for the switch position detection is supplied. When installing the NZM2-XR... and NZM3-XR... remote operators on 4 pole switches, an additional 4 pole NZM2-XAVPR or NZM3-XAVPR shroud is necessary.

3-wire control



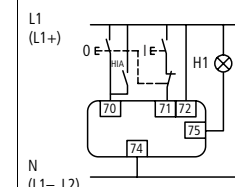
Terminal 70/71:
Please note during engineering:
Full current flows through the contact during make and break!
RMQ series contact elements can be used for the NZM2(3,4)-XR... remote operators.

2-wire control

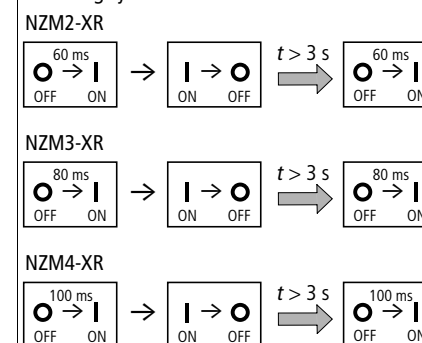


Terminal 75:
Operational readiness signal when the cover is closed, and not locked.
AC-15: 400 V; 2 A
DC-13: 220 V; 0.2 A

Three-wire control with automatic reset to the 0 position after the switch has tripped

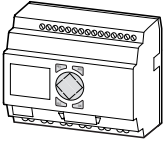
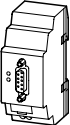
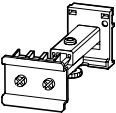


Switching cycle:

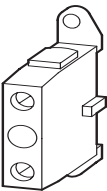


The time interval between OFF and ON is 3 seconds.
On commands received during the time interval are ignored within the first 3 seconds after switch off.

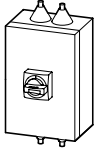
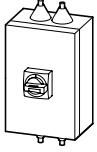
Electrical remote switching and manual tripping (push to trip) are still possible.

Description	Part no. Article no.	Price see price list	Std. pack	Notes
Diagnostics and parameterization software (in situ)				
<p>PC software for direct connection to all new NZM circuit-breakers with electronic releases (IEC and UL/CSA devices) or for direct connection to the DMI module, including the required connection cable.</p> <p>Protection parameter: online display and curve display, export option to curve programme "Moeller CurveSelect"</p> <p>Warning and release messages: reading of diagnostic memory also in volt-free state.</p> <p>Load currents: display and trend indication</p> <p>Recording and export options to Excel for load currents and diagnostic messages.</p> <p>Configuration of the DMI: motor starter, remote operator, assignment of the DMI inputs and outputs and displays.</p>	NZM-XPC-KIT 265631		1 off	Only suitable for use in conjunction with circuit-breakers having electronic releases. Free-of-charge download of the manual AWB1230-1459 and a demo software at www.moeller.net .
Data Management Interface (DMI Module)				
 <p>Query of diagnostics and operational data, display of currents, motor starter function, parameterisation and control of the circuit-breaker with electronic release</p> <p>Comprehensive remote diagnostic options and remote operation via fieldbus in combination with a field Bus connection.</p> <p>Inclusive NZM-XDMI-CAB connection cable between NZM and DMI (length: 2 m).</p>	NZM-XDMI612 260217		1 off	Only suitable for use in conjunction with circuit-breakers having electronic releases. Free download of manual AWB1230-1441 at www.moeller.net .
Expansion unit, networking				
<p>Interfacing to the DMI module for transfer of phase currents, parameter data, status data and diagnostics data as well as the circuit-breaker position (wiring of auxiliary contacts to DMI inputs).</p> <p>DMI configuration via field bus.</p> <p>Actuation of the DMI motor starter functions and the NZM remote operator (via DMI outputs wiring).</p> <p>Detection of digital inputs and actuation of the outputs via field Bus</p>				
 <p>Fieldbus interface: to PROFIBUS-DPV1 slave. Can be operated with class 1 and class 2 masters. Addresses available: 1 to 126</p>	NZM-XDMI-DPV1 270333		1 off	Connected to the DMI module and has the same contour appearance. Replaces the DPV0 interface EASY204-DP.
<p>Fieldbus connection to CANopen Addresses available: 1 to 127</p>	EASY221-CO 233539		1 off	
<p>Fieldbus connection to DeviceNet Addresses available: 0 to 63</p>	EASY222-DN 233540		1 off	
Switched-mode power supply unit				
<p>For DMI module</p> <ul style="list-style-type: none"> Rated input voltage: 50/60 HZ: 115/230 V AC Rated output voltage (residual ripple): 24 V DC ($\pm 3\%$) Rated output current: 1.25 A 	EASY400-POW 212319		1 off	
Telescopic adapter				
<p>For DMI module</p> <p>For equalization of the mounting depth of rear mounting devices in CI enclosures and cabinets</p>				
 <p>With 35 mm top-hat rail IEC/EN 60715, adjustable from 75 – 115 mm. Screw-on and snap fitting.</p>	M22-TA 226161		1 off	

Description	Part no. Article no.	Price see price list	Std. pack	Notes
FDT frame software for operating field devices				
PC software for integration of software modules (DTM's) according to the FDT standard V1.2 (e.g. NZM-XPC-DTM). <ul style="list-style-type: none"> • Operation of a temporary or stationary service station for engineering, remote diagnostics, remote operation and remote parameter definition of networked switchgear and field devices. • Engineering of the network topology of networked field devices. • Overview representation of the topology with online status information. • Access to the device specific DTM's for configuration, operation, parameterization and diagnostics of the devices. • Storage of all engineering information in a central database. Download and upload from/to the devices. 	FDT-NAVIGATOR 281623		1 off	The connection of the field devices can be implemented via the PROFIBUS-DPV1 master or via gateways (e.g.: USB/PROFIBUS, Ethernet/PROFIBUS). Communication interfacing for the PC and a communication DTM (driver) is necessary for this purpose. Please inquire.
DTM software module to FTD standard				
PC software module (Device Type Manager) to FDT/DTM standard V1.2 for integration in the FDT navigator or other FDT capable framework software packages (primary control system, PLC engineering systems). <ul style="list-style-type: none"> • Remote diagnostics, remote monitoring, remote parameter definition and remote operation of the new NZM2,3,4 circuit-breakers with electronic trip release via Profibus-DPV1. • Display of the circuit-breaker state (on/off/tripped), the phase currents, parameter data, status data and diagnostics data. • Definition of the trip parameters. • Display and setting of the DMI motor starter functions and assignment of the DMI inputs and outputs. • Control of the motor starter functions. 	NZM-XPC-DTM 281624		1 off	For connection of the circuit-breaker to the PROFIBUS-DP fieldbus, the accessory device NZM-XDMI612 and the fieldbus interface NZM-XDMI-DPV1 are required.


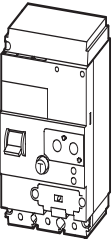
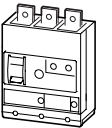

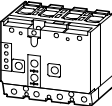

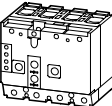
	Rated uninterrupted current I_u A	Terminal capacities mm ²	Part no. Article no. when ordered separately	Price see price list	Std. pack
Additional insulated terminals					
For looping through the neutral and protective conductor 1-pole					
	32	Flexible, 1 × (1.5 – 6)	K10/1 093827		10 off
	63	Flexible, 1 × (6 – 16), stranded, 1 × (16 – 25)	K25/1 096200		
	100	Flexible, 1 × (10 – 35), stranded, 1 × (16 – 50)	K50/1 098573		
	160	Stranded, 1 × (16 – 95)	K95/1N/BR 012336		1 off
	250	Stranded, 1 × (35 – 150), 2 × (16 – 70)	K150/1/BR 014709		
	400	Stranded, 1 × (50 – 240), 2 × (25 – 120)	K240/1/BR 017082		
	630	Stranded, 1 × (240 – 300), 2 × (50 – 240)	K2X240/1/BR 019455		



	Max. rated uninterrupted current I_u A	For use with	Part no. Article no. when ordered separately	Price see price list	Std. pack
Insulated enclosures					
With door coupling rotary handle Complete incl. all necessary functional parts Degree of protection IP65 not UL/CSA approved Standard, black/grey					
	Lockable on the 0 position on the handle using up to 3 padlocks. Additionally with cover interlock.	≤ 63 A	PN1, N(S)1	NZM1-XCIK5-TVD 271521	1 off
		≤ 63 A	NZM1, PN1, N(S)1	NZM1-XCI23-TVD 271522	
		≤ 125 A	NZM1(-4), PN1(-4), N(S)1(-4)	NZM1-XCI43-TVD 271523	
		≤ 160 A	NZM1(-4), PN1(-4), N(S)1(-4)	NZM1-XCI43/2-TVD 104645	
		≤ 200 A	NZM2(-4), PN2(-4), N(S)2(-4)	NZM2-XCI43-TVD 271524	
		≤ 250 A	NZM2(-4), PN2(-4), N(S)2(-4)	NZM2-XCI45-TVD 280418	
		≤ 400 A	NZM3(-4), PN3(-4), N(S)3(-4)	NZM3-XCI48-TVD 271525	
Red-yellow for Emergency-Stop					
	Lockable on the handle on the switch ¹⁾ using up to 3 padlocks. Lockable in 0 position on handle. Cover interlock as additional feature, locking facility on circuit-breaker in 0 position.	≤ 63 A	PN1, N(S)1	NZM1-XCIK5-TVDVR 271526	1 off
		≤ 63 A	NZM1, PN1, N(S)1	NZM1-XCI23-TVDVR 271527	
		≤ 125 A	NZM1(-4), PN1(-4), N(S)1(-4)	NZM1-XCI43-TVDVR 271528	
		≤ 160 A	NZM1(-4), PN1(-4), N(S)1(-4)	NZM1-XCI43/2-TVDVR 104646	
		≤ 200 A	NZM2(-4), PN2(-4), N(S)2(-4)	NZM2-XCI43-TVDVR 271529	
		≤ 250 A	NZM2(-4), PN2(-4), N(S)2(-4)	NZM2-XCI45-TVDVR 279356	
		≤ 400 A	NZM3(-4), PN3(-4), N(S)3(-4)	NZM3-XCI48-TVDVR 271530	

¹⁾ Notes ¹⁾ With up to 3 padlocks.

Insulated enclosure description	Retrofit terminals with 3-pole switches: for 4th and 5th (if required) conductor (N, PE-conductor), with 4-pole switches: for 5th conductor (PE conductor)	Notes
CI-K5-160-M	K10/1, K25/1	Suitable for installation of circuit-breakers and switch-disconnectors Enclosure for separate mounting with top and bottom cable entry. Include fixing straps for wall mounting. Short-circuit resistance at 415 V 50/60 Hz to 10 kA. Cannot be used in combination with NZM...-XR... remote operator..., NZM...-XSV plug-in unit or NZM...-XAV withdrawable unit. Insulated additional terminal for 4th or 5th pole should be ordered separately. CI-K5 enclosure with hard metric knock-outs CI23 enclosure with flanges CI43, CI45 and CI48 feature gland plates. Only for switches with tunnel clamps for direct connection of cables.
CI23-150	K10/1, K25/1	
CI43-150	K10/1, K25/1, K50/1, K95/1N/BR	
CI43-200	K10/1, K25/1, K50/1, K95/1N/BR	
CI43-200	K10/1, K25/1, K50/1, K95/1N/BR, K150/1/BR, K240/1/BR	
CI45-200	K10/1, K25/1, K50/1, K95/1N/BR, K150/1/BR, K240/1/BR	
CI48-250	K95/1N/BR, K150/1/BR, K240/1/BR, K2X240/1/BR	
CI-K5-160-M	K10/1, K25/1	
CI23-150	K10/1, K25/1	
CI43-150	K10/1, K25/1, K50/1, K95/1N/BR	
CI43-200	K10/1, K25/1, K50/1, K95/1N/BR	
CI43-200	K10/1, K25/1, K50/1, K95/1N/BR, K150/1/BR, K240/1/BR	
CI45-200	K10/1, K25/1, K50/1, K95/1N/BR, K150/1/BR, K240/1/BR	
CI48-250	K95/1N/BR, K150/1/BR, K240/1/BR, K2X240/1/BR	

	For use with	Part no. Order number for separate orders	Price see price list	Std. pack	Notes	
Earth-fault release						
Not UL/CSA approved Suitable for use in three- and single-phase systems						
 Pulse current sensitive according to core-balance principle						
For 3- and 4 pole NZM1(-4) circuit-breakers and N1(-4) switch-disconnectors, dependant on mains power $U_e = 200 \dots 415 \text{ V } 50/60 \text{ Hz}$,						
	Rated fault current $I_{\Delta n} = 0.03 \text{ A}$	NZM1 N(S)1	3 pole	NZM1-XFI30R 104603	1 off IEC/EN 60947-2 With $I_{\Delta n} = 0.03 \text{ A}$: delay time t_v always fixed settings at 10 ms. Alarm message > 30 % $I_{\Delta n}$ via yellow LED. Trip indication max. 2 auxiliary contacts (HIAFI) can be fitted by user: N/O = M22-K01, N/C = M22-K10 are reset via the reset toggle lever. If the trip-indicating auxiliary contact in the fault current block is used, the N/C contacts operates as a N/O contact and the N/C contact operates as an N/O contact (see HIAFI marking). Not in combination with insulated enclosure or main switch assembly kit for side panel mounting with mounting bracket NZM1-XFI...U not in combination with shunt or undervoltage release. Rated ultimate short-circuit breaking capacity is determined by the fitted NZM1, NS1. If a switch-disconnector N1 is applied by the back-up fuse to be used → Technical data.	
		NZM1-4 N1-4	4 pole	NZM1-4-XFI30R 104606		
	Rated fault current $I_{\Delta n} = 0.3 \text{ A}$	NZM1 N(S)1	3 pole	NZM1-XFI300R 104604		
		NZM1-4 N1-4	4 pole	NZM1-4-XFI300R 104607		
	Rated fault current $I_{\Delta n} = 0.03 - 0.1 - 0.3 - 0.5 - 1 - 3 \text{ A}$, delay time $t_v = 10 - 60 - 150 - 300 - 450 \text{ ms}$.	NZM1 N(S)1	3 pole	NZM1-XFIR 104605		
		NZM1-4 N1-4	4 pole	NZM1-4-XFIR 104608		
Bottom mounting up to 100 A						
	Rated fault current $I_{\Delta n} = 0.03 \text{ A}$	NZM1 N(S)1	3 pole	NZM1-XFI30U¹⁾ 104609		1 off IEC/EN 60947-2 Auxiliary contacts (1 N/O, 1N/C integrated) are reset via the reset button. Not in combination with plug-in units, insulated enclosure or main switch assembly kit for side panel mounting with mounting bracket. Rated ultimate short-circuit breaking capacity is determined by the fitted NZM2. If a switch-disconnector N2 is applied by the back-up fuse to be used → Technical data.
		NZM1-4 N1-4	4 pole	NZM1-4-XFI30U 104612		
	Rated fault current $I_{\Delta n} = 0.3 \text{ A}$	NZM1 N(S)1	3 pole	NZM1-XFI300U 104610		
		NZM1-4 N1-4	4 pole	NZM1-4-XFI300U 104613		
	Rated fault current $I_{\Delta n} = 0.03 - 0.1 - 0.3 - 0.5 - 1 - 3 \text{ A}$, delay time $t_v = 10 - 60 - 150 - 300 - 450 \text{ ms}$.	NZM1 N(S)1	3 pole	NZM1-XFIU 104611		
		NZM1-4 N1-4	4 pole	NZM1-4-XFIU 104614		
 Pulse current sensitive according to core-balance principle						
For 4 pole circuit-breaker NZM2-4 and switch-disconnector N2-4 independent of mains voltage $U_e = 280 - 690 \text{ V } 50/60 \text{ Hz}$ bottom mounting up to 250 A						
	Rated fault current $I_{\Delta n} = 0.03 \text{ A}$	NZM2-4 N2-4	4 pole	NZM2-4-XFI30 292343	1 off	
	Rated fault current $I_{\Delta n} 0.1 - 0.3 - 1 - 3 \text{ A}$, delay time $t_v = 60 - 150 - 300 - 450 \text{ ms}$	NZM2-4 N2-4	4 pole	NZM2-4-XFI 292344	1 off	
 Core-balance principle with AC/DC current sensitivity (in range 0 – 100 kHz)						
For 4 pole NZM2-4 circuit-breakers and N2-4 switch-disconnectors, internal power supply $U_e = 50 \dots 400 \text{ V}$, bottom mounting up to 250 A						
	Rated fault current $I_{\Delta n} = 0.03 \text{ A}$	NZM2-4 N2-4	4 pole	NZM2-4-XFIA30 292345	1 off	
	Rated fault current $I_{\Delta n} 0.1 - 0.3 - 1 \text{ A}$, delay time $t_v = 60 - 150 - 300 - 450 \text{ ms}$	NZM2-4 N2-4	4 pole	NZM2-4-XFIA 292346	1 off	

Notes

¹⁾ Suitable for use in three-phase systems

Residual-current release frequency response

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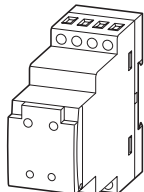
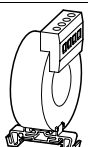
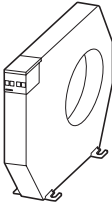
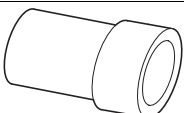
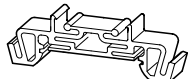
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NZM3, NZM4, PFR-...



Circuit-breakers, switch-disconnectors

For use with	Part no. Article no. when ordered with basic unit	Price see price list	Std. pack	Notes
Earth-fault release, 3-pole, 4-pole				
Not UL/CSA approved Not dependent on mains and control voltages $I_g = 0.35 - 0.4 - 0.5 - 0.6 - 0.7 - 0.8 - 0.9 - 1.0 \times I_n$ $t_g = 0 - 20 - 60 - 100 - 200 - 300 - 500 - 750 - 1000$ ms	NZM3 NS3	+NZM3-XT 260756	1 off	Only suitable for use in conjunction with circuit-breakers having electronic releases. Cannot be used in conjunction with NZM...-ME... remote operator. Display of the earth-fault in optional DMI communication module.
	NZM3-4	+NZM3-4-XT 260757		
	NZM4 NS4	+NZM4-XT 266721		
	NZM4-4	+NZM4-4-XT 266722		

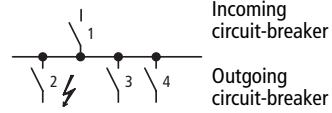
Description	Part no. Article no.	Price see price list	Std. pack	Notes
Residual current relay				
Pulse-current sensitive Rated control supply voltage: $U_s = 230$ V AC (50/60Hz) Integrated auxiliary contact (1 C/O) Ring-type transformer must also be ordered. not UL/CSA approved				
 Rated fault current $I_{\Delta N} = 0.03$ A	PFR-003 285555		1 off	Adjustable fault current: 0.03, 0.1, 0.3, 0.5, 1, 3, 5 A Adjustable delay time: 0.02, 0.1, 0.3, 0.5, 1, 3, 5 A
Rated fault current $I_{\Delta N} = 0.3$ A	PFR-03 285556			
Rated fault current $I_{\Delta N} = 0.03 - 5$ A Adjustable fault current and delay time Fault current early warning by flashing, red LED	PFR-5 285557			
Ring-type transformer				
Rated operational voltage: 690 V (50/60 Hz) not UL/CSA approved				
 Internal diameter: 20 mm	PFR-W-20 285558		1 off	incl. fixing clip for DIN rail mounting
Internal diameter: 30 mm	PFR-W-30 285559			
 Internal diameter: 35 mm	PFR-W-35 285600		1 off	incl. screw fixing Alternative: fixing clip for DIN mounting rail Design note: The current transformer diameter must be selected 1.5 times larger than the envelope diameter of the passed through conductor.
Internal diameter: 70 mm	PFR-W-70 285601			
Internal diameter: 105 mm	PFR-W-105 285602			
Internal diameter: 140 mm	PFR-W-140 285603			
Internal diameter: 210 mm	PFR-W-210 285604			
Magnetic shielding				
not UL/CSA approved				
 PFR-W-35	PFR-WMA-35 286001		1 off	Necessary for a load circuit with high inrush currents $> 4 \times I_n$, such as for example motors and
PFR-W-70	PFR-WMA-70 286002			
PFR-W-105	PFR-WMA-105 286003			
PFR-W-140	PFR-WMA-140 286004			
PFR-W-210	PFR-WMA-210 286005			
Fixing clip				
 for the DIN rail mounting of the PFR-W-35 current transformer and all larger	PFR-WC 286006		1 off	1 set = 2 pieces



NZM, FAZ-B(C), PKZ

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Selectivity 415 V AC

between circuit-breakers enables separate shut-down of faulty system sections.

Selectivity (discrimination) exists between incoming breaker 1 and outgoing breaker 2 if, only outgoing breaker 2 trips at position 2 during a short-circuit. System sections 3 and 4 continue to operate.

Incoming circuit-breaker (S1)

NZM...1-A...

NZM...2-A...

Table with columns for incoming breaker (S1) and outgoing breaker (S2) models and their respective Icu and In ratings, and a grid of selectivity results (T for full selectivity).

Notes T: full selectivity

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NZM, FAZ-B(C), PKZ



Incoming circuit-breaker (S1)

NZM...2-VE...

NZM...3-AE...

NZM...3-VE...

NZM...4-AE...

NZM...4-VE...

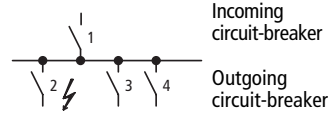
Table with columns for incoming breaker (S1) and outgoing breaker (S2) models and their respective Icu and In ratings, and a grid of selectivity results (T for full selectivity).



NZM

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Selectivity 415 V AC

between circuit-breakers enables separate shut-down of faulty system sections. Selectivity (discrimination) exists between incoming breaker 1 and outgoing breaker 2 if, only outgoing breaker 2 trips at position 2 during a short-circuit. System sections 3 and 4 continue to be operational.

Incoming circuit-breaker (S1)

Table with columns for Incoming circuit-breaker (S1) models (NZM...1-A... and NZM...2-A...) and their Icu [kA] and In [A] ratings.

Main selectivity table with columns for Incoming circuit-breaker (S1) and Outgoing circuit-breaker (S2) models and their Icu [kA] and In [A] ratings. It provides prospective short-circuit current (kA) values for various breaker combinations.

Notes T: total selectivity

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NZM



Incoming circuit-breaker (S1)

Table with columns for Incoming circuit-breaker (S1) models (NZM...2-VE..., NZM...3-AE..., NZM...3-VE..., NZM...4-AE..., NZM...4-VE...) and their Icu [kA] and In [A] ratings.

Main selectivity table with columns for Incoming circuit-breaker (S1) and Outgoing circuit-breaker (S2) models and their Icu [kA] and In [A] ratings. It provides prospective short-circuit current (kA) values for various breaker combinations.

Protection of PVC insulated cables against thermal overload with short-circuits

According to VDE 0100 part 430 cables and conductors must be protected against short-circuit and overload. The overload protection is obtained by using NZM circuit-breakers with settable, current-dependent, delayed overload release.

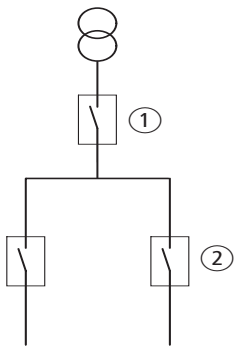
Short-circuit protection is provided by adjustable instantaneous releases, which open the main contacts in less than 25 ms. The short-circuit total opening time restricts the temperature rise of the cable to a minimum.

The tables indicate the minimum conductor cross-section reliably protected by circuit-breakers during a short-circuit. (Operating voltage $U_N = 415\text{ V}$)

	Min. protected cross-section mm ² copper
NZM...1(-4)-...20	6
NZM...1(-4)-...25 ... 160	10
NZM...2(-4)-...20 ... 250	10
NZM...3(-4)-...250 ... 630	16
NZM...4(-4)-...630 ... 1600	95

Back-up protection

between NZM(N)(H) incoming circuit-breaker and NZMB(N)(H) outgoing circuit-breaker



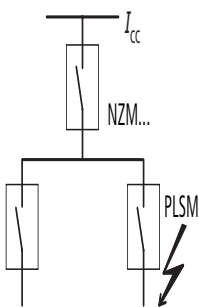
		Incoming circuit-breaker ①									
		NZM1 up to 160 A				NZM2 up to 250 A				NZM3 up to 630 A	
		25 kA	36 kA	50 kA	100 kA	25 kA	36 kA	50 kA	150 kA	50 kA	150 kA
Outgoing circuit-breaker ②	I_n $I_{cu(415\text{ V})}$										
NZMB1	25 kA up to 160 A	25	36	50	100	25	36	50	100	50	100
NZMC1	36 kA up to 160 A	-	36	50	100	-	36	50	100	50	100
NZMN1	50 kA up to 160 A	-	-	50	100	-	-	50	100	50	100
NZMH1	100 kA up to 160 A	-	-	-	100	-	-	-	100	-	100
NZMB2	25 kA up to 250 A	25	36	50	100	25	36	50	150	50	150
NZMC2	36 kA up to 250 A	-	36	50	100	-	36	50	150	50	150
NZMN2	50 kA up to 250 A	-	-	50	100	-	-	50	150	50	150
NZMH2	150 kA up to 250 A	-	-	-	-	-	-	-	150	-	150
NZMN3	50 kA up to 630 A	-	-	-	-	-	-	-	-	50	150
NZMH3	150 kA up to 630 A	-	-	-	-	-	-	-	-	-	150

Where the prospective fault current at the point of installation of circuit-breakers is very high, it is conventional to use NZMN(H) current-limiting circuit-breakers. An attractively priced alternative is to fit a NZMN(H) current-limiting circuit-breaker upstream of NZMB(C)(N) standard circuit-breakers, if the fault level is too high for NZMB(C)(N) switches.

The table shows which current-limiting circuit-breaker NZMN(H) in combination with NZMB(C)(N) are to be used to provide protection at the network locations with high short-circuit capacities.

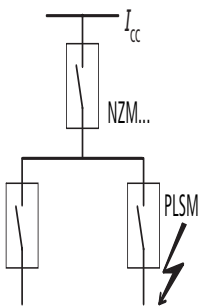
The selectivity limit is determined by the response current of the non-delayed short-circuit release in the upstream incoming circuit-breaker. In many applications this is sufficient.

between NZM...1-A... incoming circuit-breaker and FAZ-B(C)/PLSM-B(C)... outgoing circuit-breaker



Outgoing circuit-breaker	Outgoing circuit-breaker NZM(B)(C)2-A...	NZMC(N)(H)1-A...
FAZ-B(C)...		
0,5 – 16	25 kA	30 kA
20 – 40	20 kA	20 kA
50, 63	15 kA	15 kA
PLSM-B(C)...(I...)		
0,5 – 16	25 kA	30 kA
20 – 40	20 kA	20 kA
50, 63	15 kA	15 kA

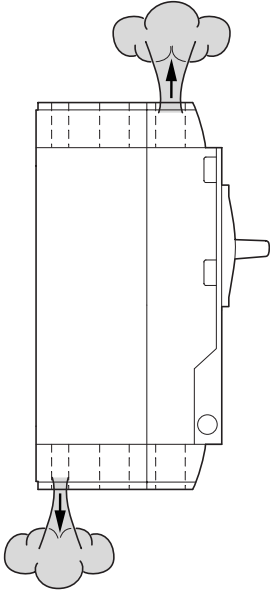
between NZM...2-A... incoming circuit-breaker and FAZ-B(C)/PLSM-B(C)... outgoing circuit-breaker



Outgoing circuit-breaker	Incoming circuit-breaker NZMB(C)2-A...	NZMN(H)2-A...
FAZ-B(C)...		
0,5 – 10	25 kA	50 kA
13 – 32	25 kA	30 kA
40 – 63	20 kA	20 kA
PLSM-B(C)...(I...)		
0,5 – 10	25 kA	50 kA
13 – 32	25 kA	30 kA
40 – 63	20 kA	20 kA

Direction of blow-out, minimum clearances, tube cable lugs

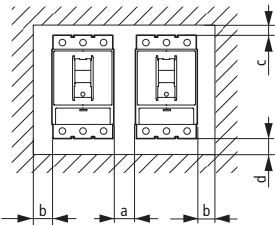
Direction of blow-out



	Top, front	Bottom, rear
NZM1	X	-
NZM2 ¹⁾	X	X
NZM3	X	X
NZM4	X	-

¹⁾ NZM B (C) – A ... as NZM1

Minimum clearances



between two adjacently mounted switches
Minimum clearance a in mm

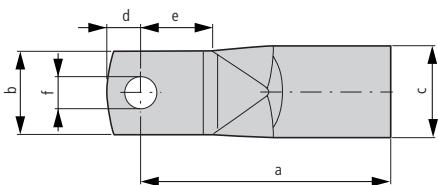
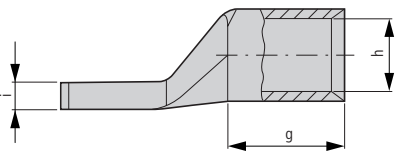
	NZM1	NZM2	NZM3	NZM4
NZM1	0	5	5	15
NZM2	5	5	5	15
NZM3	5	5	5	15
NZM4	15	15	15	15

between switch and other parts
Minimum clearances in mm

	b		c		d	
	≦ 690 V	1000 V	≦ 690 V	1000 V	≦ 690 V	1000 V
NZM1	0	-	60	-	0	-
NZM2 ¹⁾	5	5	35	35	35	35
NZM3	5	5	60	60	60	60
NZM4	15	15	100	200	0	0

¹⁾ NZM B (C) – A ... C= 60 mm, d = 0 mm

Dimensions



For pressing the cable lugs a press tool K22, HK60/22 or EK22 from the company Klauke is necessary with the following press inserts:
R22/95 for 95 mm²
R22/120 for 120 mm²
R22/150 for 150 mm²
R22/185 for 185 mm²
R22/240 for 240 mm²

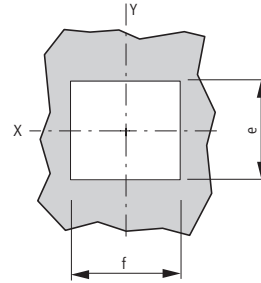
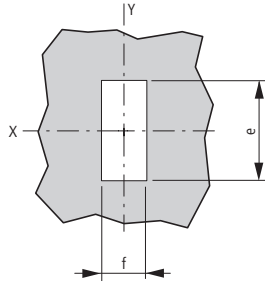
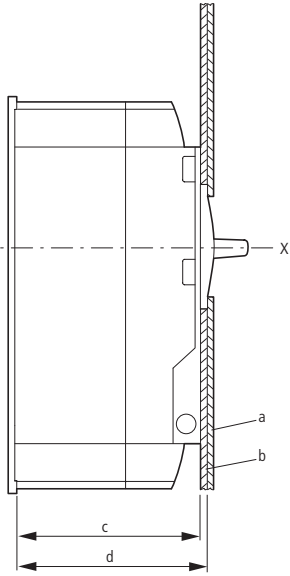
Cable lug	For use with	Rated cross section mm ²	Terminal bolt Ø	Dimensions in mm									
				a	b	c	d	e	f	g	h	i	
KS95-NZM7	NZM2	95	M8	53+2	23±0.5	18±0.2	10±1	19	8,5	25	13,5	4,4	
KS120-NZM7	NZM2	120	M8	56+2	23±0.5	19.5±0.2	10±1	19	8,5	26	15	4,4	
KS150-NZM7	NZM2	150	M8	61+2	23±0.5	21±0.2	10±1	19	8,5	30	16,5	4,4	
NZM2-XKS185	NZM2	185	M8	65±1.5	22±1	24±0.3	9 ⁺¹ _{-0,5}	19 ^{+2,5} _{-0,5}	8,5 ^{+0,05} _{-0,1}	30±2	19±0.4	7	
NZM3-XKS185	NZM3, NZM4	185	M10	65	24,5	24	11,5	18	10,5	30	19	7.0±0.8	
NZM3-XKS240	NZM3, NZM4	240	M10	72	31	26	11,5	19	10,5	35	21	5.0±0.8	



Front cut-out

Cut-out a
toggle lever

Cut-out b
rotary handle,
remote operator

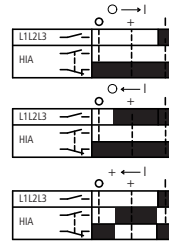
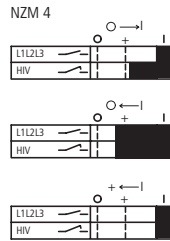
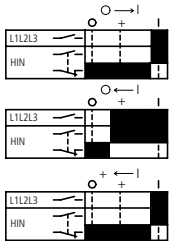


	Distance from mounting plate and door cutout		Cut-out a		Cut-out b	
	c mm	d mm	e mm	f mm	e mm	f mm
NZM1	68	73	40	23	46	91
NZM2	103	108	79	36	96	101
NZM3	120.5	125.5	79	36	96	136
NZM4	138	146	101	105	118	204

Standard auxiliary contact (HIN)

Early-make auxiliary contact (HIV)

Trip-indicating auxiliary contact (HIA)



0 → I Switching on

■ Contact closed

0 ← I Switching off

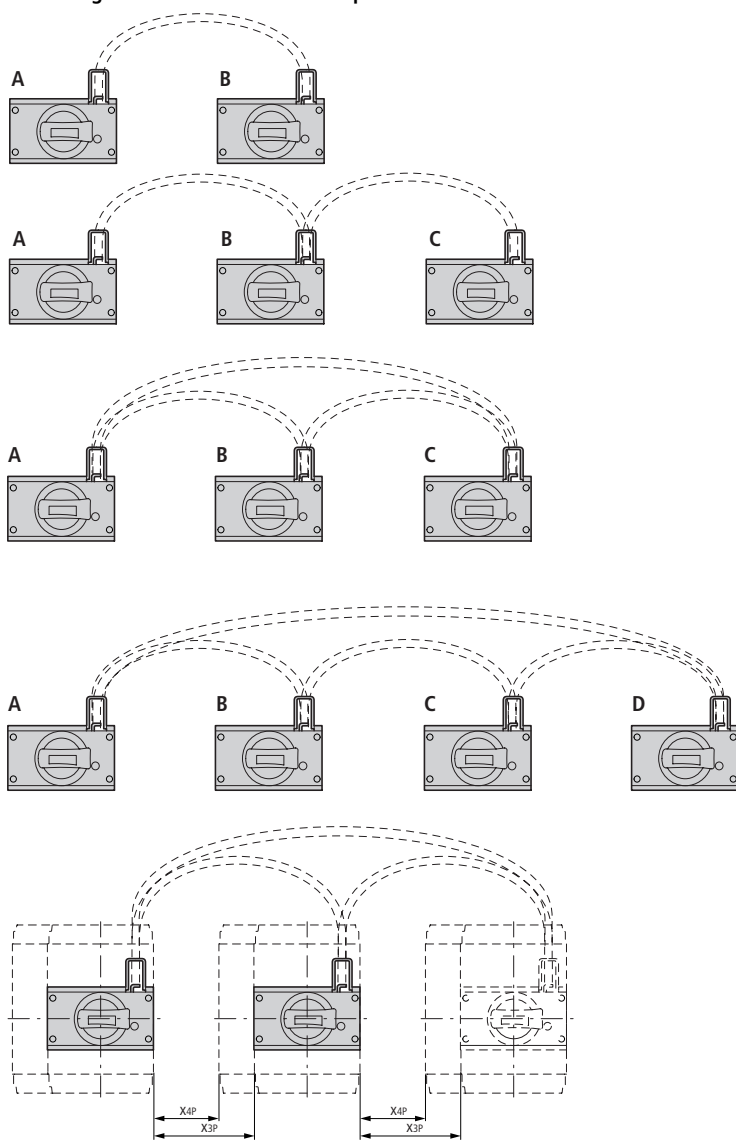
□ Contact open

+ ← I Trip

Notes

If early-make contacts are required in combination with shunt or undervoltage releases, please select the combination type in the "Release" section.

Interlocking variants and combination options



A	B
OFF	OFF
ON/TRIP	ON
ON	ON/TRIP

A	B	C
OFF	OFF	OFF
ON	ON/TRIP	ON
ON/TRIP	ON	ON/TRIP

A	B	C
OFF	OFF	OFF
ON/TRIP	ON	ON
ON	ON/TRIP	ON
ON	ON	ON/TRIP

A	B	C	D
OFF	OFF	OFF	OFF
ON/TRIP	ON	ON/TRIP	ON
ON	ON/TRIP	ON	ON/TRIP

= Switch clearance 3 pole

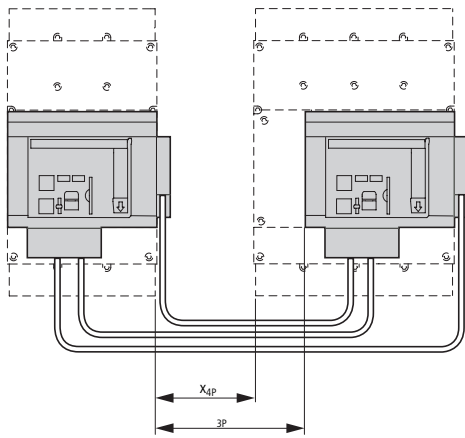
= Switch clearance 4 pole

NZM-XBZ225		left switch				right switch			
max. switch clearance		NZM1		NZM2		NZM3		NZM4	
		X _{3P}	X _{4P}	X _{3P}	X _{4P}	X _{3P}	X _{4P}	X _{3P}	X _{4P}
		mm	mm	mm	mm	mm	mm	mm	mm
NZM1	3/4 pole	135	105	120	85	135	90	125	80
NZM2	3/4 pole	135	105	120	85	135	90	125	80
NZM3	3/4 pole	90	75	75	35	85	40	80	45
NZM4	3/4 pole	50	35	40	15	25	-	15	-

NZM-XBZ600		left switch				right switch			
max. switch clearance		NZM1		NZM2		NZM3		NZM4	
		X _{3P}	X _{4P}	X _{3P}	X _{4P}	X _{3P}	X _{4P}	X _{3P}	X _{4P}
		mm	mm	mm	mm	mm	mm	mm	mm
NZM1	3/4 pole	510	480	495	460	510	465	475	405
NZM2	3/4 pole	510	480	495	460	510	465	475	405
NZM3	3/4 pole	460	430	450	410	460	415	460	390
NZM4	3/4 pole	400	370	380	340	400	375	390	320

NZM-XBZ1000		left switch				right switch			
max. switch clearance		NZM1		NZM2		NZM3		NZM4	
		X _{3P}	X _{4P}	X _{3P}	X _{4P}	X _{3P}	X _{4P}	X _{3P}	X _{4P}
		mm	mm	mm	mm	mm	mm	mm	mm
NZM1	3/4 pole	910	880	895	860	910	865	865	795
NZM2	3/4 pole	910	880	895	860	910	865	865	795
NZM3	3/4 pole	820	790	850	810	860	815	860	790
NZM4	3/4 pole	750	720	730	700	800	775	790	720





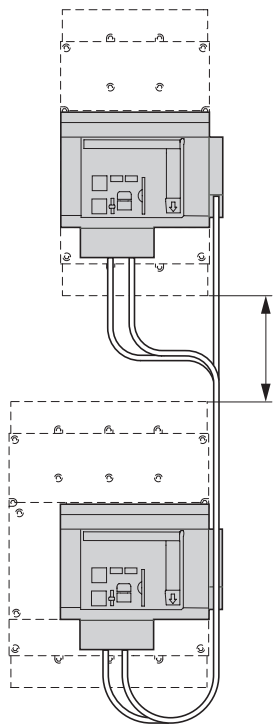
X_{3p} = max. switch clearance 3 pole

X_{4p} = max. switch clearance 4 pole

**XMVR mechanical interlock
(Mounting adjacent)**

NZM...-XMVR

Max. switch clearance		right switch					
		NZM2		NZM3		NZM4	
		X _{3p}	X _{4p}	X _{3p}	X _{4p}	X _{3p}	X _{4p}
left switch		mm	mm	mm	mm	mm	mm
NZM2	3/4 pole	130	95	95	50	–	–
NZM3	3/4 pole	–	–	135	90	155	85
NZM4	3/4 pole	–	–	–	–	120	50



**XMVRL mechanical interlock
Mounting in adjacent enclosures**

NZM...-XMVRL

Max. switch clearance		right switch					
		NZM2		NZM3		NZM4	
		X _{3p}	X _{4p}	X _{3p}	X _{4p}	X _{3p}	X _{4p}
left switch		mm	mm	mm	mm	mm	mm
NZM2	3/4 pole	350	315	420	385	–	–
NZM3	3/4 pole	–	–	400	365	460	390
NZM4	3/4 pole	–	–	–	–	420	350

**XMVRL mechanical interlock
(Mounting one above the other)**

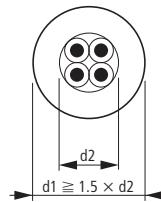
NZM...-XMVRL

Max. switch clearance		Switch top		
		NZM2 3/4 pole	NZM3 3/4 pole	NZM4 3/4 pole
		Y	Y	Y
Switch bottom		mm	mm	mm
NZM2	3/4 pole	220	225	–
NZM3	3/4 pole	–	220	230
NZM4	3/4 pole	–	–	230

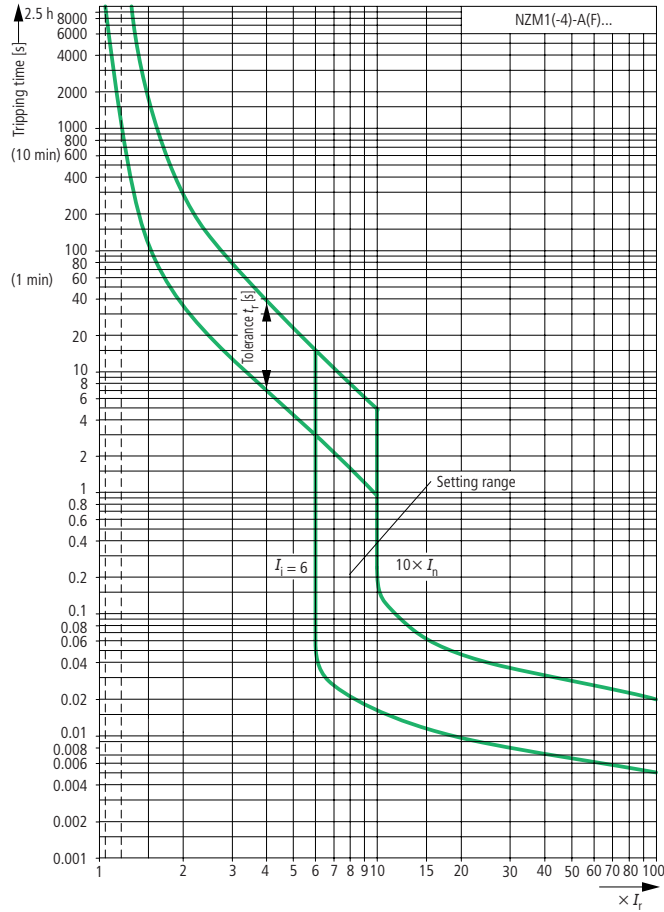
Y = max. switch clearance

Ring-type transformer

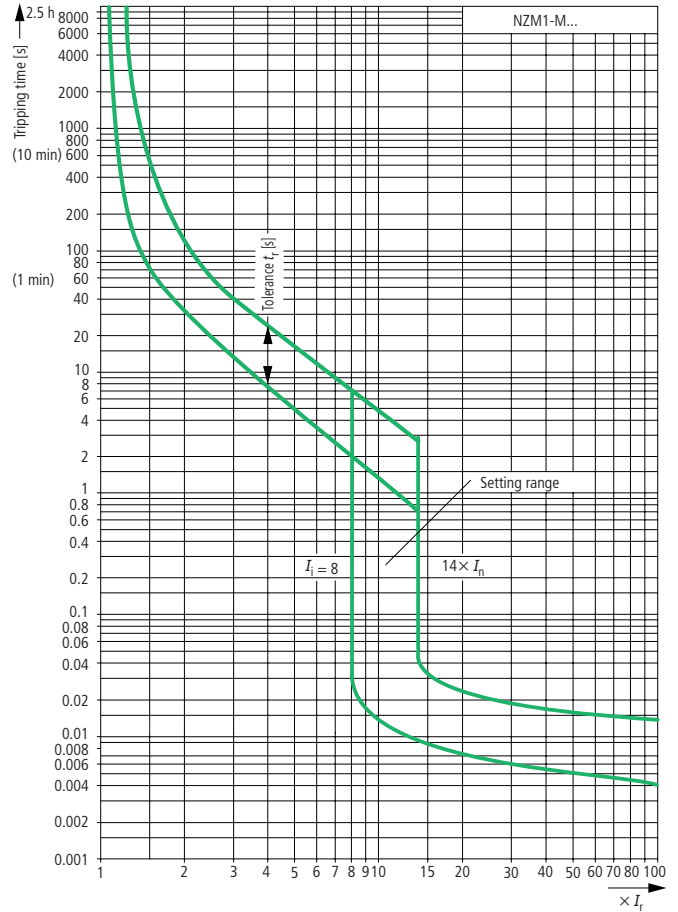
Maximum rated current [A]		Diameter	
Power distribution	Motor/capacitor	Transformer part no. PFR-W-... d1	Max. conductor circumference (mm) d2
50	50	20	13
150	100	30	20
150	100	35	23
400	200	70	47
600	250	105	70
1200	630	140	93
1800	800	210	140



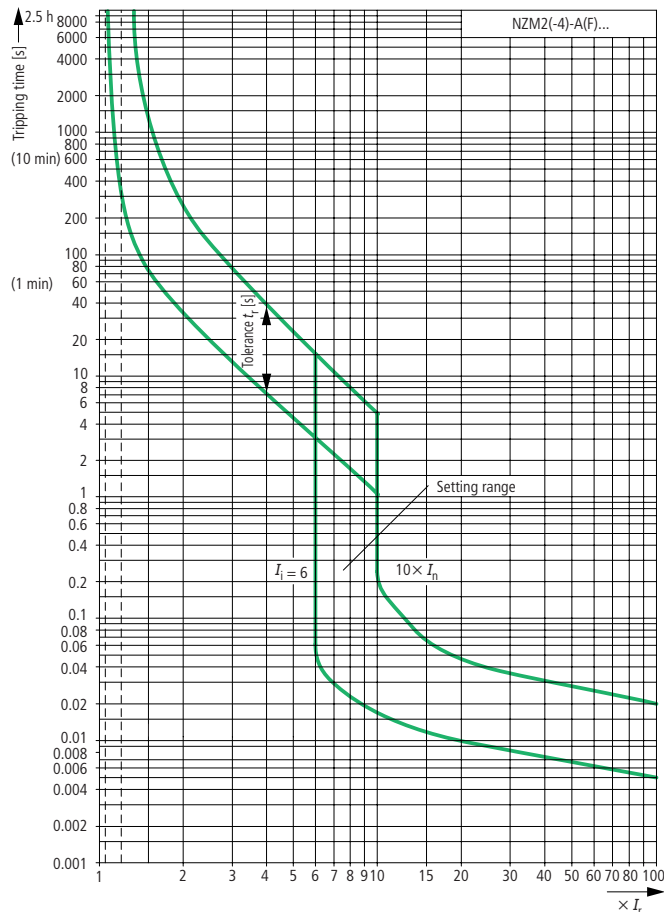
System and line protection with NZM1



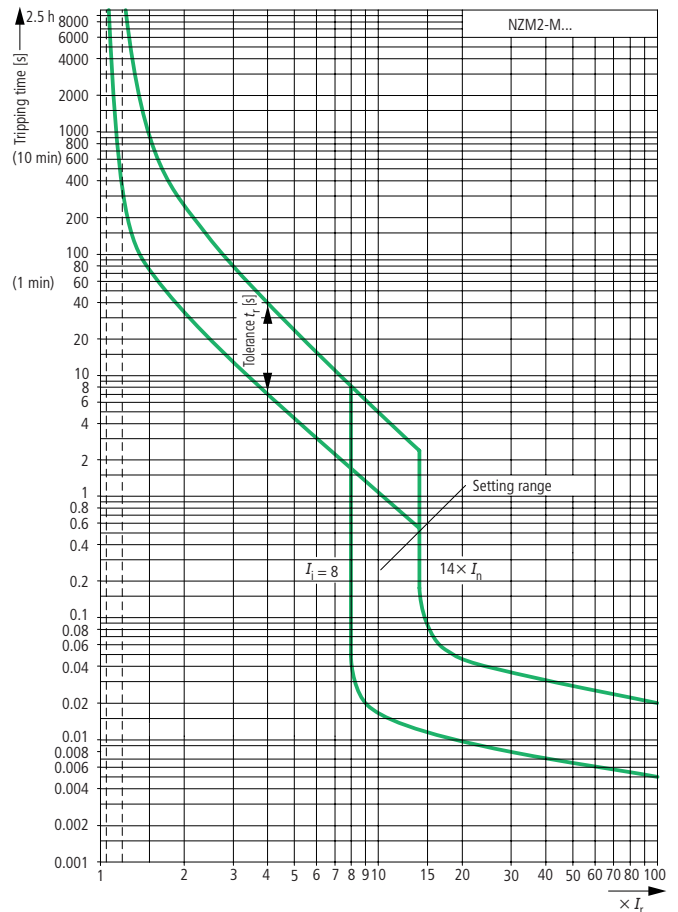
Motor protection with NZM1



System and line protection with NZM2

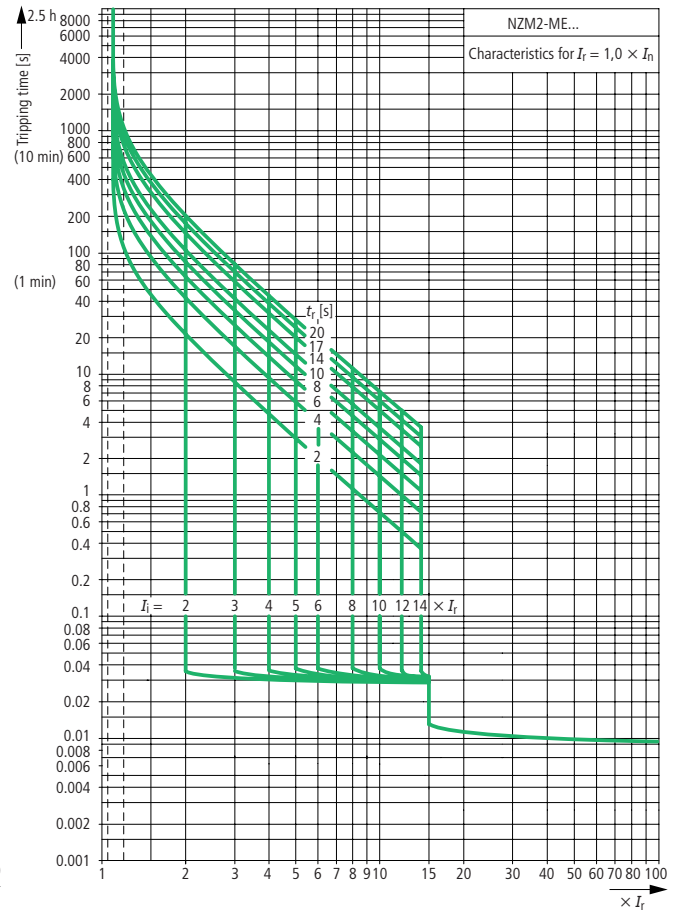
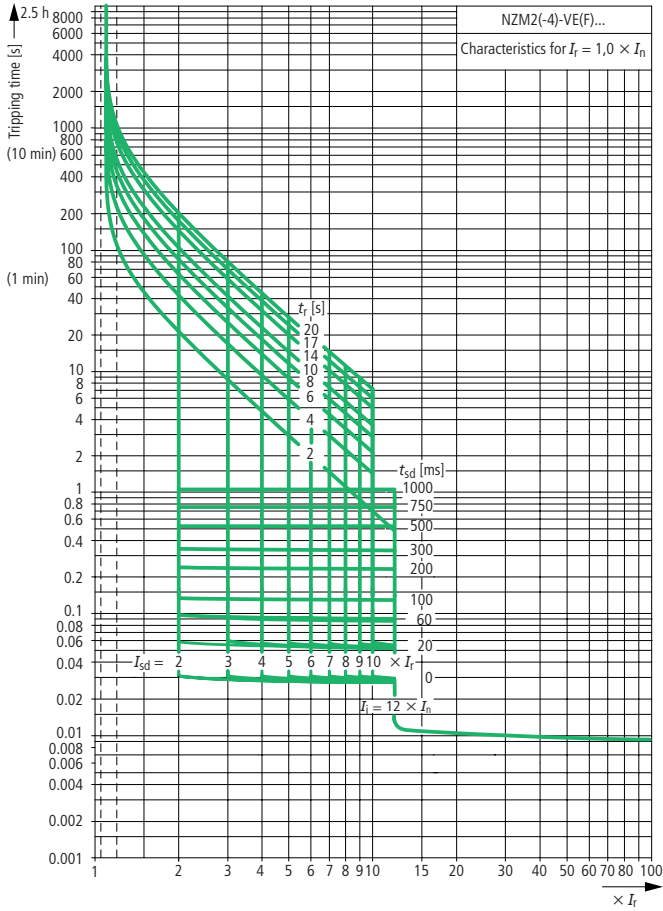


Motor protection with NZM2



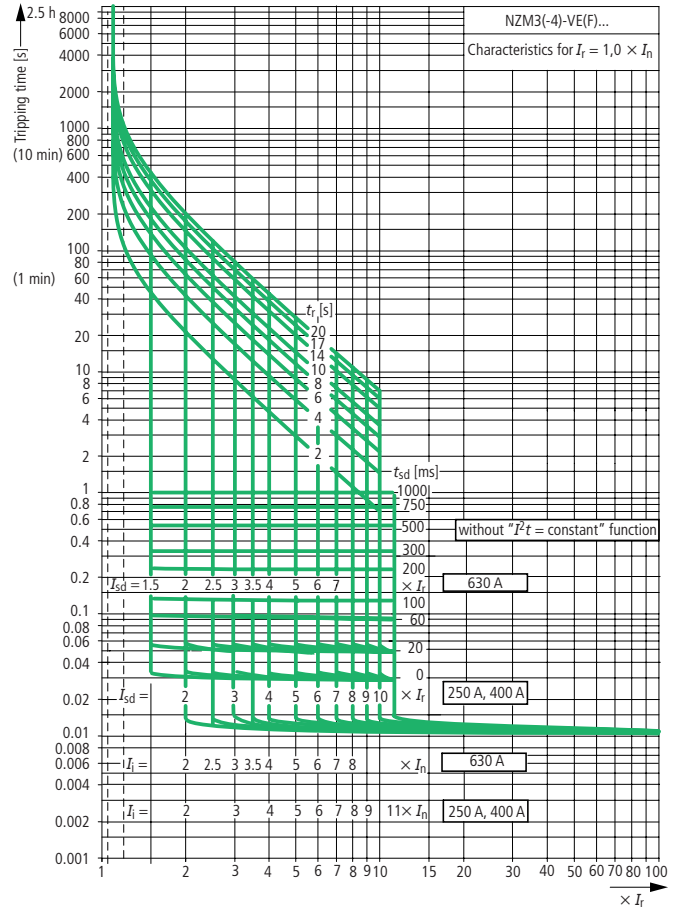
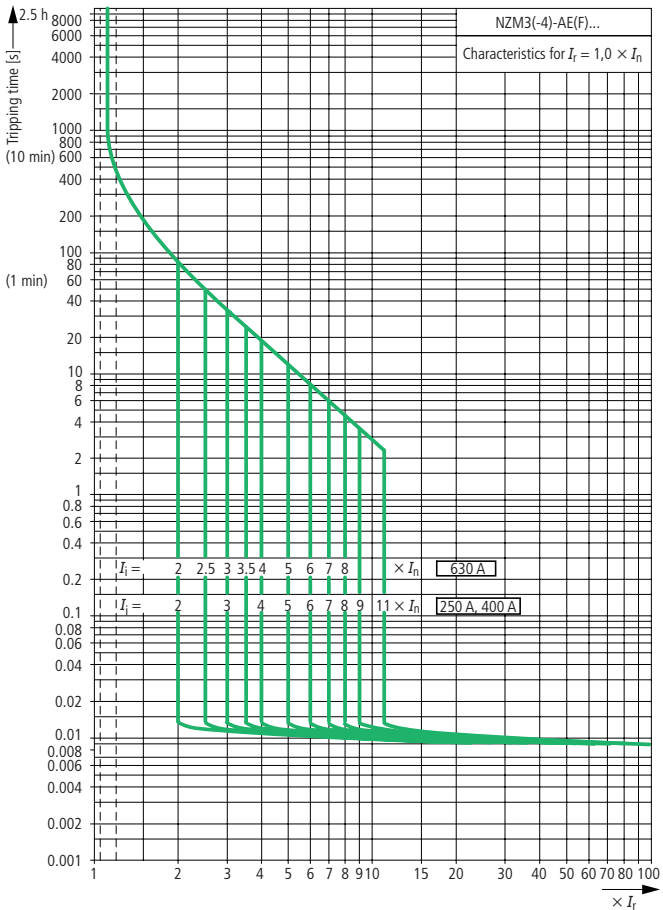
Systems, cable, selectivity and generator protection with NZM2

Motor protection with NZM2



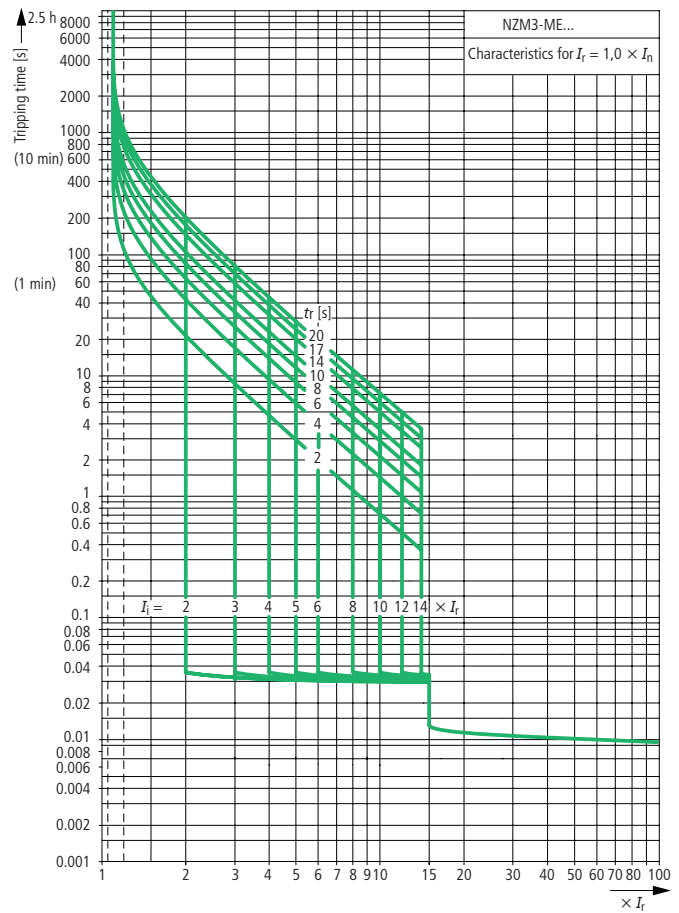
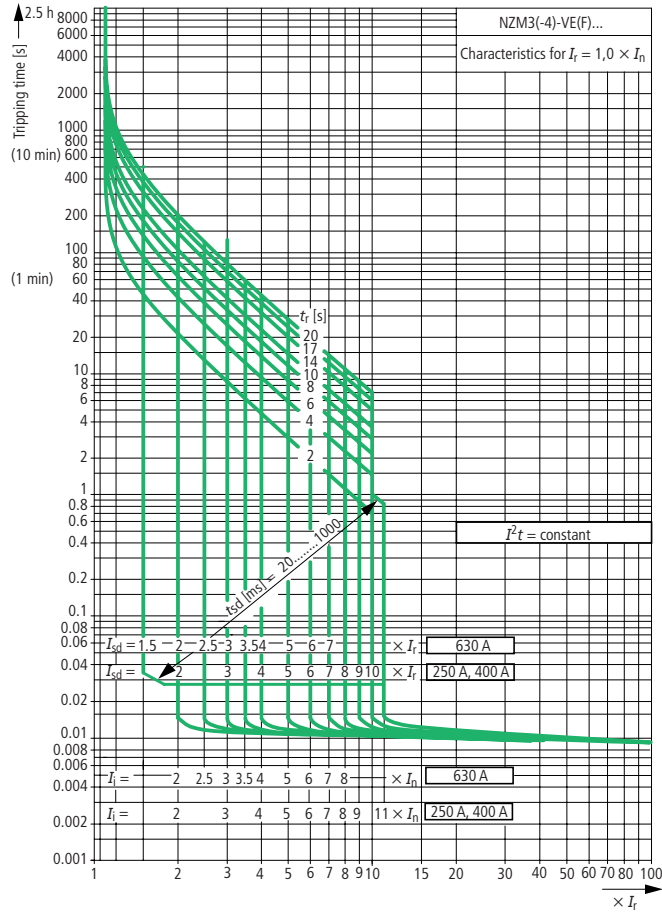
System and line protection with NZM3

Systems, cable, selectivity and generator protection with NZM3



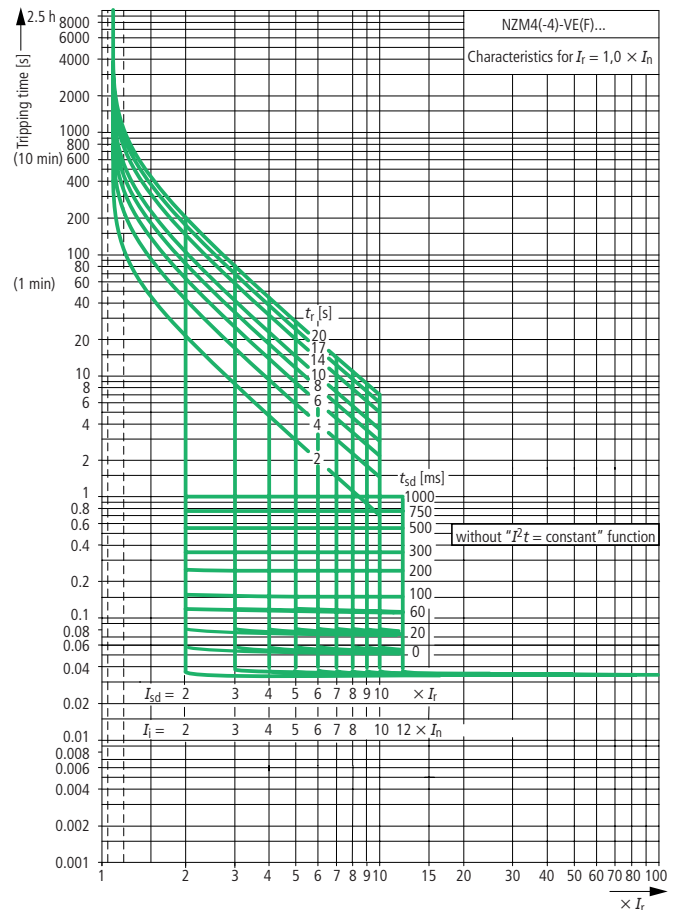
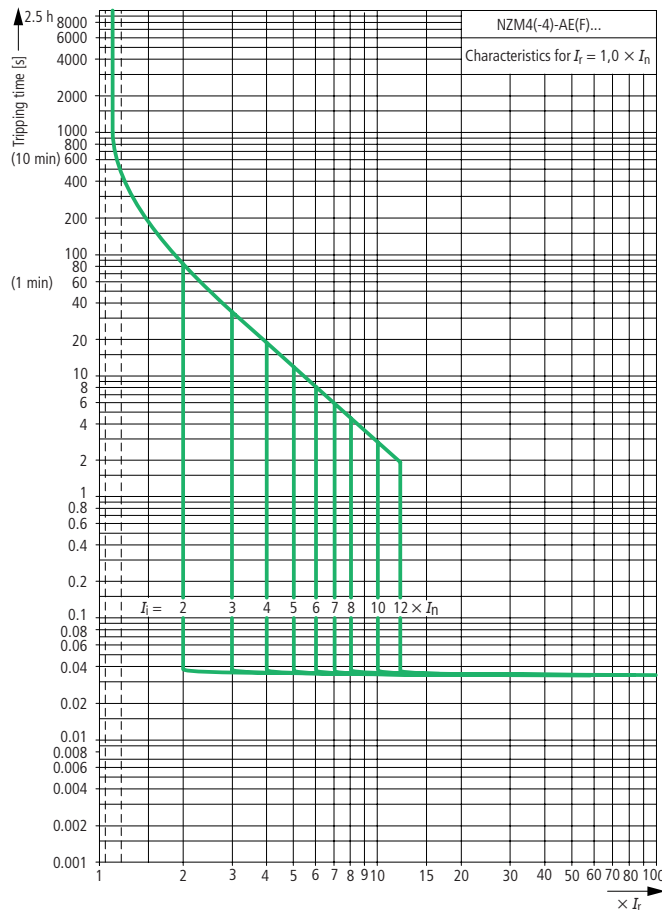
Systems, cable, selectivity and generator protection with NZM3

Motor protection with NZM3



System and line protection with NZM4

Systems, cable, selectivity and generator protection with NZM4

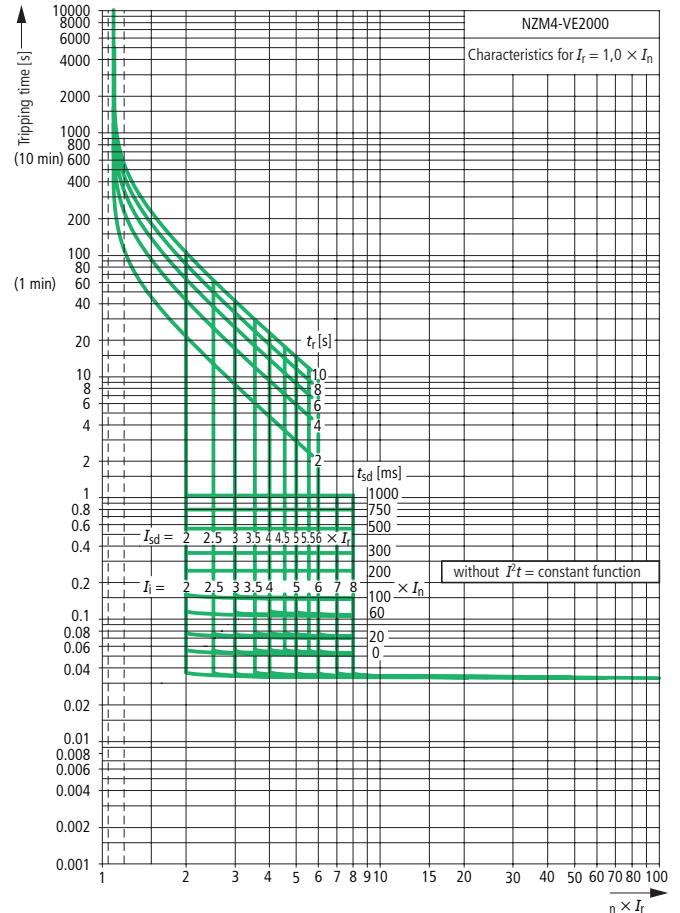
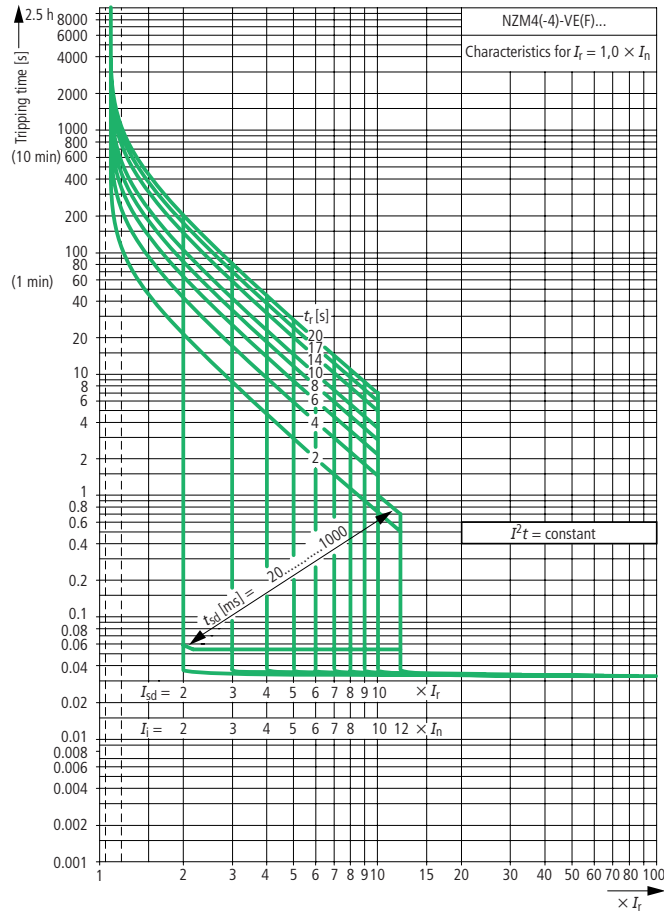


Circuit-breakers, switch-disconnectors



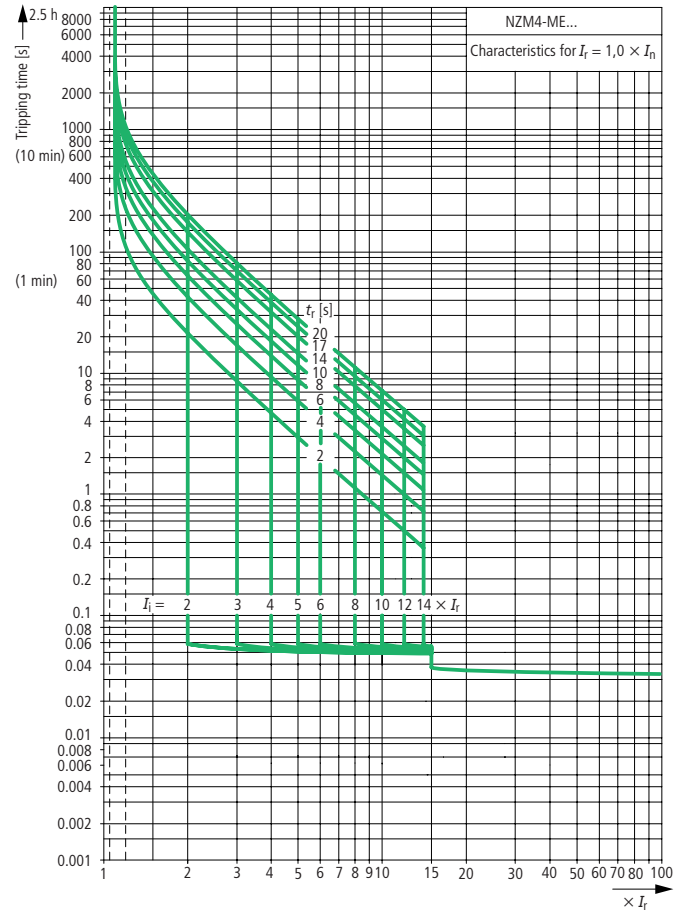
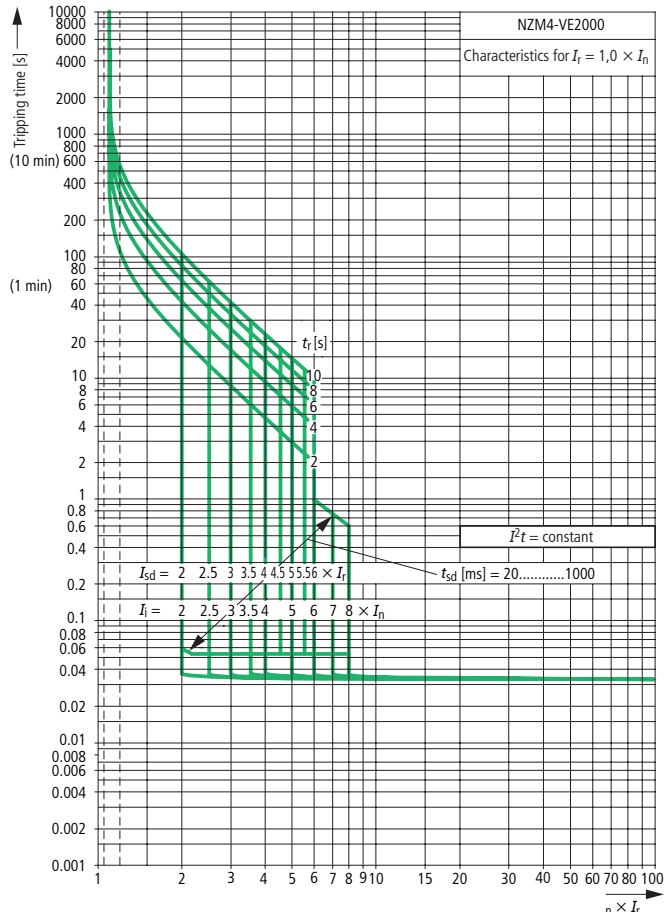
Systems, cable, selectivity and generator protection with NZM4

Systems, cable, selectivity and generator protection with NZM4, 2000 A



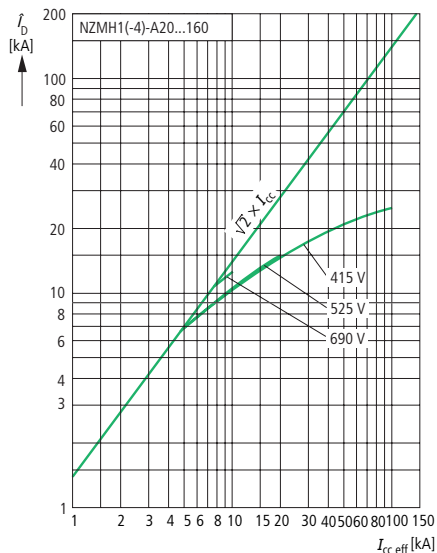
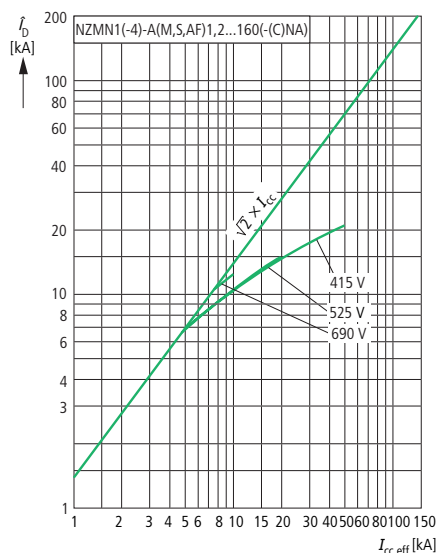
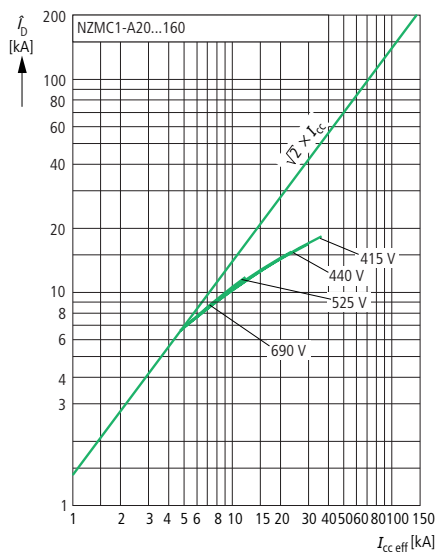
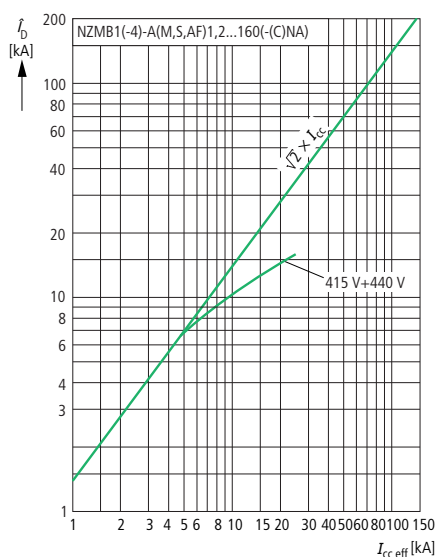
Systems, cable, selectivity and generator protection with NZM4, 2000 A

Motor protection with NZM4



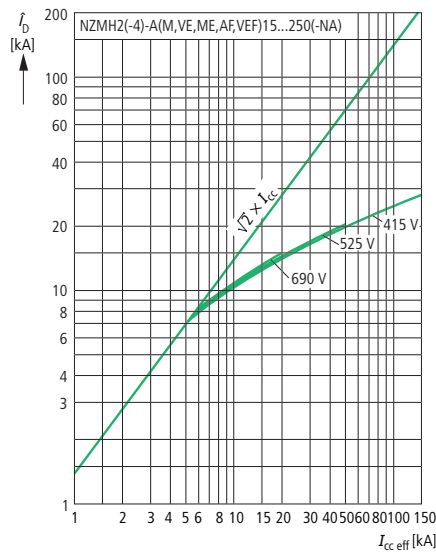
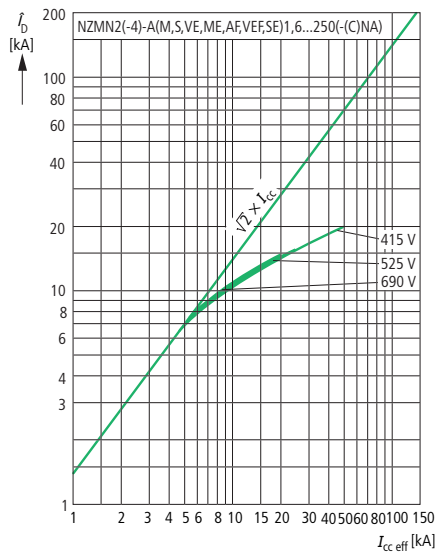
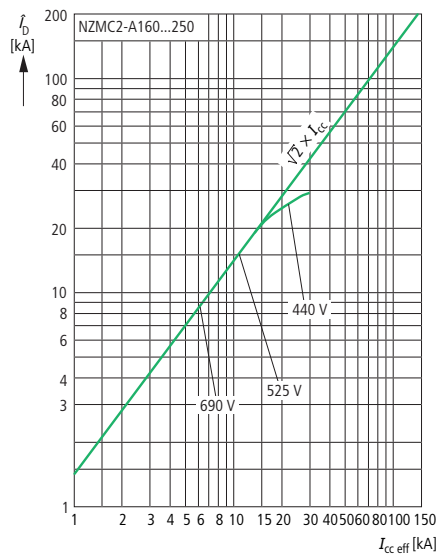
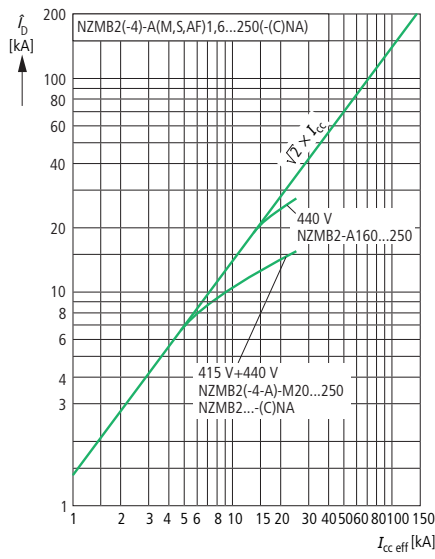
Let-through current \hat{i}_D

NZMC1

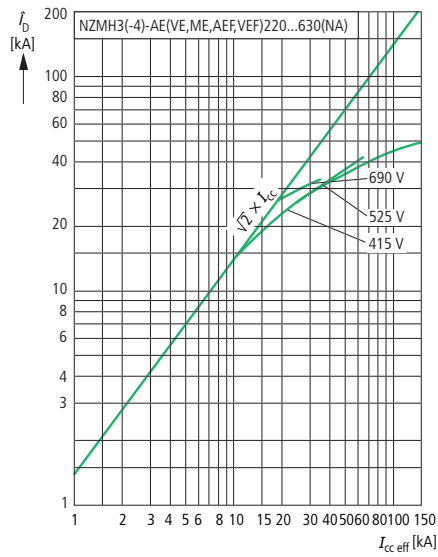
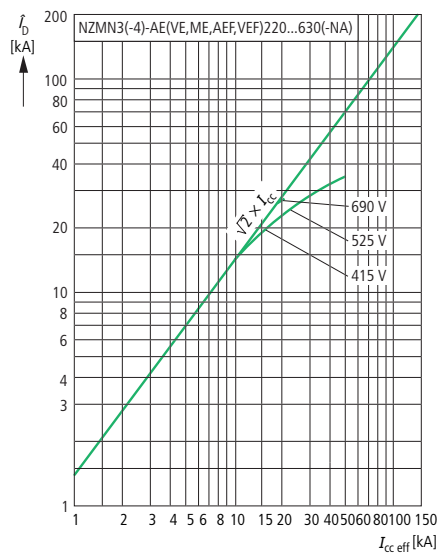


Let-through current \hat{i}_D

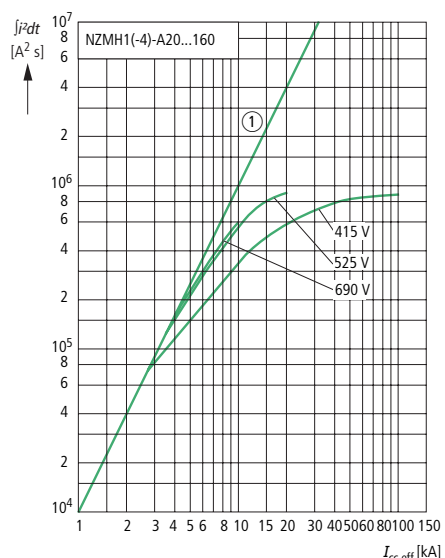
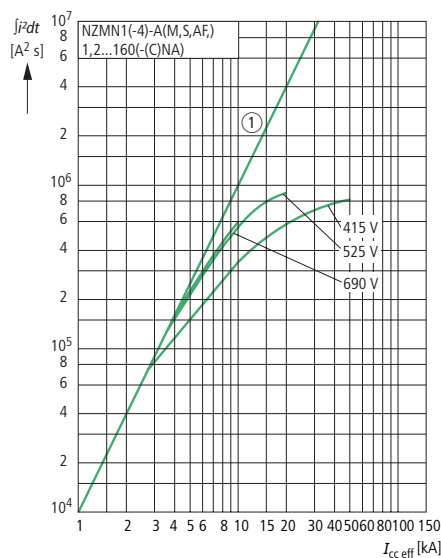
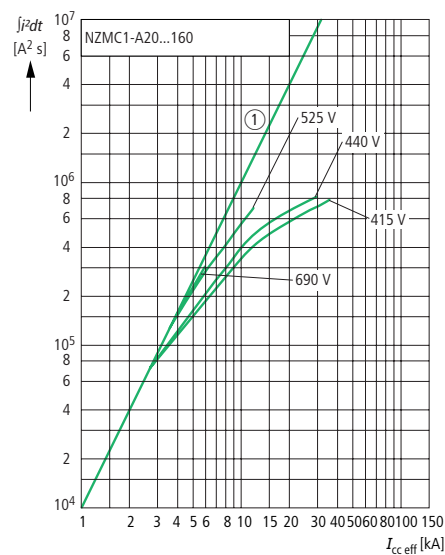
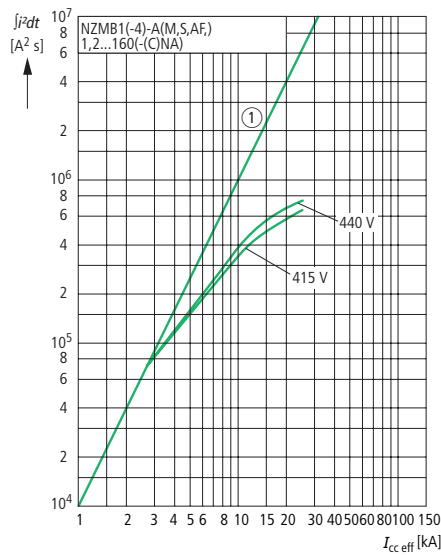
Circuit-breakers, switch-disconnectors



Let-through current \hat{i}_D



Let-through energy I^2t

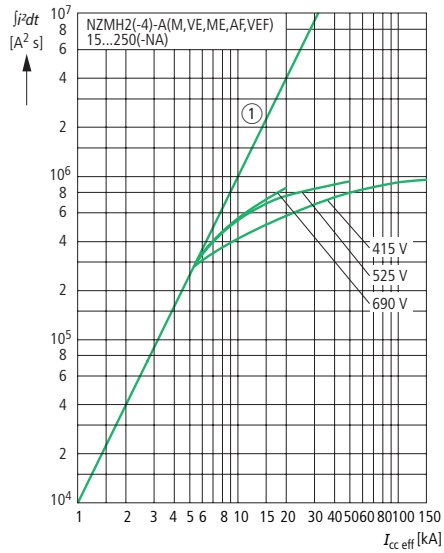
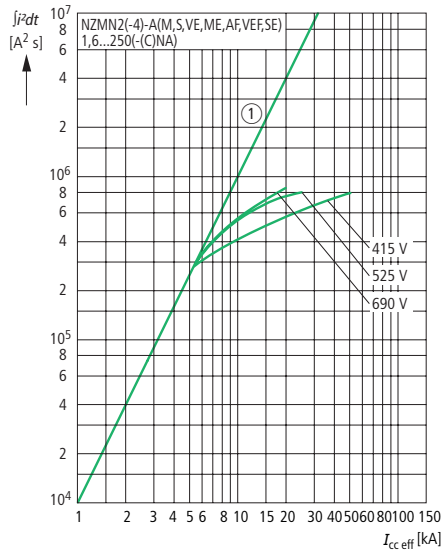
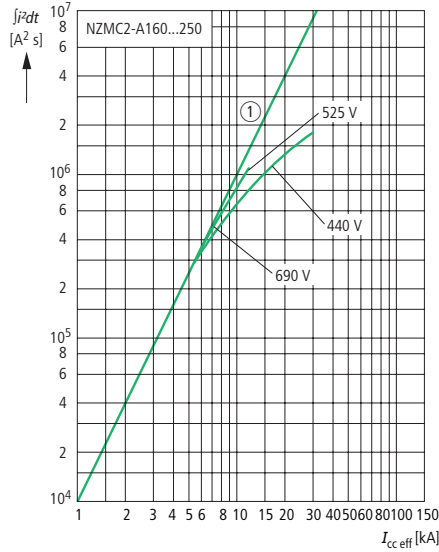
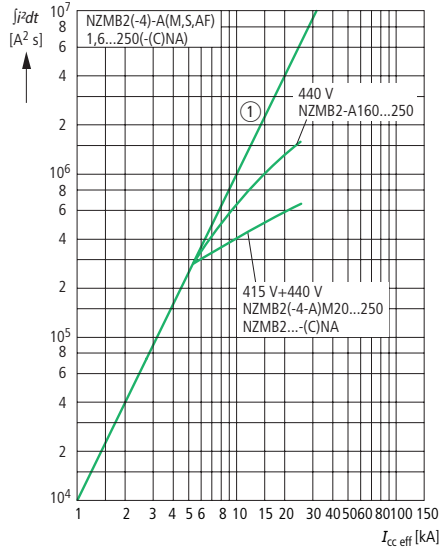


① 1 half-cycle

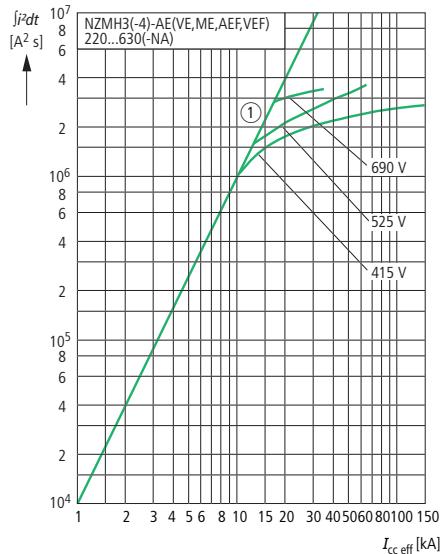
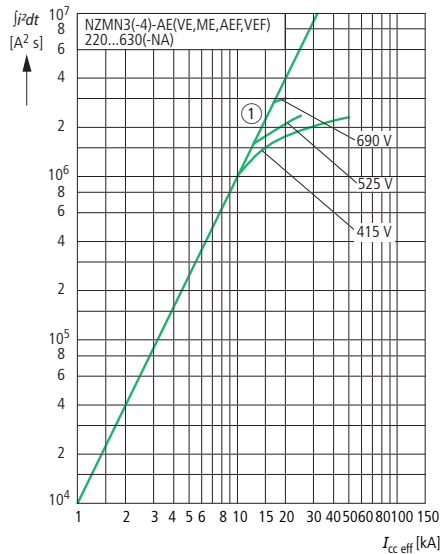
① 1 half-cycle



Let-through energy I^2t



① 1 half-cycle



Frame size 2: residual-current release frequency response

<http://catalog.moeller.net>

Moeller HPL0211-2007/2008

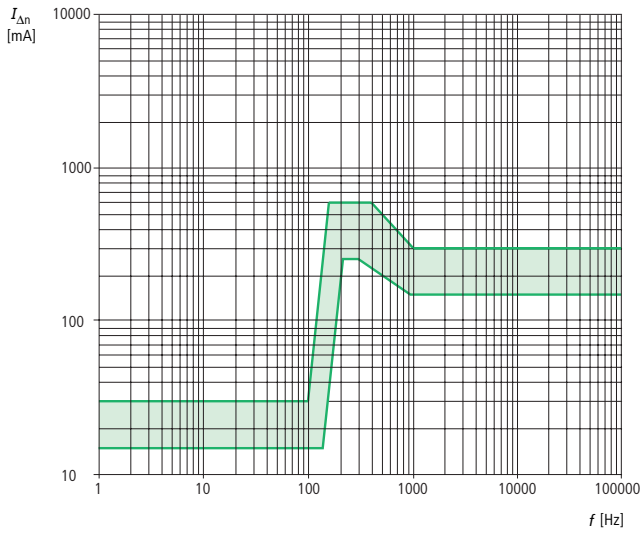
NZM2-4-XFIA



Frequency response

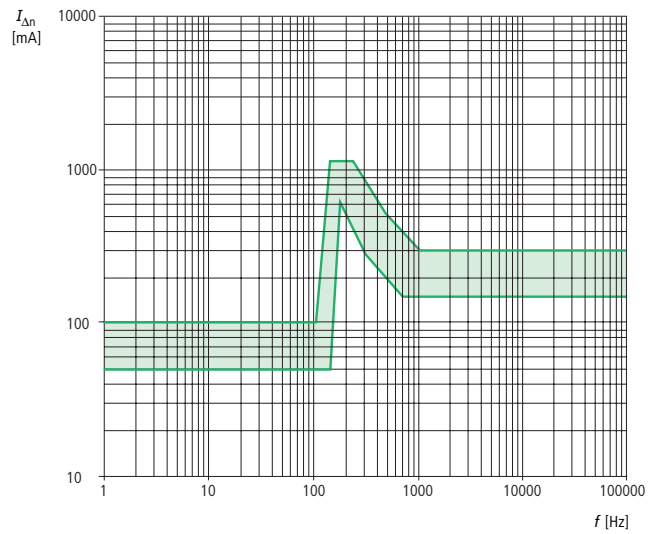
NZM2-4-XFIA30

30 mA



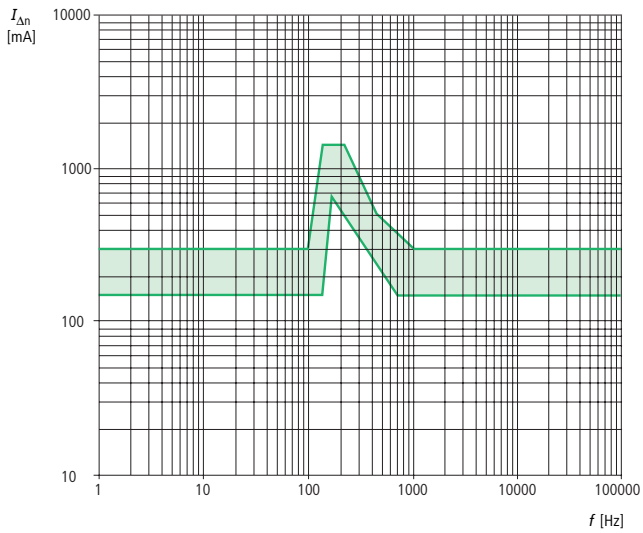
NZM2-4-XFIA

100 mA

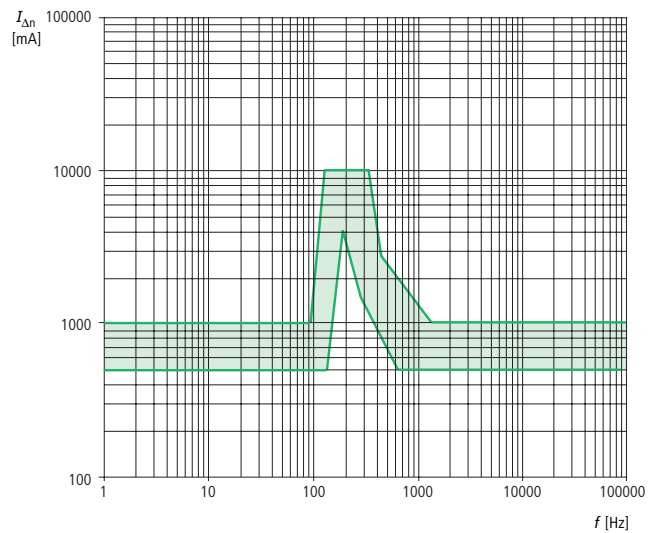


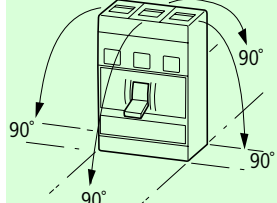
NZM2-4-XFIA

300 mA



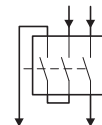
1000 mA



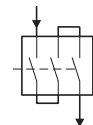
xEnergy		NZM...1, NZM...2, NZM...3, NZM...4		Moeller HPL0211-2007/2008		http://catalog.moeller.net	
		Rated uninterrupted current max. 160 A					
		NZMB1	NZMC1	NZMN1	NZMH1		
General							
Standards		IEC/EN 60947					
Protection against direct contact		Finger and back of hand proof to VDE 0106 Part 100					
Climatic proofing		Damp heat, constant, according to IEC 60068-2-78 Damp heat, cyclical to IEC 60068-2-30					
Ambient temperature							
Storage	°C	-25...+70					
Operation	°C	-25...+70					
Mechanical shock resistance (IEC/EN 60068-2-27)		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					
Mounting position		Vertical and 90° in all directions <div style="display: flex; align-items: center;">  <div style="margin-left: 10px;"> <p>With residual-current release NZM1, N(S)1: Vertical and 90° in all directions</p> </div> </div>					
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					
Terminals		Tunnel terminal: IP10 Phase isolator and strip terminal: IP00					
Circuit-breakers							
Rated impulse withstand voltage U_{imp}							
Main contacts	V	6000	6000	6000	6000	6000	6000
Auxiliary contacts	V	6000	6000	6000	6000	6000	6000
Rated operational voltage	U_e	V AC	690	690	690	690	690
Rated operational voltage switching via 3 contacts		V DC ¹⁾	-	-	500	500	-
Overtoltage category/pollution degree			III/3	III/3	III/3	III/3	III/3
Rated insulation voltage	U_i	V	690	690	690	690	690
For use in IT electrical power networks		V	440	690	690	690	690

Notes
¹⁾ 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
 Setting for I_f at DC = setting I_f AC/DC correction factor
 Details apply for 3-pole system protection circuit-breaker with thermomagnetic release NZM(H)1(2)-A...

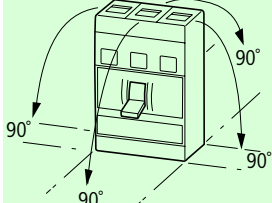
Switching of one pole via two series contacts



Switching of one pole via three series contacts



²⁾ For 3 pole system protection circuit-breaker the following applies: 690 V

http://catalog.moeller.net		Moeller HPL0211-2007/2008		NZM...1, NZM...2, NZM...3, NZM...4		xEnergy			
		Rated uninterrupted current max. 250 A		Rated uninterrupted current max. 630 A		Rated uninterrupted current max. 2000 A			
		NZMB2	NZMC2	NZMN2	NZMH2	NZMN3	NZMH3	NZMN4	NZMH4
General									
IEC/EN 60947									
Finger and back of hand proof to VDE 0106 Part 100									
Damp heat, constant, according to IEC 60068-2-78 Damp heat, cyclical to IEC 60068-2-30									
-25...+70									
-25...+70									
20 (half-sinusoidal shock 20 ms) NZM4: (half-sinusoidal shock 11 ms)									
500									
300									
Vertical and 90° in all directions <div style="display: flex; align-items: center;">  <div style="margin-left: 10px;"> <p>With plug-in adapter NZM2, N(S)2: vertical, 90° right/left, with residual current release, NZM2: vertical and 90° to all directions</p> <p>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</p> </div> </div>									
As required									
In the operating controls area: IP20 (basic degree of protection)									
With insulating surround: IP40, with door coupling rotary handle: IP66									
Tunnel terminal: IP10 Phase isolator and strip terminal: IP00									
8000	8000	8000	8000	8000	8000	8000	8000	8000	8000
6000	6000	6000	6000	6000	6000	6000	6000	6000	6000
690	690	690	690	690	690	690	690	690	690
-	-	750	750	-	-	-	-	-	-
III/3	III/3	III/3	III/3	III/3	III/3	III/3	III/3	III/3	III/3
1000 ²⁾	690	1000	1000	1000	1000	1000	1000	1000	1000
440	690	690	690	690	690	690	690	525	525



NZM...1, NZM...2, NZM...3, NZM...4

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			Rated uninterrupted current max. 160 A					
			NZMB1	NZMC1	NZMN1	NZMH1		
Switching capacity								
Rated short-circuit making capacity								
240 V		I_{cm}	kA	63	121	187	220	
400/415 V		I_{cm}	kA	53	76	105	220	
440 V		I_{cm}	kA	53	63	74	74	
525 V		I_{cm}	kA	-	24	40	40	
690 V		I_{cm}	kA	-	14	17	17	
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	30	55	85	100	
	400/415 V 50/60 Hz	I_{cu}	kA	25	36	50	100	
	440 V 50/60 Hz	I_{cu}	kA	25	30	35	35	
	525 V 50/60 Hz	I_{cu}	kA	-	12	20	20	
	690 V 50/60 Hz	I_{cu}	kA	-	8	10	10	
	500 V DC	I_{cu}	kA	-	-	15	30	
I_{cs} to IEC/EN 60947 operating sequence O-t-CO-t-CO	240 V 50/60 Hz	I_{cs}	kA	30	55	85	100	
	400/415 V 50/60 Hz	I_{cs}	kA	25	36	50	50	
	440 V 50/60 Hz	I_{cs}	kA	18.5	22.5	35	35	
	525 V 50/60 Hz	I_{cs}	kA	-	6	10	10	
	690 V 50/60 Hz	I_{cs}	kA	-	4	7.5	7.5	
	750 V DC	I_{cs}	kA	-	-	-	-	
Maximum low-voltage h.b.c. fuse ⁹⁾			A gG/gL	NZM.1-...20...100: 200 NZM.1-...125, 160: 315				
Utilization category to IEC/EN 60947-2				A	A	A	A	
Rated short-time withstand current								
t = 0.3 s		I_{cw}	kA	-	-	-	-	
t = 1 s		I_{cw}	kA	-	-	-	-	
Rated making and breaking capacity								
Rated operational current	AC-1	400/415 V 50/60 Hz	I_e	A	160	160	160	160
		690 V 50/60 Hz	I_e	A	160	160	160	160
	AC-3	400/415 V 50/60 Hz	I_e	A	160	160	160	160
		690 V 50/60 Hz	I_e	A	160	160	160	160
	DC - -1	500 V DC	I_e	A	-	-	125	125
		750 V DC	I_e	A	-	-	-	-
	DC - 3	500 V DC	I_e	A	-	-	125	125
		750 V DC	I_e	A	-	-	-	-
	Lifespan, mechanical			Operations	20000	20000	20000	20000
	Maximum operating frequency				120	120	120	120
	Max. operating frequency			Ops/h	120	120	120	120
	Lifespan, electrical							
AC-1	400/415 V 50/60 Hz	Operations		10000 ⁸⁾	7500	10000	10000	
	690 V 50/60 Hz	Operations		-	5000	7500	7500	
AC-3	400/415 V 50/60 Hz	Operations		7500 ⁴⁾	-	7500	7500	
	690 V 50/60 Hz	Operations		-	-	5000	5000	
DC - -1	500 V DC	Operations		-	-	10000	10000	
	750 V DC	Operations		-	-	-	-	
DC - 3	500 V DC	Operations		-	-	5000	5000	
	750 V DC	Operations		-	-	-	-	
Current heat loss per pole at I_n ⁶⁾			W	16.7	16.7	16.7	16.7	
Total opening delay at short-circuit			ms	< 10	< 10	< 10	< 10	
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	35	-	85	-	
	480V 60Hz		kA	25 ¹⁾	-	35 ¹⁾	-	
	600 V 60 Hz		kA	-	-	-	-	

Notes

- 1) For NA switch switching capacity with NZM...1-...(C)NA the following applies: 480 Y/277 V from 60 A
- 2) For AC-3 rated operational current with NZM4 the following applies: 400 V: max. 650 kW; 690 V: max. 600 kW
- 3) For NA switch switching capacity with NZML2 and NZML3 the following applies: Current Limiting switch to UL489
- 4) For 3-pole system protection circuit-breaker the AC-3 specification is not applicable
- 5) For NA switch switching capacity with NZML4 at 240 V 60 Hz the following applies: on request
- 6) For current heat loss per pole the specification refers to the maximum nominal current of the frame size.
- 7) For 3-pole system protection circuit-breaker the following applies: 400/415 V 7500 switching operations
- 8) Maximum back-up fuse, if the expected short-circuit currents at the installation location exceed the switching capacity of the circuit-breaker.
- 9) ≤ 1600 A
- 10) Higher switching capacity on request

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NZM...1, NZM...2, NZM...3, NZM...4



Rated uninterrupted current max. 250 A				Rated uninterrupted current max. 630 A		Rated uninterrupted current max. 2000 A	
NZMB2	NZMC2	NZMN2	NZMH2	NZMN3	NZMH3	NZMN4	NZMH4
63	121	187	330	187	330	105	275
53	76	105	330	105	330	105	187
53	63	74	286	74	286	74	187
-	24	53	105	53	143	53	143
-	9	40	40	40	74	40	105
30	55	85	150	85	150	50	125
25	36	50	150	50	150	50	85
25	30	35	130	35	130	35	85 ¹⁰⁾
-	112	25	50	25	65	25	65
-	8	20	20	20	35	20	50
-	-	30	60	-	-	-	-
-	-	30	60	-	-	-	-
30	55	85	150	85	150	37	63
25	36	50	150	50	150	37	43
18.5	22.5	35	130	35	130	26	43
-	9	25	37.5	13	33	19	49
-	4	5	5	5	9	15	37
355	355	355	355	NZMN3-...250, 400: 400 NZMN3-...630: 630		NZMN4-...630...1250: 2 x 630 NZMN4-...1600: 2 x 800 NZMN4-2000: 2 x 1000	
A	A	A	A	A	A	B (2000A: A) B (2000A: A)	
-	-	1.9	1.9	3.3	3.3	19.2	19.2
-	-	1.9	1.9	3.3	3.3	19.2	19.2
250	250	250	250	630	630	2000	2000
250	250	250	250	630	630	2000	2000
250	250	250	250	630	630	1600 ²⁾	1600 ²⁾
250	250	250	250	630	630	1600 ²⁾	1600 ²⁾
-	-	250	250	-	-	-	-
-	-	250	250	-	-	-	-
-	-	250	250	-	-	-	-
-	-	250	250	-	-	-	-
20000	20000	20000	20000	15000	15000	10000	10000
120	120	120	120	60	60	60	60
10000 ⁸⁾	7500	10000	10000	5000	5000	3000 ¹⁰⁾	3000 ¹⁰⁾
-	5000	7500	7500	3000	3000	2000 ¹⁰⁾	2000 ¹⁰⁾
6500 ⁴⁾	-	6500	6500	2000	2000	2000 ¹⁰⁾	2000 ¹⁰⁾
-	5000	5000	5000	2000	2000	1000 ¹⁰⁾	1000 ¹⁰⁾
-	-	7500	7500	-	-	-	-
-	-	7500	7500	-	-	-	-
-	-	3000	3000	-	-	-	-
19	19	19	19	40	40	97 (2000 A)	97 (2000 A)
< 10	< 10	< 10	< 10	< 10	< 10	< 25 \leq 415 V; < 35 > 415 V	< 25 \leq 415 V; < 35 > 415 V
35	-	85	150 ³⁾	85	150 ³⁾	85	125
25	-	35	100 ³⁾	42	100 ³⁾	42	85
18	-	25	50 ³⁾	35	50 ³⁾	35	50

Current limiting values: NZM 2... and NZM 3...

Circuit-breaker		Voltage at 60 Hz [V]	Threshold Current			Intermediate Current			High Interrupting Capacity		
Part no.	max. size [A]		sym. rms [kA]	Maximum Peak [kA]	I^2dt [kA ² s]	sym. rms [kA]	Maximum Peak [kA]	I^2dt [kA ² s]	sym. rms [kA]	Maximum Peak [kA]	I^2dt [kA ² s]
NZM 2- A... AF...	250 A	240	16.25	12.80	0.36	100	20.23	0.40	150	20.00	0.38
		480	16.25	13.20	0.50	65	23.63	0.85	100	26.55	0.78
		600	16.25	12.98	0.60	30	19.40	0.67	50	24.40	0.84
NZM 2- VE... VEF...	250 A	240	16.25	11.40	0.31	100	18.23	0.27	150	20.40	0.32
		480	16.25	14.23	0.48	65	23.63	0.58	100	26.43	0.62
		600	16.25	14.33	0.48	30	19.60	0.60	50	24.63	0.79
NZM3	600 A	240	39	41.20	3.30	100	31.00	1.01	150	36.80	1.34
		480	39	29.50	1.60	65	36.40	2.34	100	43.10	1.92
		600	30	29.50	2.24	42	33.80	2.04	50	39.15	2.42

Part no.	Weight kg
Circuit-breaker	
NZM...1-...	1.046
NZM...1-4-...	1.325
NZM...2-...	2.345
NZM...2-4-...	3.5
NZM...3-...	6.34
NZM...3-4-...	8.4
NZM...4-...	21
NZM...4-4-... / NZM...4-VE2000	27
Plug-in adapter elements	
+NZM2-XSV	4.7
+NZM2-4-XSV	5.9
Withdrawable unit	
+NZM3-XAV	21
+NZM3-4-XAV	27
+NZM4-XAV	52
+NZM4-4-XAV	65

Part no.	Weight kg
Circuit-breaker	
PN1-..., N1-...	0.926
PN1-4-..., N1-4-...	1.325
PN2-..., N2-...	2.15
PN2-4-..., N2-4-...	2.65
PN3-..., N3-...	5.7
PN3-4-..., N3-4-...	7.1
N4-...	17
N4-4-...	22



Circuit-breaker, switch-disconnector for 1000 V AC, 3 pole

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NZM...2, NZM...3, NZM...4, N...



			NZMH2, N2 max. 250 A	NZMN3 max. 630 A	NZMH4, N4 max. 1600 A
General					
Utilization category			A	A	A/B
Maximum operating frequency		Ops/h	120	60	60
Lifespan					
mechanical (of which max. 50 % trip by shunt/ undervoltage release)			20000	15000	10000
electrical, AC-1 1000 V		Switching operations	3000	1000	500
Rated operational voltage	U_e	V AC	1000	1000	1000
Circuit-breakers					
Rated uninterrupted current	I_u	A	250	630	1600
Rated short-circuit making capacity up to 1000 V 50/60 Hz	I_{cm}	kA	17	17	40
Rated short-circuit breaking capacity I_{cn}					
I_{cu} to IEC/EN 60947 operating sequence O-t-CO	I_{cu}	kA	3	10	20
I_{cs} to IEC/EN 60947 operating sequence O-t-CO-t-CO	I_{cs}	kA	3	10	15
Rated making and breaking capacity					
Rated operational current					
AC-1			250	630	1600
Rated insulation voltage	U_i	V	1000	1000	1000
Use in IT power networks			–	–	–
Switch-disconnectors					
Rated uninterrupted current	I_u	A	250		1600
Rated short-time withstand current	I_{cw}	kA	3.5	–	25
Rated making and breaking capacity					
Rated operational current					
AC-22/23A	I_e		250		1600
Rated insulation voltage	U_i	V	1000	–	1000
Use in IT power networks			–	–	–
Rated conditional short-circuit current					
With back-up fuse		A gG/gL	N2-160...250-S1: 250	–	–
1000 V		kA	10	–	–
With downstream fuse		A gG/gL	N2-160...250-S1: 250	–	–
1000 V		kA	10	–	–

Circuit-breakers, switch-disconnectors



				PN1/N1 max. 160 A	PN2/N2 max. 250 A	PN3/N3 max. 630 A	N4 max. 1600 A
Switch-disconnectors							
Rated impulse withstand voltage U_{imp}							
Main contacts		V		6000	8000	8000	8000
Auxiliary contacts		V		6000	6000	6000	6000
Rated operational voltage							
	U_e	V AC		690	690	690	690
Rated uninterrupted current max.							
IEC/EN 60947-2 annex L	I_u	A		160	250	630	1600
Technical data, divergent from the products for the IEC market UL489, CSA 22.2 No. 5.1							
	I_u	A		125	160	550	1200
Overvoltage category/pollution degree							
				III/3	III/3	III/3	III/3
Rated insulation voltage							
	U_i	V AC		690	690	1000	1000
For use in IT electrical power networks							
		V		690	690	690	525
Switching capacity							
Rated short-circuit making capacity							
	I_{cm}	kA		2.8	5.5	25	53
Rated short-time withstand current							
$t = 0.3$ s	I_{cw}	kA		2	3.5 ¹⁾	12	25
$t = 1$ s	I_{cw}	kA		2	3.5 ¹⁾	12	25
Rated conditional short-circuit current							
With back-up fuse		A gG/gL		PN1(N1)-63...125: 125 PN1(N1)-160: 160	PN2(N2)-160...250: 250	PN3(N3)-400...630: 630	N4-630...1600: 2 × 800
400 ... 415 V		kA		100	100	100	100
690 V		kA		80	80	80	80
With downstream fuse		A gG/gL		PN1(N1)-63...125: 125 PN1(N1)-160: 160	PN2(N2)-160...250: 250	PN3(N3)-400...630: 630	N4-630...1600: 2 × 800
400 ... 415 V		kA		100	100	100	100
690 V		kA		10	80	80	80
Rated making and breaking capacity							
Rated operational current, AC-22/23A							
415 V	I_e	A		160	250	630	1600
690 V	I_e	A		160	250	630	1600
Lifespan, mechanical							
	Operations			20000	20000	15000	10000
Maximum operating frequency							
	Ops./h			120	120	60	60
Lifespan, electrical to IEC/EN 60947-4-1 section B							
AC-1							
400/415 V	Operations			10000	10000 ⁴⁾	5000	3000
690 V	Operations			7500	7500 ⁴⁾	3000	2000
AC-3							
400/415 V	Operations			7500	7500 ⁵⁾	3000	2000
690 V	Operations			5000	5000 ³⁾⁵⁾	2000	1000
Current heat loss per pole at I_u ²⁾							
		W		12.7	16	40	97

Notes

¹⁾ The rated short time withstand current for PN2/N2 in conjunction with residual-current release NZM2-4-XFI... $I_{cw} = 1.5$ kA

²⁾ The current heat loss per pole ratings refer to the maximum current rating of the frame size.

³⁾ For the electrical life at AC-3 for PN2/N2 the following applies: 690 V: max. 160 kW

⁴⁾ For 3-pole switch-disconnectors the following applies: 400/415 V 7500 switching operations; 690 V 5000 switching operations

⁵⁾ For 3-pole switch-disconnectors the following applies: 400/415 V 6000 switching operations; 690 V 4000 switching operations

				NS1-...-NA max. 125A	NS2-...-NA max. 250A	NS3-...-NA max. 600A	NS2-...-NA max. 250A
Moulded Case Switch							
Rated peak withstand current		U_{imp}					
Main contacts		V		6000	8000	8000	8000
Auxiliary contacts		V		6000	6000	6000	6000
Rated operational voltage		U_e	VAC	690	690	690	690
Rated uninterrupted current max.							
IEC/EN 60947-2 annex L		I_n	A	125	250	600	1200
UL489/CSA 22.2 No. 5.1		I_n	A	125	250	600	1200
Overvoltage category/pollution degree				III/3	III/3	III/3	III/3
Rated insulation voltage		U_i	V	690	1000	1000	1000
Switching capacity according to UL 489, CSA 22.2 No. 5.1							
	240 V 60 Hz		KA	85	150	150	85
	480 V 60 Hz		KA	35	100	100	65
	600 V 60 Hz		KA	–	50	50	42
Switching capacity, divergent from the products for the NA market							
Rated short-circuit making capacity	240 V 50/60 Hz	I_{cm}	KA	187	330	330	187
	400/415 V 50/60 Hz	I_{cm}	KA	105	330	330	154
	440 V 50/60 Hz	I_{cm}	KA	74	286	286	143
	525 V 50/60 Hz	I_{cm}	KA	53	105	143	84
	690 V 50/60 Hz	I_{cm}	KA	17	53	74	74
Rated short-circuit breaking capacity $I_{cc} = I_{cu}$ according to IEC/EN 60947-2 Annex L	240 V 50/60 Hz	I_{cu} to IEC/EN 60947 test cycle O-t-CO	KA	85	150	150	85
	400/415 V 50/60 Hz	I_{cu}	KA	50	150	150	70
	440 V 50/60 Hz	I_{cu}	KA	35	130	130	65
	525 V 50/60 Hz	I_{cu}	KA	20	50	85	40
	690 V 50/60 Hz	I_{cu}	KA	10	20	35	35
	240 V 50/60 Hz	I_{cs} according to IEC/EN 60947 test cycle O-t-CO-t-CO	KA	85	150	150	43
	400/415 V 50/60 Hz	I_{cs}	KA	50	150	150	35
	440 V 50/60 Hz	I_{cs}	KA	35	130	130	33
	525 V 50/60 Hz	I_{cs}	KA	10	37.5	33	20
	690 V 50/60 Hz	I_{cs}	KA	7.5	5	9	18
Lifespan, mechanical (of which max. 50 % trip by shunt/undervoltage release)		Operations		20000	20000	15000	10000
Maximum operating frequency		ops./h		120	120	60	60
Lifespan, electrical	AC-1	400/415 V 50/60 Hz	Operations	10000	10000	5000	3000
		690 V 50/60 Hz	Operations	7500	7500	3000	2000
	AC-3	400/415 V 50/60 Hz	Operations	7500	6500	2000	2000
		690V 50/60 Hz	Operations	5000	5000	2000	1000
Current heat loss per pole at $I_n^{(1)}$		W		8.7	19	40	97
Total downtime in a short-circuit		ms		< 10	< 10	< 10	< 25 ≤ 415 V < 35 > 415 V

Notes

¹⁾ Details refer to the maximum nominal current of the frame size



Device Type	Release type	Response values of the overload release at temperatures deviating from the reference temperatures						
		Temperature compensation coefficient						
		20 °C	30 °C	40 °C	50 °C	60 °C	65 °C	70 °C
Thermomagnetic release (TM)								
System protection		Protection of systems (reference temperature 40 °C)						
NZM...1(-4)-A(F)15...80(-NA)	TM	1.14	1.07	1	0.93	0.86	0.83	0.79
NZM...1(-4)-A(F)90...125(-NA)	TM	1.14	1.07	1	0.93	0.86	0.83	0.79
NZM...1(-4)-A160	TM	1.08	1.04	1	0.96	0.92	0.90	0.88
NZM...2(-4)-A(F)15...200(-NA)	TM	1.04	1.02	1	0.98	0.96	0.95	0.94
NZM...2(-4)-A(F)250(-NA)	TM	1.04	1.02	1	0.98	0.96	0.95	0.94
NZM...2(-4)-A20...200 + XSV	TM with XSV	1.04	1.02	1	0.98	0.96	0.95	0.94
NZM...2(-4)-A250 + XSV	TM with XSV	1.04	1.02	1	0.98	0.96	0.95	0.94
Short-circuit / motor protection		Motor protection (reference temperature 20 °C)						
NZM...1-M(S)40...80(-CNA)	TM	1	0.98	0.95	0.93	0.90	0.89	0.88
NZM...1-M(S)100(-CNA)	TM	1	0.98	0.95	0.93	0.90	0.89	0.88
NZM...2-M(S)20...200(-CNA)	TM	1	0.98	0.96	0.94	0.92	0.91	0.90
NZM...2-M(S)20...200 + XSV	TM with XSV	1	0.98	0.96	0.94	0.92	0.91	0.90

Notes With temperatures which deviate from the reference temperature, a slight change of the overload protection properties occurs. In order to determine the release time using the tripping characteristics the temperature compensation coefficient in accordance with the table must be considered.
Example: An NZM1-A100 is calibrated for a reference temperature of 40 °C.

What happens when it is operated at an ambient temperature of 60 °C ?

At 60 °C, the temperature compensation coefficient of 0.86 results in a reduced operating current of $I_r = 100 \text{ A} \times 0.86 = 86 \text{ A}$. In other words at an ambient temperature of 60 °C the NZM1-A100 trips as if it were set to 86 A.

Device Type	Release type	Reduction of the rated operational current (derating) under particular ambient conditions (according to IEC 947)						
		Derating coefficient						
		20 °C	30 °C	40 °C	50 °C	60 °C	65 °C	70 °C
Thermomagnetic release (TM)								
System protection		Protection of systems (reference temperature 40 °C)						
NZM...1(-4)-A(F)15...80(-NA)	TM	1	1	1	1	1	1	1
NZM...1(-4)-A(F)90...125(-NA)	TM	1	1	1	1	0.86	0.83	0.8
NZM...1(-4)-A160	TM	1	1	1	0.95	0.9	0.85	0.8
NZM...2(-4)-A(F)15...200(-NA)	TM	1	1	1	1	1	1	1
NZM...2(-4)-A(F)250(-NA)	TM	1	1	1	1	0.9	0.85	0.8
NZM...2(-4)-A20...200 + XSV	TM with XSV	1	1	1	1	1	1	1
NZM...2(-4)-A250 + XSV	TM with XSV	1	0.97	0.92	0.87	0.81	–	–
Short-circuit / motor protection		Motor protection (reference temperature 20 °C)						
NZM...1-M(S)40...80(-CNA)	TM	1	1	1	1	1	1	1
NZM...1-M(S)100(-CNA)	TM	1	1	1	1	0.86	0.83	0.8
NZM...2-M(S)20...200(-CNA)	TM	1	1	1	1	1	1	1
NZM...2-M(S)20...200 + XSV	TM with XSV	1	1	1	1	1	1	1

Notes The derating coefficient must be considered in accordance with the following table in order to determine the maximum permissible current loading at different ambient temperatures.

Example: An NZM2-A250 should be operated at an ambient temperature of 65 °C.

How high is the permissible rated operational current I_e ?

At 65 °C the derating coefficient is 0.85, this means $I_e = 250 \text{ A} \times 0.85 = 212.5 \text{ A}$.

The NZM2-A250 may be operated at an ambient temperature of 65 °C with a maximum $I_e = 212.5 \text{ A}$.

Device Type	Release type	Reduction of the rated operational current (derating) under particular ambient conditions (according to IEC 947)						
		Derating coefficient						
		20 °C	30 °C	40 °C	50 °C	60 °C	65 °C	70 °C
Electronic release (E)								
System protection								
NZM...3(-4)-AE(F)250...500(-NA)	E	1	1	1	1	1	1	1
NZM...3(-4)-AE(F)550...630(-NA)	E	1	1	1	1	0.9	0.85	0.8
NZM...3(-4)-AE250...400 + XAV	E with XAV	1	1	1	1	1	1	1
NZM...3(-4)-AE630 + XAV	E with XAV	0.96	0.92	0.87	0.83	0.78	0.75	0.73
NZM...4(-4)-AE(F)600...1250(-NA)	E	1	1	1	1	1	1	1
NZM...4(-4)-AE1600	E	1	1	1	1	0.87	0.85	0.82
NZM...4(-4)-AE630...1250 + XAV	E with XAV	1	1	1	1	1	1	1
NZM...4(-4)-AE1600 + XAV	E with XAV	1	0.98	0.93	0.89	0.85	0.83	0.8
Systems protection, cable protection, selectivity and generator protection								
NZM...2(-4)-VE(F)100...175(-NA) (-S1)	E	1	1	1	1	1	1	1
NZM...2(-4)-VE(F)200...250(-NA) (-S1)	E	1	1	1	1	0.9	0.85	0.8
NZM...2(-4)-VE100...160 + XSV	E with XSV	1	1	1	1	1	1	1
NZM...2(-4)-VE250 + XSV	E with XSV	1	1	1	0.94	0.88	0.84	0.81
NZM...3(-4)-VE(F)250...500(-NA)	E	1	1	1	1	1	1	1
NZM...3(-4)-VE(F)550...630(-NA)	E	1	1	1	1	0.9	0.85	0.8
NZM...3(-4)-VE250...400 + XAV	E with XAV	1	1	1	1	1	1	1
NZM...3(-4)-VE630 + XAV	E with XAV	0.96	0.92	0.87	0.83	0.78	0.75	0.73
NZM...4(-4)-VE(F)600...1250(-NA) (-S1)	E	1	1	1	1	1	1	1
NZM...4(-4)-VE1600 (-S1)	E	1	1	1	1	0.87	0.85	0.82
NZM...4(-4)-VE630...1250 + XAV	E with XAV	1	1	1	1	1	1	1
NZM...4(-4)-VE1600 + XAV	E with XAV	1	0.98	0.93	0.89	0.85	0.83	0.8
Motor protection								
NZM...2-ME(SE)90...140(-CNA)	E	1	1	1	1	1	1	1
NZM...2-ME(SE)220(-CNA)	E	1	1	1	1	0.9	0.85	0.8
NZM...2-ME90...140 + XSV	E with XSV	1	1	1	1	1	1	1
NZM...2-ME220 + XSV	E with XSV	1	1	1	0.94	0.88	0.84	0.81
NZM...3-ME(SE)220...350(-CNA) (-S1)	E	1	1	1	1	1	1	1
NZM...3-ME(SE)450(-CNA) (-S1)	E	1	1	1	1	1	1	1
NZM...3-ME220...350 + XAV	E with XAV	1	1	1	1	1	1	1
NZM...3-ME450 + XAV	E with XAV	0.96	0.92	0.87	0.83	0.78	0.75	0.73
NZM...4-ME550...875 (-S1)	E	1	1	1	1	1	1	1
NZM...4-ME1400 (-S1)	E	1	1	1	1	1	1	1
NZM...4-ME550...875 + XAV	E with XAV	1	1	1	1	1	1	1
NZM...4-ME1400 + XAV	E with XAV	1	0.98	0.93	0.89	0.85	0.83	0.8
Switch-disconnector / Molded Case Switch								
N1(-4) -63, PN1(-4)-63, NS1-63-NA		1	1	1	1	1	1	1
N1(-4) -100...125, PN1(-4)-100...125, NS1-100...125-NA		1	1	1	1	0.86	0.83	0.8
N1(-4) -160, PN1(-4)-160		1	1	1	0.95	0.9	0.85	0.8
N2(-4) -160...200, PN2(-4)-160...200, NS2-160...200-NA		1	1	1	1	1	1	1
N2(-4) -250, PN2(-4)-200, NS2-250-NA		1	1	1	1	0.9	0.85	0.8
N2(-4) -160...200 + XSV		1	1	1	1	1	1	1
N2(-4) -250, NS2-250-NA		1	0.97	0.92	0.87	0.81	-	-
N3(-4)-400, PN3(-4)-400, NS3-400-NA		1	1	1	1	1	1	1
N3(-4)-630, PN3(-4)-630, NS3-600-NA		1	1	1	1	0.9	0.85	0.8
N3(-4)-400 + XAV		1	1	1	1	1	1	1
N3(-4)-630 + XAV		0.96	0.92	0.87	0.83	0.78	0.75	0.73
N4(-4)-630...1250, NS4-800...1200-NA		1	1	1	1	1	1	1
N4(-4)-1600		1	1	1	1	0.87	0.85	0.82
N4(-4)-630...1250 + XAV		1	1	1	1	1	1	1
N4(-4)-1600 + XAV		1	0.98	0.93	0.89	0.85	0.83	0.8

Notes The derating coefficient must be considered in accordance with the following table in order to determine the maximum permissible current loading at different ambient temperatures.

Example: An NZM2-A250 should be operated at an ambient temperature of 65 °C.
How high is the permissible rated operational current I_e ?
At 65 °C the derating coefficient is 0.85, this means $I_e = 250 \text{ A} \times 0.85 = 212.5 \text{ A}$.
The NZM2-A250 may be operated at an ambient temperature of 65 °C with a maximum $I_e = 212.5 \text{ A}$.



NZM up to 250 A with thermomagnetic release (3- and 4-pole)

I _n [A]	Fixed mounting												
	NZM1-				NS1-				N1-, PN1-				
	A...(-NA)		M...		AF...-NA		S...-CNA		...-NA		P		R
P	R	P	R	P	R	P	R	P	R	P	R	P	R
[W]	[μOhm]	[W]	[μOhm]	[W]	[μOhm]	[W]	[μOhm]	[W]	[μOhm]	[W]	[μOhm]	[W]	[μOhm]
1.2	-	-	-	-	-	-	-	1.2	413000	-	-	-	-
1.6	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	0.5	66000	-	-	-	-
2.4	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	1.1	66000	-	-	-	-
5	-	-	-	-	-	-	-	0.4	9180	-	-	-	-
8	-	-	-	-	-	-	-	1	9180	-	-	-	-
12	-	-	-	-	-	-	-	0.5	1670	-	-	-	-
15	-	-	-	-	5.5	8180	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	1.3	1670	-	-	-	-
20	9.8	8180	-	-	9.8	8180	-	-	-	-	-	-	-
25	8.8	4680	-	-	8.8	4680	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	2	1050	-	-	-	-
30	-	-	-	-	8.2	3030	-	-	-	-	-	-	-
32	9.1	3030	-	-	-	-	-	-	-	-	-	-	-
33	-	-	-	-	-	-	-	3.2	1050	-	-	-	-
35	-	-	-	-	8.2	2220	-	-	-	-	-	-	-
40	11	2220	13.5	2810	11	2220	2.7	562	-	-	-	-	-
45	-	-	-	-	10.7	1760	-	-	-	-	-	-	-
50	13.5	1760	15	1880	13.5	1760	4.2	562	-	-	-	-	-
60	-	-	-	-	12.9	1190	-	-	-	-	-	-	-
63	14	1190	16.7	1250	-	-	6.7	562	6.7	562	6	380	-
70	-	-	-	-	12.5	850	-	-	-	-	-	-	-
80	15.5	850	21.1	1085	15.5	850	10.8	562	-	-	-	-	-
90	-	-	-	-	17.7	730	-	-	-	-	-	-	-
100	24	730	25	795	24	730	16.9	562	16.9	562	15	380	-
110	-	-	-	-	20.7	570	-	-	-	-	-	-	-
125	38	570	-	-	38	570	-	-	26.3	562	24	380	-
150	-	-	-	-	-	-	-	-	-	-	-	-	-
160	50	460	-	-	-	-	-	-	-	-	38	380	-
175	-	-	-	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-	-	-	-
225	-	-	-	-	-	-	-	-	-	-	-	-	-
250	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: The values stated in the table apply for 3- and 4-pole fixed mounted devices with an equal load distribution.
On 4-pole devices the current in the N-conductor is equal to zero.
The total resistive load is the measured value for a 3-pole or a 4-pole switch.
The total heat dissipation is the value measured at I_n, 50/60Hz for a 3-pole or 4-pole switch.
The heat dissipation can be calculated with the formula: P = 3 × R × I²

NZM up to 1600 A with electronic release (3- and 4-pole)

Fixed mounting		Supplementary Plug-in units		Fixed mounting		Supplementary Withdrawable units		Fixed mounting		Supplementary Withdrawable units	
NZM2-	N2, PN2			NZM3-NS3	N3-, PN3-			NZM4-NS4	N4-		
R	R	R	R	R	R	R	R	R	R	R	R
[μOhm]	[μOhm]	[μOhm]	[μOhm]	[μOhm]	[μOhm]	[μOhm]	[μOhm]	[μOhm]	[μOhm]	[μOhm]	[μOhm]
275	256	100	100	100	90	70	37	37	37	10	10

Note: The values stated in the table apply for 3- and 4-pole devices with an equal load distribution.
On 4-pole devices the current in the N-conductor is equal to zero.
The total resistive load is the measured value for a 3-pole or a 4-pole switch (independent of I_n and the type of release).
The total resistive load for a plug-in or withdrawable switch results from: the resistive value for fixed mounted + resistive value for plug-in or withdrawable.
The heat dissipation can be calculated with the formula: P = 3 × R × I²

Fixed mounting

Fixed mounting													
NZM2-				NS2-				N2-, PN2-					
A...(-NA)		M...		AF...-NA		S...-CNA		...-NA		P		R	
P	R	P	R	P	R	P	R	P	R	P	R	P	R
[W]	[μOhm]	[W]	[μOhm]	[W]	[μOhm]	[W]	[μOhm]	[W]	[μOhm]	[W]	[μOhm]	[W]	[μOhm]
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	6.2	750000	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	8.4	450000	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	0.2	4600	-	-	-	-
-	-	-	-	-	-	-	-	0.5	4600	-	-	-	-
-	-	-	-	-	-	-	-	0.4	1200	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	3	4250	-	-	-	-	-	-	-	-
-	-	-	-	-	-	1	1200	-	-	-	-	-	-
5.1	4250	5.1	4250	5.1	4250	-	-	-	-	-	-	-	-
8	4250	8	4250	6	3140	-	-	-	-	-	-	-	-
-	-	-	-	-	-	0.5	780	-	-	-	-	-	-
-	-	-	-	9	3140	-	-	-	-	-	-	-	-
10	3140	10	3140	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	0.9	780	-	-	-	-	-	-
-	-	-	-	11	2800	-	-	-	-	-	-	-	-
13	2800	13	2800	13	2800	1.5	317	-	-	-	-	-	-
-	-	-	-	15	2270	-	-	-	-	-	-	-	-
18	2270	18	2270	18	2270	2.5	317	-	-	-	-	-	-
-	-	-	-	19	1700	-	-	-	-	-	-	-	-
20	1700	20	1700	-	-	4	317	-	-	-	-	-	-
-	-	-	-	17	1070	-	-	-	-	-	-	-	-
22	1070	22	1070	22	1070	6	317	-	-	-	-	-	-
-	-	-	-	23	855	-	-	-	-	-	-	-	-
28	855	28	855	28	855	10	317	-	-	-	-	-	-
-	-	-	-	22	589	-	-	-	-	-	-	-	-
29	589	29	589	29	589	15	317	-	-	-	-	-	-
-	-	-	-	35	427	-	-	-	-	-	-	-	-
40	427	40	427	-	-	25	317	25	317	19.7	256	-	-
-	-	-	-	37	332	-	-	-	-	-	-	-	-
48	332	48	332	48	332	40	317	40	317	30.7	256	-	-
-	-	-	-	46	310	-	-	-	-	-	-	-	-
57	310	-	-	57	310	59.4	317	59.4	317	48	256	-	-

			NZM1, PN1, N1, NS1 160 A	$I_n^{(1)}$ A	NZM2, PN2, N2, NS2 250 A	$I_n^{(1)}$ A	NZM3, PN3, N3, NS3 630 A	$I_n^{(1)}$ A				
Terminal capacities												
Standard equipment												
Accessories												
			Box terminal		Screw terminal		Screw terminal					
			Screw connection		Box terminal		Box terminal					
			Tunnel terminal		Tunnel terminal		Tunnel terminal					
			Connection on rear		Connection on rear		Connection on rear					
Rated power of coil												
Box terminal	Solid	mm ²	1 × (10 – 16)	160	1 × (4 – 16)	250	2 × 16	500				
			2 × (6 – 16)		2 × (4 – 16)							
Tunnel terminal	Stranded	mm ²	1 × (25 – 70)	160	1 × (25 – 185)	250	1 × (35 – 240)	500				
			2 × 25		2 × (25 – 70)							
Tunnel terminal	Solid	mm ²	1 × 16	160	1 × 16	250	1 × (25 – 185)	350				
			Stranded		Single hole		mm ²		1 × (25 – 95)	1 × (25 – 185)	630	
					Double hole fitting		mm ²		–	1 × (50 – 240)		2 × 185
					4-hole		mm ²		–	2 × (50 – 240)		
Bolt terminal and rear-side connection												
Direct on the switch	Solid	mm ²	1 × (10 – 16)	160	1 × (4 – 16)	250	1 × 16	630				
			2 × (6 – 16)		2 × (4 – 16)		2 × 16					
Module plate	Stranded	mm ²	1 × (25 – 70) ³⁾	160	1 × (25 – 185)	250	1 × (25 – 240)	2 × 185				
			2 × 25		2 × (25 – 70)		2 × (25 – 240)					
Module plate	Single hole	min.	mm ²	–	–	–	–	–				
		max.	mm ²	–	–	–	–	–				
Module plate	Double hole	min.	mm ²	–	–	–	–	–				
		max.	mm ²	–	–	–	–	–				
Connection width extension			mm ²	–	–	–	2 × 300	630				
								2 × 185				
Al conductors, Al cable												
Tunnel terminal	Solid	mm ²	1 × 16	160	1 × 16	250	1 × 16	350				
			2 × (25 – 95)		1 × (25 – 185)		1 × (25 – 185) ²⁾					
Tunnel terminal	Stranded	Single hole	mm ²	–	–	–	–	630				
		Double hole fitting	mm ²	–	–	–	–	–				
		4-hole	mm ²	–	–	–	–	–				
Bolt terminal and rear-side connection												
Direct on the switch	Solid	mm ²	1 × (10 – 16)	160	1 × (10 – 16)	250	1 × 16	400				
			2 × (10 – 16)		2 × (10 – 16)		2 × (10 – 16)					
Module plate	Stranded	mm ²	1 × (25 – 35)	160	1 × (25 – 50)	250	1 × (25 – 120)	400				
			2 × (25 – 35)		2 × (25 – 50)		2 × (25 – 120)					
Module plate	Single hole	min.	mm ²	–	–	–	–	–				
		max.	mm ²	–	–	–	–	–				
Module plate	Single hole	min.	mm ²	–	–	–	–	–				
		max.	mm ²	–	–	–	–	–				
Module plate	Double hole	min.	mm ²	–	–	–	–	–				
		max.	mm ²	–	–	–	–	–				
Connection width extension			mm ²	–	–	–	–	–				
Cu strip (number of segments x width x segment thickness)												
Box terminal	min.	mm	2 × 9 × 0.8	160	2 × 9 × 0.8	250	6 × 16 × 0.8	630				
			max.		mm		9 × 9 × 0.8		10 × 16 × 0.8	10 × 24 × 1.0 + 5 × 24 × 1.0 (2 ×) 8 × 24 × 1.0		
Flat conductor terminal	min.	mm	–	160	–	250	–	630				
			max.		mm		–		–			
Module plate	Single hole	min.	mm	–	–	–	–	–				
		max.	mm	–	–	–	–	–				
Bolt terminal and rear-side connection												
Flat copper strip, with holes	min.	mm	–	160	2 × 16 × 0.8	250	6 × 16 × 0.8	630				
			max.		mm		10 × 16 × 0.8		10 × 32 × 1.0 + 5 × 32 × 1.0			
Connection width extension	min.	mm ²	–	160	–	250	(2 ×) 10 × 50 × 1.0	630				
			max.		mm ²		–		–	–		
Copper busbar (width × thickness)												
Bolt terminal and rear-side connection												
Screw connection	min.	mm	M6	160	M8	250	M10	630				
			12 × 5		16 × 5		20 × 5					
Direct on the switch	max.	mm	16 × 5	160	20 × 5	250	30 × 10 + 30 × 5	630				
			–		–		–					
Module plate	Single hole	min.	mm	–	–	–	–	–				
		max.	mm	–	–	–	–	–				
Module plate	Double hole	min.	mm	–	–	–	–	–				
		max.	mm	–	–	–	–	–				
Connection width extension	min.	mm	–	160	–	250	–	630				
			max.		mm		–		–	–		

Notes

¹⁾ The rated currents I_n have been determined conform to IEC/EN 60947 (switchgear standard) and generally relate to the max. defined cross-sections and are intended for the purpose of orientation. The engineering standards which apply in each case must be observed.

²⁾ depending on the cable manufacturer up to 240 mm² can be connected.

³⁾ depending on the cable manufacturer up to 95 mm² can be connected.

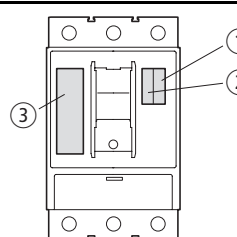
NZM4, N4, NS4 1600 A		$I_n^{(1)}$ A	NZM...1...NA, NS1...NA		NZM...2...NA, NS2...NA		NZM...3...NA, NS3...NA		NZM...4...NA, NS4...NA	
Screw terminal			Box terminal		Screw terminal		Screw terminal		Screw terminal	
Tunnel terminal			Screw connection		Box terminal		Box terminal		Tunnel terminal	
Connection on rear			Tunnel terminal		Tunnel terminal		Tunnel terminal		Connection on rear	
Strip terminal			Connection on rear		Connection on rear		Connection on rear		Strip terminal	
			AWG		1 × (12 ... 6)		1 × (12 ... 6)		–	
			AWG/kcmil		1 × (4 ... 2/0)		1 × (4 ... 350)		1 × (2 – 500)	
			AWG		1 × 6		1 × 6		1 × 6	
			AWG/kcmil		1 × (4 ... 3/0)		1 × (4 – 350)		1 × (4 – 350)	
			–		–		–		1 × (0 – 500)	
			–		–		–		2 × (0 – 500)	
4 × (50 – 240)		1400	AWG/kcmil		–		–		4 × (0 – 500)	
			AWG		1 × (12 ... 6)		1 × (12 – 6)		–	
			AWG/kcmil		2 × (9 ... 6)		1 × (4 ... 3/0)		1 × (250 ... 350)	
1 × (120 ... 185)		1250	kcmil		–		–		1 × (250 – 600)	
4 × (50 ... 185)		1000	AWG/kcmil		–		–		4 × (0 ... 350)	
1 × (120 – 300)		1000	AWG/kcmil		–		–		2 × (3/0 – 600)	
2 × (95 – 300)		1400	AWG/kcmil		–		–		2 × (3/0 – 350)	
2 × (95 – 185)		1400	AWG/kcmil		–		–		4 × (2 – 350)	
4 × (35 – 185)		1600	AWG/kcmil		–		–		2 × 500	
4 × 300		1600	AWG/kcmil		–		–		4 × 600	
6 × (95 – 240)		4 × 240	AWG/kcmil		–		–		6 × (3/0 – 500)	
			AWG		–		–		–	
			AWG/kcmil		–		–		–	
			AWG/kcmil		–		–		–	
4 × (50 – 240)		1400	AWG/kcmil		–		–		–	
			AWG		–		–		–	
			AWG/kcmil		–		–		–	
			AWG/kcmil		–		–		–	
1 × (185 – 240)		pleaes inquire	kcmil		–		–		–	
2 × (70 – 185)		pleaes inquire	AWG/kcmil		–		–		–	
4 × 50		–	AWG		–		–		–	
2 × 240		pleaes inquire	AWG/kcmil		–		–		–	
6 × (70 – 240)		–	AWG/kcmil		–		–		–	
			mm		2 × 9 × 0.8		2 × 9 × 0.8		6 × 16 × 0.8	
			mm		9 × 9 × 0.8		10 × 16 × 0.8		10 × 24 × 1.0 + 5 × 24 × 1.0 (2 ×) 8 × 24 × 1.0	
6 × 16 × 0.8		1100	mm		–		–		6 × 16 × 0.8	
(2 ×) 10 × 32 × 1.0		1250	mm		–		–		(2 ×) 10 × 32 × 1.0	
(2 ×) 10 × 50 × 1.0		(2 ×) 10 × 40 × 1.0	mm		–		–		(2 ×) 10 × 50 × 1.0	
			mm		–		–		–	
(2 ×) 10 × 50 × 1.0		1600	mm		–		2 × 16 × 0.8		6 × 16 × 0.8	
(2 ×) 10 × 50 × 1.0		1600	mm		–		10 × 16 × 0.8		10 × 32 × 1.0 + 5 × 32 × 1.0	
			mm		–		–		(2 ×) 10 × 50 × 1.0	
(2 ×) 10 × 80 × 1.0		1600	mm		–		–		(2 ×) 10 × 50 × 1.0	
		2 × (10 × 50 × 1.0)	mm		–		–		(2 ×) 10 × 80 × 1.0	
			M10		M6		M8		M10	
25 × 5		1600	mm		12 × 5		16 × 5		20 × 5	
2 × (50 × 10)		2000	mm		16 × 5		20 × 5		30 × 10 + 30 × 5	
2 × (80 × 10)		1250	mm		–		–		–	
25 × 5		1250	mm		–		–		25 × 5	
2 × (50 × 10)		2 × (40 × 10)	mm		–		–		2 × (50 × 10)	
2 × (50 × 10)		1500	mm		–		–		2 × (50 × 10)	
60 × 10		1600	mm		–		–		60 × 10	
2 × (80 × 10)		2 × (50 × 10)	mm		–		–		2 × (80 × 10)	

at AC = 50/60 Hz			M22-K...	NZM-XHIV	NZM-XHI
Auxiliary contacts					
Rated operational voltage					
AC	U_e	V AC	500	500	500
DC	U_e	V DC	220	220	220
Conventional thermal current					
	$I_{th} = I_e$	A	4	4	4
Rated operational current					
AC-15	115 V	I_e	A	4	4
	230 V	I_e	A	4	4
	400 V	I_e	A	2	2
	500 V	I_e	A	1	1
DC-13	24 V	I_e	A	3	3
	42 V	I_e	A	1.7	1.5
	60 V	I_e	A	1.2	0.8
	110 V	I_e	A	0.8	0.5
	220 V	I_e	A	0.3	0.2
Short-circuit protection					
max. fuse		A gG/gL	10	10	10
Max. miniature circuit-breaker		A	PKZM0-10/FAZ-B6	FAZ-B6	FAZ-B6
Early-make time compared to the main contacts during switch on and off (switching times with manual operation)		ms		NZM1, PN1, N(S)1: approx. 20 NZM2, PN2, N(S)2: approx. 20 NZM3, PN3, N(S)3: approx. 20 NZM4, N(S)4: approx. 90 With NZM4/N(S)4 the HIV does not feature early break.	
Terminal capacities					
Solid or flexible conductor with ferrule		mm ²	1 × (0.75 – 2.5) 2 × (0.75 – 2.5)	1 × (0.75 – 2.5) 2 × (0.75 – 2.5)	1 × (0.75 – 2.5) 2 × (0.75 – 2.5)
		AWG	1 × (18 – 14) 2 × (18 – 14)	1 × (18 – 14) 2 × (18 – 14)	1 × (18 – 14) 2 × (18 – 14)
UL/CSA					
Rated operational current		I_e	A	10 A ... 600 V AC 1 A ... 250 V DC	2.5 A – 240 V AC 1 A – 250 V DC
Heavy Pilot Duty				A600/P300 above 300 V AC same polarity	C300/R300

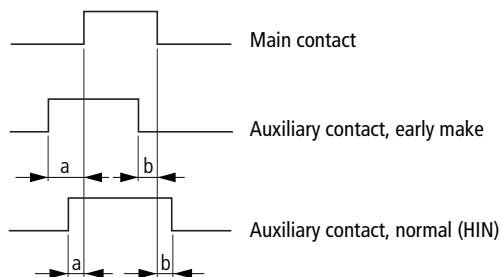


Equipping with auxiliary contacts, time differences

Maximum equipment and position of the internal accessories

	③ -XHIV(2S) or -XA or -XU	② HIA	① HIN	Contacts per slot with HIA and HIN
				
NZM1, N(S)1	1	1	1	1 N/O
NZM2, N(S)2	1	1	2	1 N/C
NZM3, N(S)3	1	1	3	2 N/O
NZM4, N(S)4	1	2	3	2 N/C
PN1	1	–	1	1 N/O, 1 N/C
PN2	1	–	2	N/O = normally open contact N/C = normally closed contact
PN3	1	–	3	

Time differences ON-OFF



	Time difference a (ms)						Time difference b (ms)					
	Manual operation			Motor operators			Manual operation			Motor operators		
	HIV	HIN	K01	HIV	HIN	K01	HIV	HIN	K01	HIV	HIN	K01
NZM1	20 ²⁾	0	2.5	–	–	–	20 ²⁾	0	2.5	–	–	–
NZM2	20 ²⁾	3.5	6.5	Not permissibl	2.5	4.5	20 ²⁾	3	4.5	Not permissibl	3	4
NZM3	20 ²⁾	4	8	Not permissibl	2	4	20 ²⁾	3.5	8	Not permissibl	3	6.5
NZM4	90 ²⁾	7	11	Not permissibl	on request	on request	0 ¹⁾²⁾	12	15	Not permissibl	on request	on request

Notes
 1) With NZM4/N(S)4 the HIV does not feature early break.
 2) Minimum value, as it is dependent on the switching speed



				NZM1(2/3)-XU...	NZM4-XU...
Undervoltage release					
Rated control voltage					
Alternating voltage at 50/60 Hz	U_s	V AC		24...600	24...600
DC	U_s	V DC		12...250	12...250
Operating range					
Drop-out voltage		$\times U_s$		0.35 – 0.7	0.35 – 0.7
Pick-up voltage		$\times U_s$		0.85 – 1.1	0.85 – 1.1
Power consumption					
AC					
Pick-up AC		VA		1.5	3.6
Sealing AC		VA		1.5	3.6
DC					
Pick-up DC		W		0.8	2.5
Sealing DC		W		0.8	2.5
Max. opening delay (response time until the main circuits open)		ms		19	23
Minimum command time		ms		10 – 15	10 ... 15
Terminal capacities					
Solid or flexible conductor with ferrule		mm ²		1 × (0.75 ... 2.5) 2 × (0.75 ... 2.5)	1 × (0.75 ... 2.5) 2 × (0.75 ... 2.5)
		AWG		1 × (18 ... 14) 2 × (18 ... 14)	1 × (18 ... 14) 2 × (18 ... 14)

				UVU-NZM	
Undervoltage releases, off-delayed					
Rated operational voltage					
Alternating voltage at 50/60 Hz	U_e	V AC		24, 220 – 550	
DC	U_e	V DC		24	
Inrush current (peak value)	I_e	mA		< 500	
Power consumption		VA		50	
Delay time	t_{sd}	ms		70 – 4000	
With additional external capacitor, 90.000 µF \geq 35 V		s		To 16	
With additional external capacitor, 30.000 µF \geq 35 V		s		To 8	
Terminal capacities					
Solid or flexible conductor with ferrule		mm ²		1 × (0.5 – 2.5) 2 × (0.5 – 1.5)	

				NZM1(2/3)-XA...	NZM4-XA...	NZM2/3-XA...-MNS	NZM4-XA...-MNS
Shunt release							
Rated control voltage							
AC	U_s	V AC		12...440	12...440	230	230
DC	U_s	V DC		12...440	12...440		
Frequency range		Hz		0 – 400	0 – 400	50/60	50/60
Operating range							
AC		$\times U_s$		0.7...1.1	0.7...1.1	0.1...1.1	0.1...1.1
DC		$\times U_s$		0.7...1.1	0.7...1.1		
Power consumption							
Pick-up AC/DC		VA/W		2.5	2.5	–	–
Sealing AC/DC		VA/W		2.5	2.5	–	–
Maximum current consumption at 110% U_s (230 V 50 Hz)		A		–	–	0.5	1
Max. opening delay (response time until the main circuits open)		ms		20	22	20	22
Duty factor		ms		∞	∞	1000 ms	1000 ms
Minimum command time		ms		10 ... 15	10 ... 15	10 ... 15	10 ... 15
Terminal capacities							
Solid or flexible conductor with ferrule		mm ²		1 × (0.75 ... 2.5) 2 × (0.75 ... 2.5)	1 × (0.75 ... 2.5) 2 × (0.75 ... 2.5)	1 × (0.75 ... 2.5) 2 × (0.75 ... 2.5)	1 × (0.75 ... 2.5) 2 × (0.75 ... 2.5)
		AWG		1 × (18 ... 14) 2 × (18 ... 14)	1 × (18 ... 14) 2 × (18 ... 14)	1 × (18 ... 14) 2 × (18 ... 14)	1 × (18 ... 14) 2 × (18 ... 14)

Remote operator, capacitor units

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NZM-XCM, NZM...-XR...



			NZM-XCM		
Capacitor unit for shunt release					
Rated operational voltage	U_e	V AC	230		
Rated operational current	I_e	mA	< 10		
Inrush current (peak value)	I_e	A	3		
Terminal capacities					
Solid or flexible conductor with ferrule		mm ²	1 × (0.5 – 2.5) 2 × (0.5 – 1.5)		
		AWG	1 × (20 – 14) 2 × (20 – 16)		
			NZM2-XR...		NZM3-XR...
Remote operator					
Rated control voltage					
AC	U_s	V AC	110...440		110...440
DC	U_s	V DC	24...250		24...250
Operating range					
AC	U_s		0.85...1.1		0.85...1.1
DC	U_s		0.85...1.1		0.85...1.1
Motor rating					
AC	110 ... 130 V AC	VA	350		350
	208 ... 240 V AC	VA	350		350
	380 ... 440 V AC	VA	350		350
DC	24 ... 30 V DC	W	250		250
	110 ... 130 V DC	W	250		250
	220 ... 250 V DC	W	250		250
Rated power of coil					
AC	110 ... 130 V AC	VA	270		270
	208 ... 240 V AC	VA	270		270
	380 V ... 440 V AC	VA	270		270
DC	24 ... 30 V DC	W	210		210
	100 ... 130 V DC	W	210		210
	220 ... 250 V DC	W	210		210
Total make time			ms		60
Total opening delay			ms		300
Minimum signal duration					
with switch on		ms	30		30
with switch off		ms	150		250
Lifespan, mechanical			Operations		20000
Maximum operating frequency			Ops./h		120
Terminal capacities					
Solid or flexible conductor with ferrule		mm ²	0.75 ... 2.5		0.75 ... 2.5
		AWG	18 ... 14		18 ... 14



			DMI
General			
Dimensions (W × H × D)		mm	107.5 × 90 × 53
Modular spacing (space units)			6 space units wide
Weight		kg	0.3
Mounting			Top-hat rail IEC/EN 60715, 35 mm
Climatic environmental conditions			
Operating ambient temperature		°C	0 to +55
Mounting position			horizontal, vertical
Condensation			Prevent condensation by means of suitable measures
LCD display (clearly legible)		°C	0 to +55
Storage/Transport		°C	-40 to +70
Relative humidity, non-condensing (IEC/EN 60068-2-30)		%	5...95
Air pressure (operation)		hPa	795...1080
Corrosion resistance			
IEC/EN 60068-2-42	4 days SO ₂	cm ³ /m ³	10
IEC/EN 60068-2-43	4 days H ₂ S	cm ³ /m ³	1
Ambient conditions, mechanical			
Pollution degree			2
Degree of protection IEC/EN 60529			IP20
Vibrations (IEC/EN 60068-2-6)			
Constant amplitude 0.15 mm		Hz	10...57
Constant acceleration 2 g		Hz	57...150
Mechanical shock resistance (IEC/EN 60068-2-27) semi-sinusoidal 15 g/11 ms		Impacts	18
Drop to IEC/EN 60068-2-31	Drop height	mm	50
Free fall, packaged (IEC/EN 60068-2-32)		m	1
Power supply			
Rated operational voltage	U_e	V	24
Admissible range		V DC	20.4...28.8
Residual ripple		%	≦ 5
Input current at 24 V DC		mA	210
Voltage dips (IEC/EN 61131-2)		ms	10
Heat dissipation at 24 V DC		W	5



				EASY221-CO	EASY222-DN	NZM-XDMI-DPV1
General						
Standards and regulations				EN 55011, EN 55022, EN 61000-4, IEC 60068-2-6, IEC 60068-2-27		
Dimensions (W × H × D)		mm	35.5 × 90 × 58 (2 space units)	35.5 × 90 × 58 (2 space units)	35.5 × 90 × 58 (2 space units)	
Weight		kg	0.15	0.15	0.15	
Mounting				Top-hat rail EN 50022, 35 mm or screw fixing using fixing brackets ZB4-101-GF1 (accessories)		
Terminal capacity						
Solid		mm ²	0.2 / 4 (AWG 22 – 12)	0.2 / 4 (AWG 22 – 12)	0.2 / 4 (AWG 22 – 12)	
Flexible with ferrule		mm ²	0.2 / 2.5 (AWG 22 – 12)	0.2 / 2.5 (AWG 22 – 12)	0.2 / 2.5 (AWG 22 – 12)	
Standard screwdriver		mm	3.5 × 0.8	3.5 × 0.8	3.5 × 0.8	
Max. tightening torque		nm	0.6	0.6	0.6	
Ambient climatic conditions						
Operational ambient temperature		°C	-25 to 55, low temperatures to IEC 60068-2-1, high temperatures to IEC 60068-2-2			
Condensation				Prevent condensation with suitable measures		
Storage		°C	40 – 70	40 – 70	40 – 70	
Relative humidity, non-condensing (IEC/EN 60068-2-30)		%	5 – 95	5 – 95	5 – 95	
Air pressure (in operation)		hPa	795 – 1080	795 – 1080	795 – 1080	
Corrosion resistance						
IEC/EN 60068-2-42		4 days SO ₂	cm ³ /m ³	10	10	10
IEC/EN 60068-2-43		4 days H ₂ S	cm ³ /m ³	1	1	1
Ambient mechanical conditions						
Pollution degree			2	2	2	
Degree of protection (IEC/EN 60529)			IP20	IP20	IP20	
Vibrations (IEC/EN 60068-2-6)						
Constant amplitude 0.15 mm		Hz	10 – 57	10 – 57	10 – 57	
Constant acceleration 2 g		Hz	57 – 150	57 – 150	57 – 150	
Mechanical shock resistance (IEC/EN 60068-2-27) semi-sinusoidal 15 g/11 ms		Shocks	18	18	18	
Drop to IEC/EN 60068-2-31		Drop height	mm	50	50	
Free fall, packaged (IEC/EN 60068-2-32)			m	1	1	
Mounting position				Horizontal/vertical		
Electromagnetic compatibility (EMC)						
Electrostatic discharge (IEC/EN 61000-4-2, Level 3, ESD)						
Air discharge		kV	8	8	8	
Contact discharge		kV	6	6	6	
Electromagnetic fields (IEC/EN 61000-4-3, RFI)		V/m	10	10	10	
Radio interference suppression (EN 55011)				EN 55011 Class B EN 55022 Class B		
EN 55011 Class A EN 55022 Class A						
Burst pulses (IEC/EN 61000-4-4, level 3)						
Power cables		kV	2	2	2	
Signal cables		kV	2	2	2	
High-energy pulses (surge) (IEC/EN 61000-4-5, level 2)		kV	0.5 (supply cables, symmetrical)			
Line-conducted interference (IEC/EN 61000-4-6)		V	10	10	10	



			EASY221-CO	EASY222-DN	NZM-XDMI-DPV1
Insulation resistance					
Clearance and creepage distances			EN 50178, UL 508, CSA C22.2, No. 142		
Insulation resistance			EN 50178		
Power supply					
Rated operational voltage	U_e	V	24 (-15/+20 %)	24 (-15/+20 %)	24 (-15/+20 %)
Admissible range		V DC	20.4 – 28.8	20.4 – 28.8	20.4 – 28.8
Residual ripple		%	< 5	< 5	< 5
At 24 V DC		mA	typically 200	typically 200	Normally 200
Voltage dips (IEC/EN 61131-2)		ms	10	10	10
Heat dissipation at 24 V DC		W	4.8	4.8	4.8
Protection against polarity					
Power supply			Yes	Yes	Yes
LED displays					
Power supply			RUN LED (RUN): green	Module status LED (MS): green	Power LED (POW): green
LED display			LED ERROR (ERR): red	Network status LED (NS): red/green	PROFIBUS-DP LED (BUS): red
Network					
Connection types			RJ45	5-pole, pluggable screw terminal	SUB-D 9-pole, socket
Potential isolation			Between bus and power supply (simple), between bus and power supply and NZM-XDMI612 (safe isolation)	Between bus and power supply (simple), between bus and power supply and NZM-XDMI612 (safe isolation)	Between bus and power supply (simple), between bus and power supply and NZM-XDMI612 (safe isolation)
Function			CANopen slave	DeviceNet slave	PROFIBUS-DP slave
Interface			CAN	CAN	RS 485
Bus protocol			CANopen	DeviceNet	PROFIBUS-DP
Baud rates			Automatic search up to 1 MBit/s	Automatic search up to 500 kBit/s	Automatic search up to 12 MBit/s
Bus termination resistors			Separate external bus termination required (120 Ω) NZM-XDMI612	Separate external bus termination required (120 Ω) NZM-XDMI612	Separate external bus termination required
Bus addresses			1 ... 127 addressed via display	0 ... 63 addressed via display	1 ... 126 via DMI
Services					
Cyclic			All data R1 – R16, S1 – S8	All data R1 – R16, S1 – S8	Status ON/Off, tripped (detailed), load early warnings, phase currents $I_1/I_2/I_3$ [A], remote operator acutation, display/operation NZM-XDMI612, inputs/outputs, motor starter functions
Acyclical			Read/write, real-time, summer/winter time, all the parameters of the easy function relay	Read/write, real-time, summer/winter time, all the parameters of the easy function relay	Display/match protection settings, event list, identification, hours of operation, switching operations, time



			PFR-003	PFR-03	PFR-5
Electrical					
Standards			IEC/EN 60947-2, IEC 755, IEC 1008, IEC 1009		
Sensitivity			Pulse current sensitive, type A		
Rated control voltage	U_s	V AC	230 ±20 % (50/60 Hz)		
Motor rating	P_e	W	3	3	3
Rated fault currents	$I_{\Delta n}$	mA	0.03	0.3	0.03, 0.1, 0.3, 0.5, 1, 3, 5
Delay time	t_v	s	0.02 (non-delayed)	0.02 (non-delayed)	0.02, 0.1, 0.3, 0.5, 1, 3, 5
Relay contacts			1 integrated changeover contact	1 integrated changeover contact	1 integrated changeover contact
Rated voltage of the relay contact		V AC/DC	250/100	250/100	250/100
Rated current of the relay contact		A	6	6	6
Fault current warning		Hz	–	–	0.5 = 25% – 50% $I_{\Delta n}$ 1 = 50% – 75% $I_{\Delta n}$ 2 = 75% – 100% $I_{\Delta n}$
Mechanical					
Standard front dimension		mm	45	45	45
Device height		mm	85	85	85
Device width		mm	45	45	45
Mounting			Snap fixing, top-hat rail DIN 46277, IEC/EN 60715		
Terminals top and bottom			Box terminals		
Terminal protection			Finger/back-of-hand proof to BGV A2, VDE 106 part 100		
Terminal capacities		mm ²	2 × 0.75 – 2.5 solid, 2 × 0.75 – 1.5 flexible/with ferrules		
Sealability				–	yes



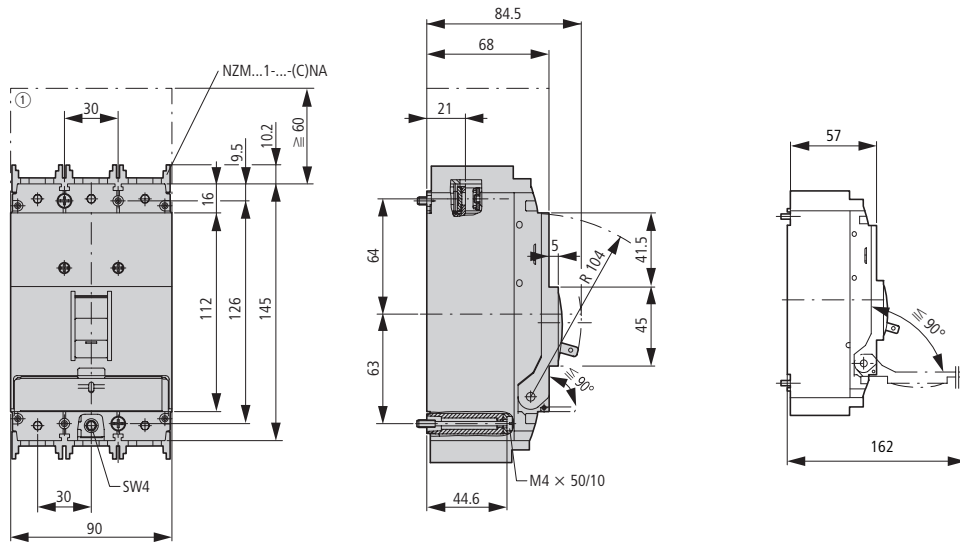
xEnergy		NZM...-XFI...		Moeller HPL0211-2007/2008		http://catalog.moeller.net	
		NZM1(-4)-XFI30R	NZM1(-4)-XFI300R	NZM1(-4)-XFIR	NZM1(-4)-XFI30U		
Electrical							
Standards		IEC/EN 60947-2	IEC/EN 60947-2	IEC/EN 60947-2	IEC/EN 60947-2		
Sensitivity		Pulse current sensitive according to core-balance principle					
Min. operating voltage							
or detection of fault currents type A/ AC		80 V (dependent on mains voltage)	80 V (dependent on mains voltage)	80 V (dependent on mains voltage)	80 V (dependent on mains voltage)		
or detection of fault currents type B							
Suitability for the application							
Rated operational voltage	U_e	V AC	200...415 (3~)	200...415 (3~)	200...415 (3~)	200...415 (3~)	
Rated frequency	f	Hz	50/60	50/60	50/60	50/60	
Number of poles			3/4	3/4	3/4	3/4	
Rated current range	I_n	A	15...125	15...125	15...125	15...100	
Rated fault currents	$I_{\Delta n}$	A	0.03	0.3	0.03...0.1...0.3...0.5...1...3	0.03	
Detection range of the fault current			50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	
Rated ultimate short-circuit making capacity and -rated ultimate short-circuit breaking capacity	$I_{\Delta m}$	A	= I_{CU}	= I_{CU}	= I_{CU}	= I_{CU}	
Fault current warning			$\geq 0.3 \times I_{\Delta n}$	$\geq 0.3 \times I_{\Delta n}$	$\geq 0.3 \times I_{\Delta n}$	$\geq 0.3 \times I_{\Delta n}$	
Mechanical							
Standard front dimension		mm	45	45	45	45	
Mounting			on the right side	sidewise on the right	Bottom	Bottom	
Mounting position			Vertical and 90° in all directions				
Supply			NZM1 from above	NZM1 from above	NZM1 from above	NZM1 from above	
Degree of protection			IP20 in the operating component area				
Ambient temperature		°C	-5...+40	-5...+40	-5...+40	-5...+40	
Sealability					yes, setting buttons		
Terminal capacity							
Flexible without ferrule		mm ²	such as NZM1 standard terminal				
flexible with ferrules		mm ²	such as NZM1 standard terminal				

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		NZM1(-4)-XFI300U	NZM1(-4)-XFIU	+NZM2-4-XFI30	+NZM2-4-XFI	+NZM2-4-XFIA30	+NZM2-4-XFIA
Electrical							
Standards		IEC/EN 60947-2	IEC/EN 60947-2	IEC/EN 60947-2	IEC/EN 60947-2	IEC/EN 60947-2	IEC/EN 60947-2
Sensitivity		Pulse current sensitive according to core-balance principle	Pulse current sensitive according to core-balance principle	Pulse current sensitive according to core-balance principle	Pulse current sensitive according to core-balance principle	Sensitive to AC/DC (type B)	Sensitive to AC/DC (type B)
Min. operating voltage							
80 V (dependent on mains voltage)		80 V (dependent on mains voltage)	80 V (dependent on mains voltage)	independent of mains voltage	independent of mains voltage	0 V independent of mains voltage	0 V independent of mains voltage
						50 V (dependent on mains power)	50 V (dependent on mains voltage)
Suitability for the application							
Rated operational voltage		200...415 (3~)	200...415 (3~)	280...690	280...690	50...400 (3~)	50...400 (3~)
Rated frequency		50/60	50/60	50/60	50/60	50/60	50/60
Number of poles		3/4	3/4	4	4	4-pole	4-pole
Rated current range		15...100	15...100	15...250	15...250	15...250	15...250
Rated fault currents		0.3	0.03...0.1...0.3...0.5...1...3	0.03	0.1...0.3...1...3	0.03	0.1...0.3...1
Detection range of the fault current		50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	with AC voltage: 0 – 100 kHz with pulsed DC voltage: 50 Hz	with AC voltage: 0 – 100 kHz with pulsed DC voltage: 50 Hz
Rated ultimate short-circuit making capacity and -rated ultimate short-circuit breaking capacity		= I_{CU}	= I_{CU}	= I_{CU}	= I_{CU}	= I_{CU}	= I_{CU}
Fault current warning		$\geq 0.3 \times I_{\Delta n}$	$\geq 0.3 \times I_{\Delta n}$	-	-	-	-
Mechanical							
Standard front dimension		45	45	96	96	96	96
Mounting		Bottom	Bottom	Bottom	Bottom	Bottom	Bottom
Mounting position		Vertical and 90° in all directions					
Supply		NZM1 from above	NZM1 from above	As required	As required	Bottom	Bottom
Degree of protection		IP20 in the operating component area					
Ambient temperature		-5...+40	-5...+40	-25...+70	-25...+70	-25...+70	-25...+70
Sealability			yes, setting buttons			yes, setting buttons	yes, setting buttons
Terminal capacity							
Flexible without ferrule		such as NZM1 standard terminal		with NZM2 standard connection			
flexible with ferrules		such as NZM1 standard terminal		with NZM2 standard connection			

**Circuit-breaker
Switch-disconnector**

3 pole

- NZMB1
- NZMC1
- NZMN1
- NZMH1
- PN1
- N1
- NS1



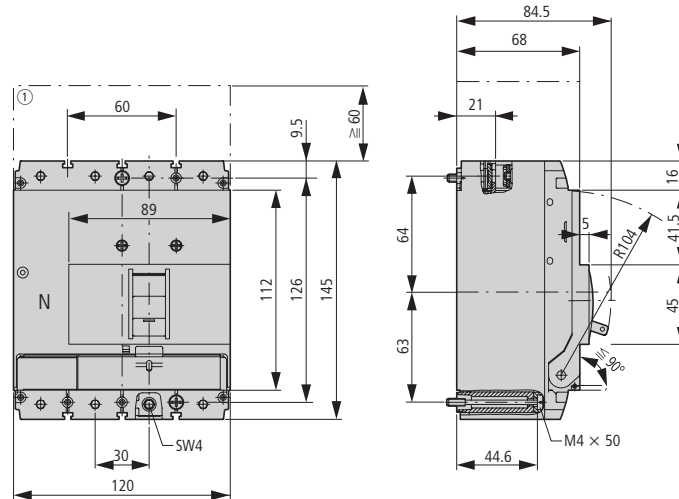
① Blow out area, minimum clearance to other parts ≥ 60 mm

Circuit-breaker

Switch-disconnector

4 pole

- NZMB1-4
- NZMN1-4
- NZMH1-4
- PN1-4
- N1-4



① Blow out area, minimum clearance to other parts ≥ 60 mm

Covers

NZM1(-4)-XKSA

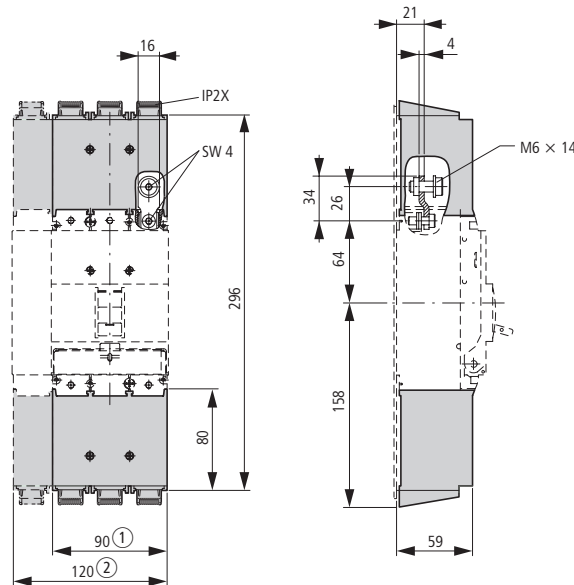
Screw connection

NZM1(-4)-XKS

IP2X protection against contact with a finger for shroud

NZM1(-4)-XIPA

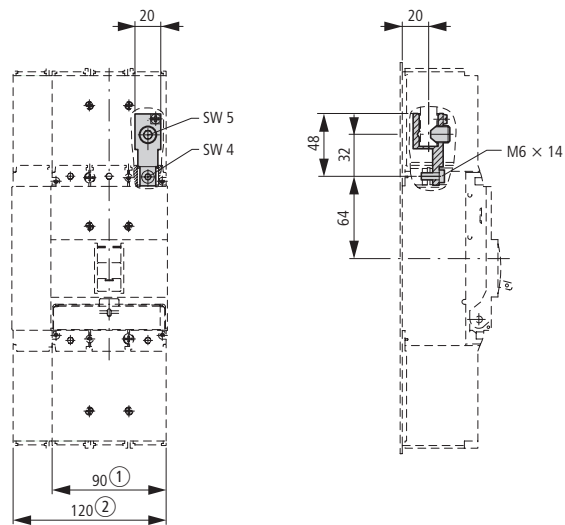
Screw connection



① 3 pole
② 4 pole

Tunnel terminal

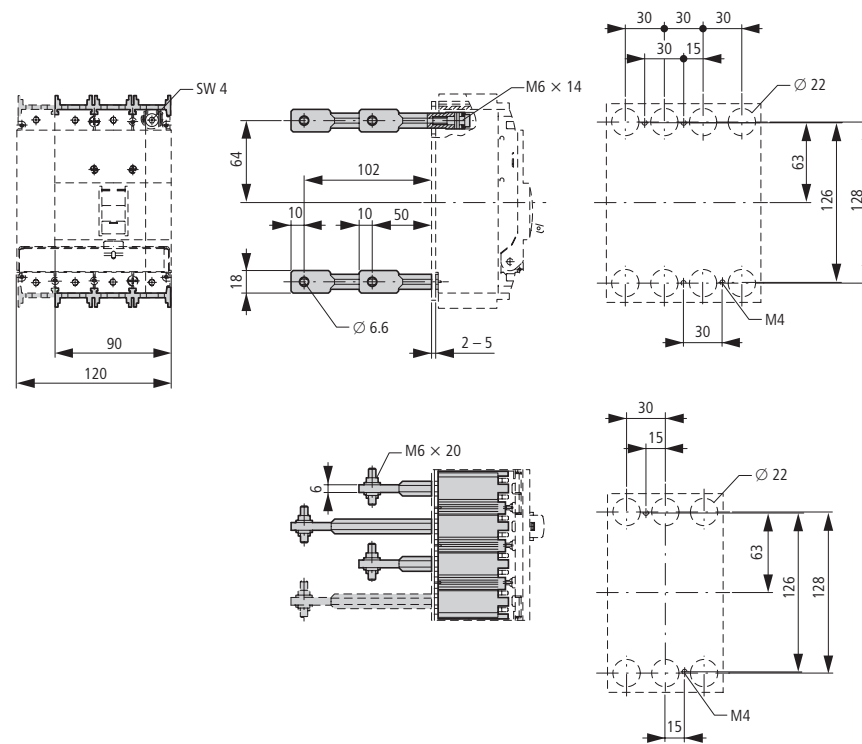
NZM1(-4)-XKA



- ① 3 pole
- ② 4 pole

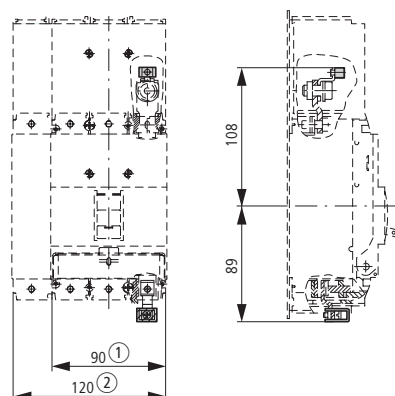
Connection on rear

NZM1(4)-XKR



Control circuit terminal

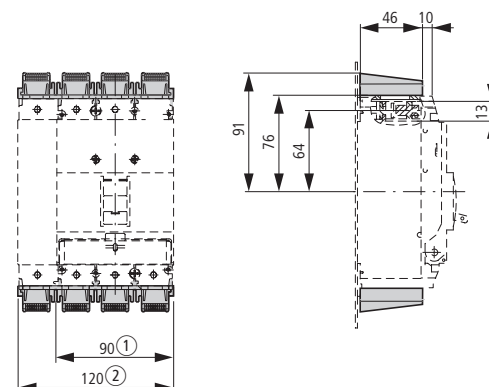
NZM1-XIPK, NZM-XSTK



- ① 3 pole
- ② 4 pole

IP2X protection against contact with a finger

NZM1(-4)-XIPK

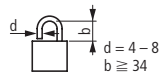
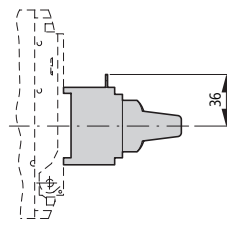
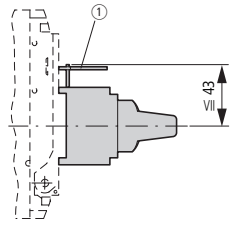
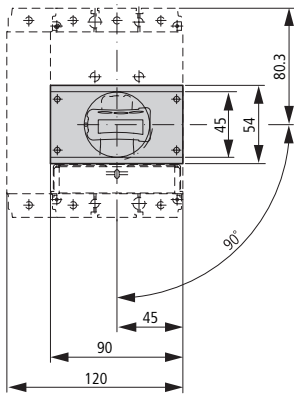


Rotary drive

Rotary handle on circuit-breaker

NZM1-XDV
NZM1-XDVR

NZM1-XDTV

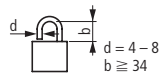
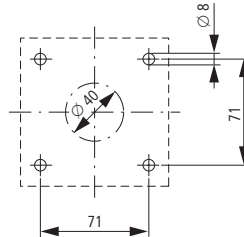
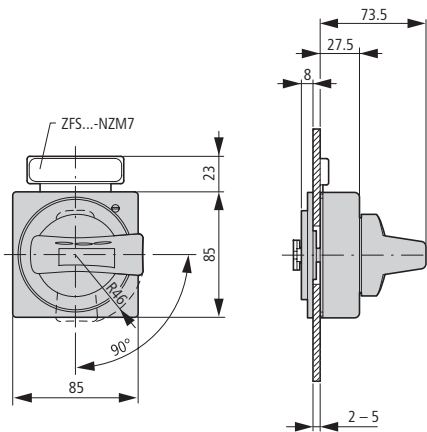


d = 4 - 8
b ≥ 34

① Up to 3 padlocks

Door coupling rotary handle

NZM1-XTVD(V)(R)(-NA)

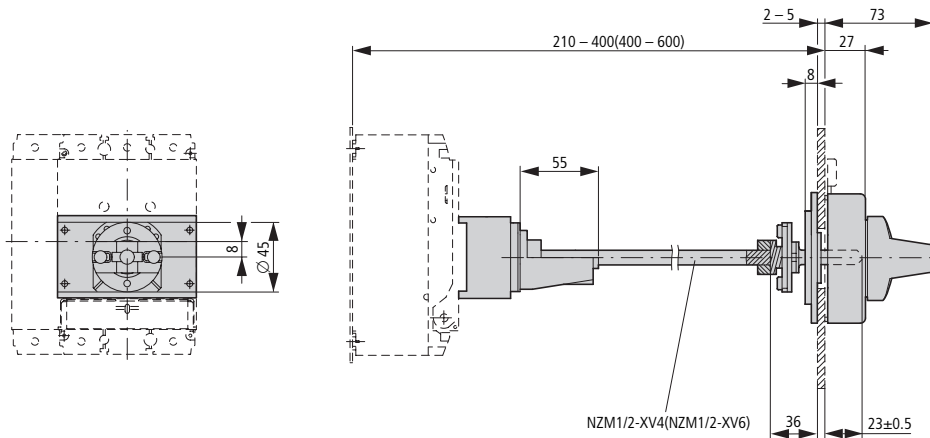


d = 4 - 8
b ≥ 34

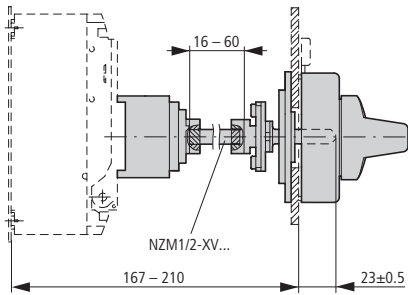
① Up to 3 padlocks

Door coupling rotary handle with extension shaft

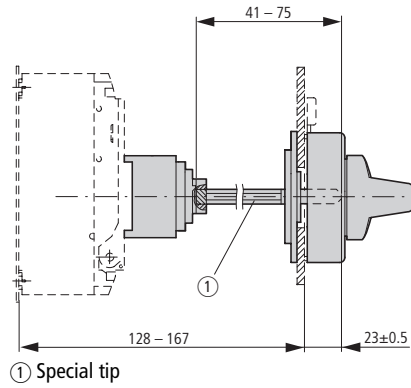
NZM1-XTVD(V)(R)(-NA)
NZM1/2-XV4(6)



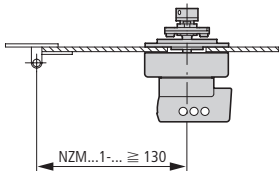
NZM1-XTVD(V)(R)-60(-NA)



NZM1-XTVD(V)(R)-0(-NA)



Minimum door coupling rotary handle clearance from door pivot point





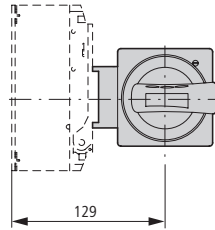
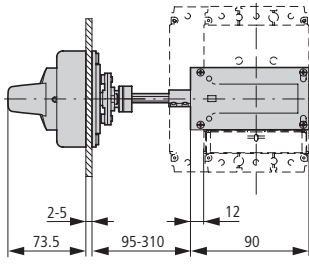
NZM1-XS, NZM1...HIV

Moeller HPL0211-2007/2008

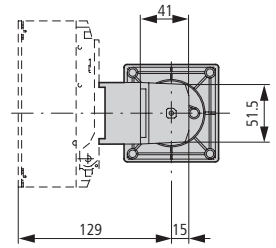
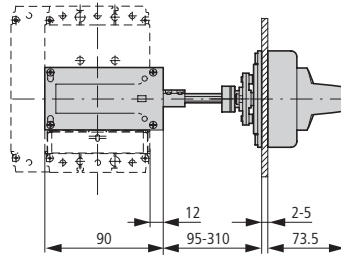
<http://catalog.moeller.net>

Main switch assembly kit for side panel mounting

NZM1-XS(R)-L

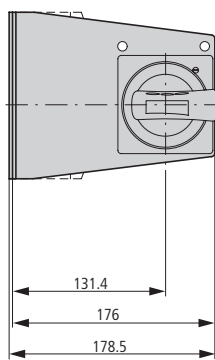
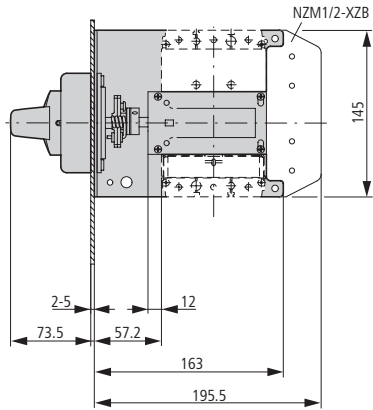


NZM1-XS(R)-R

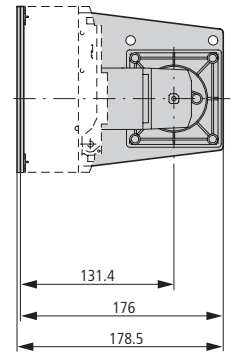
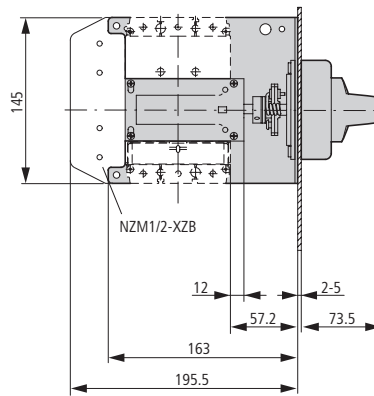


Main switch assembly kit for side panel mounting with mounting bracket

NZM1-XS(R)M-L



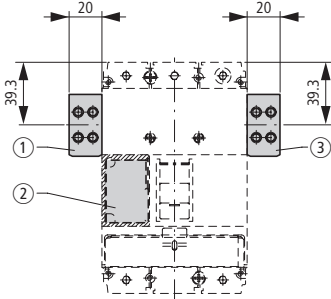
NZM1-XS(R)M-R



Undervoltage release

Shunt release

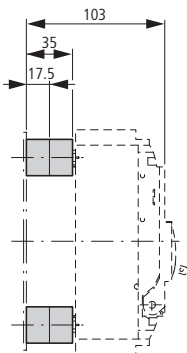
Early-make auxiliary contacts



- ① NZM1-XA(HIV)
NZM1-XU(HIV)(20)
NZM1-XHIV
- ② NZM1-XA(HIV)(L)
NZM1-XU(V)(HIV)(L)(20)
NZM1-XHIV(L)
- ③ NZM1-XHIVR

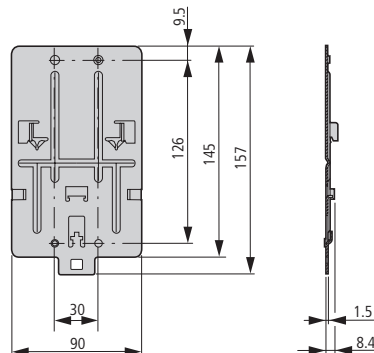
Spacers

NZM1/2-XAB



Clip plate

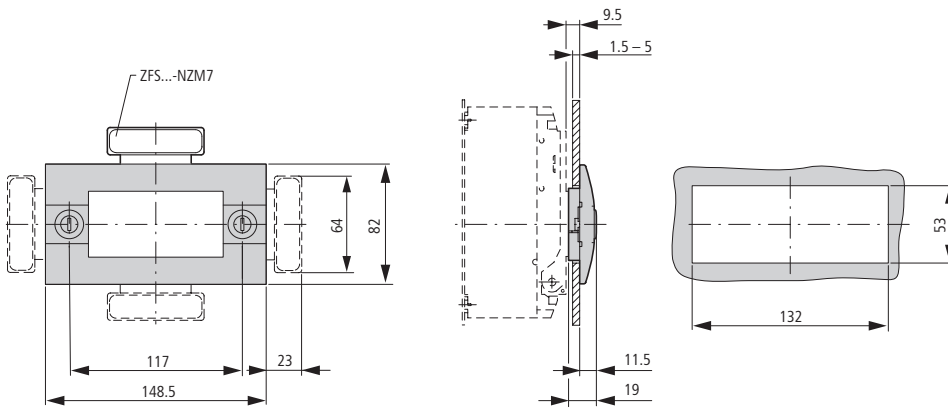
NZM1-XC35



Insulating surrounds

NZM1-XBR

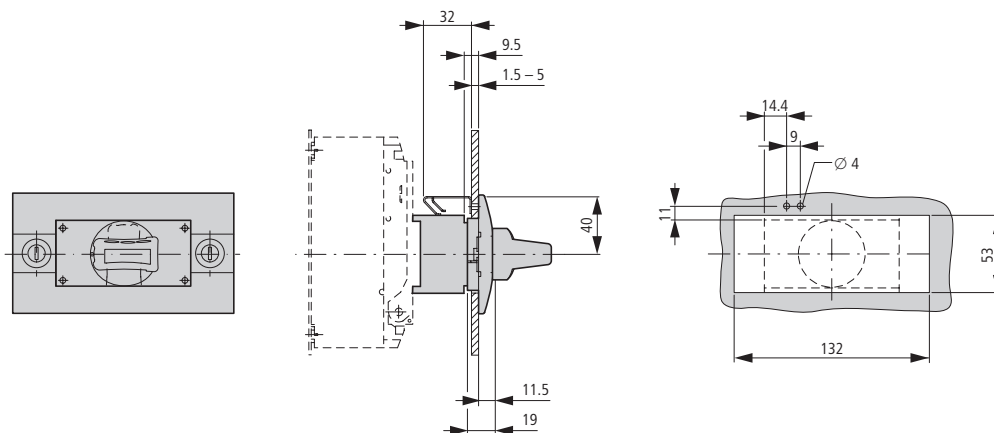
① Mounting aperture



Rotary handle on switch with door interlock

NZM1-XDTV(R)

① Mounting aperture



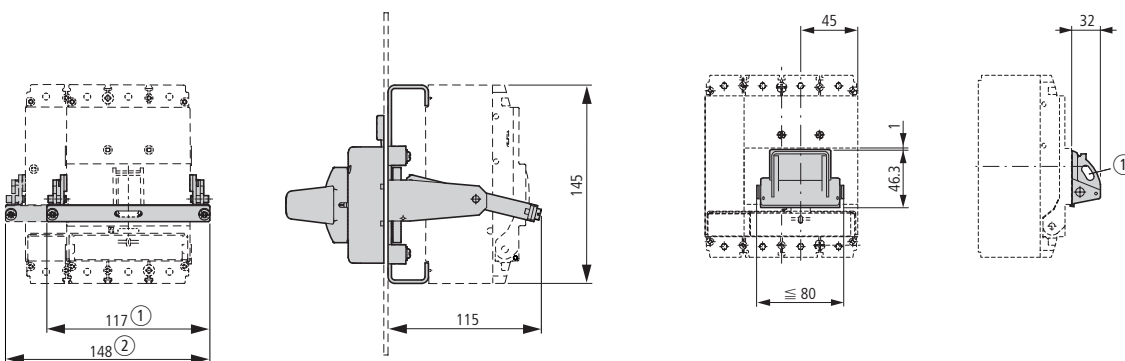
Rear drive

NZM1-XRAV(R)

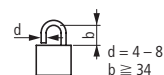
NZM1-4-XRAV(R)

Toggle lever locking device

NZM-XKAV



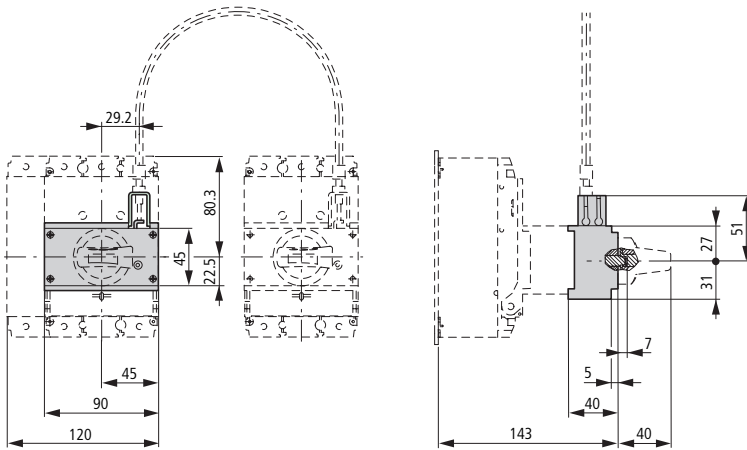
- ① NZM1-XRAV(R)
- ② NZM1-4-XRAV(R)



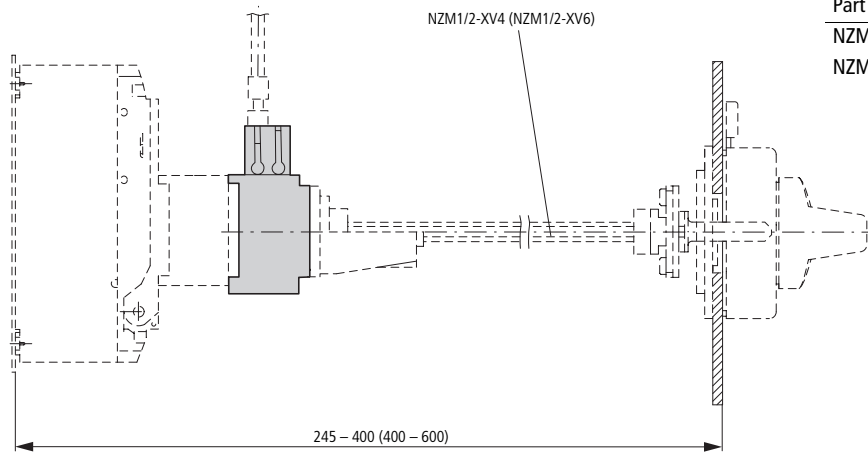
① Up to 3 padlocks

Mechanical interlock

NZM1-XMV + NZM1-XDV(R)

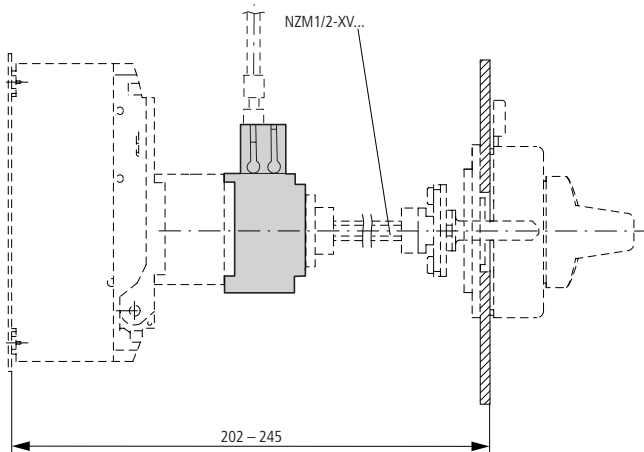


NZM1-XMV + NZM1-XTVD(V)(R)

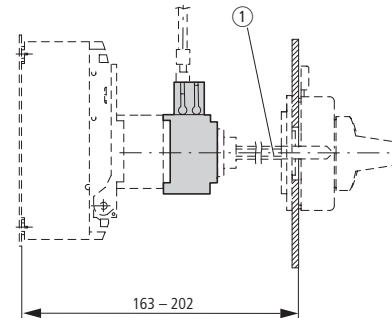


Part no.	x
NZM1/2-XV4	245 - 400
NZM1/2-XV6	400 - 600

NZM1-XMV + NZM1-XTVD(V)(R)-60



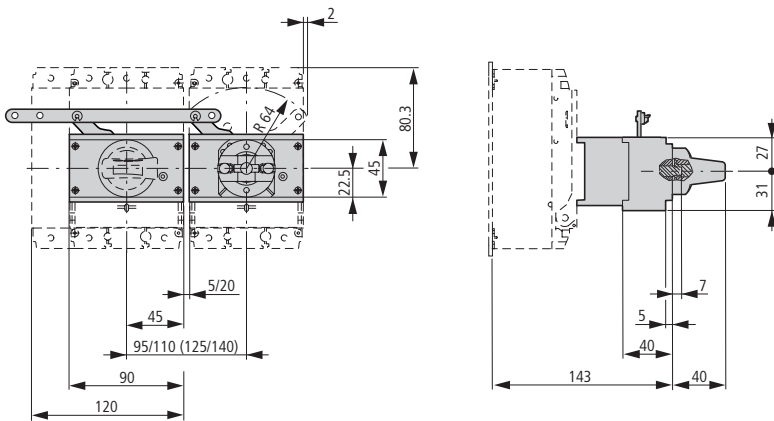
NZM1-XMV + NZM1-XTVD(V)(R)-0



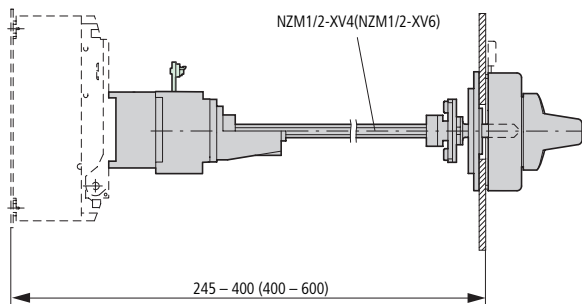
① Special tip

Paralleling mechanism

PN1-XPA

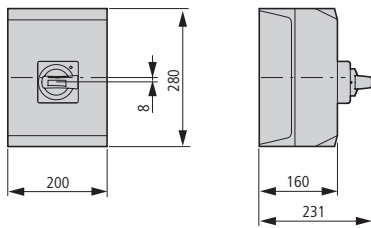


PN1-XPA

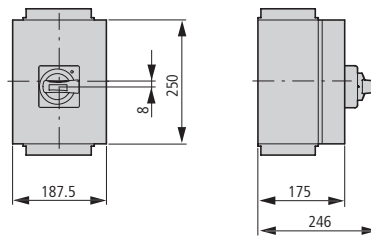


Insulated enclosures

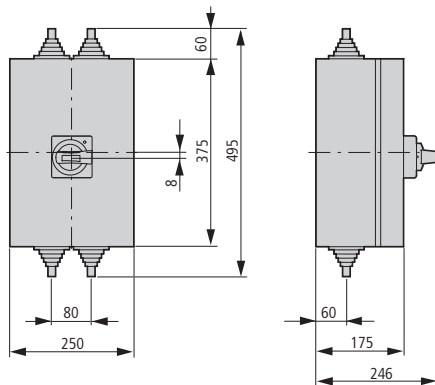
NZM1-XCIK5-T...



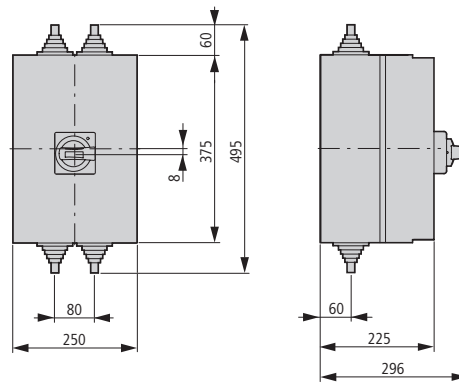
NZM1-XCI23-T...



NZM1-XCI43-T...

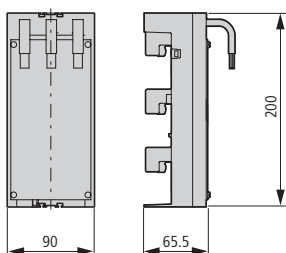


NZM1-XCI43/2-T...



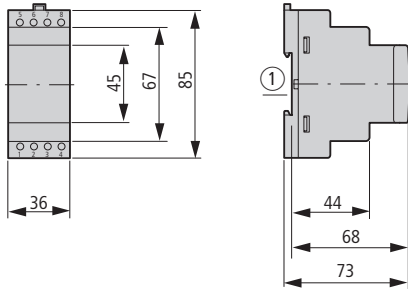
Component adapter

NZM1-XAD160



Residual-current relay

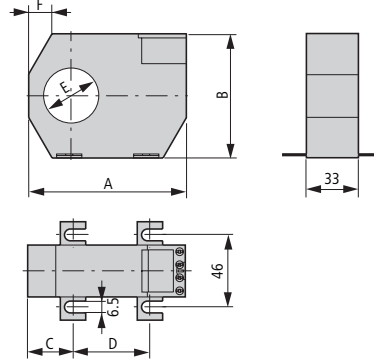
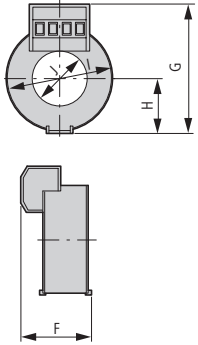
PFR-003
PFR-03
PFR-5



Current transformer

PFR-W-20...30

PFR-W-35...210



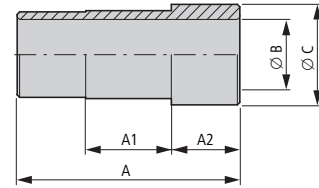
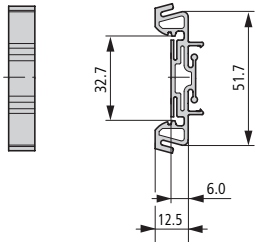
Part no.	A	B	C	D	E	F
PFR-W-35	100	79	26	48.5	35	35
PFR-W-70	130	110	32	66	70	52
PFR-W-105	170	146	38	94	105	72
PFR-W-140	220	196	48.5	123	140	97
PFR-W-210	299	284	69	161	210	141

	F	G	H	I	J
PFR-W-20	32	60	24	46	21
PFR-W-30	32	70	30	59	30

Fixing clip

PFR-WC

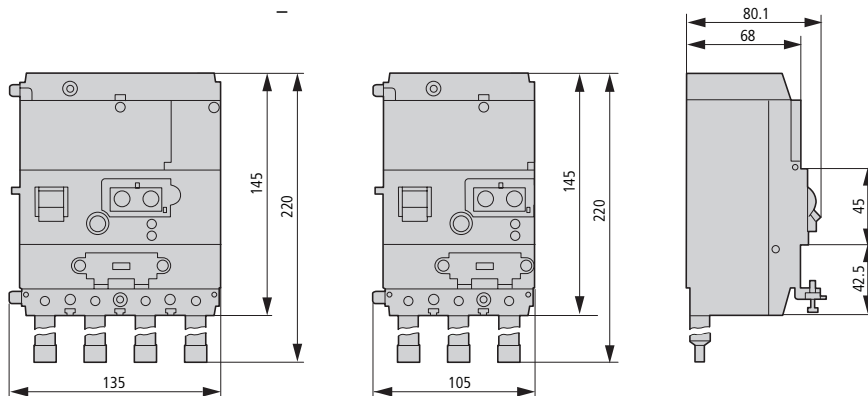
PFR-WMA



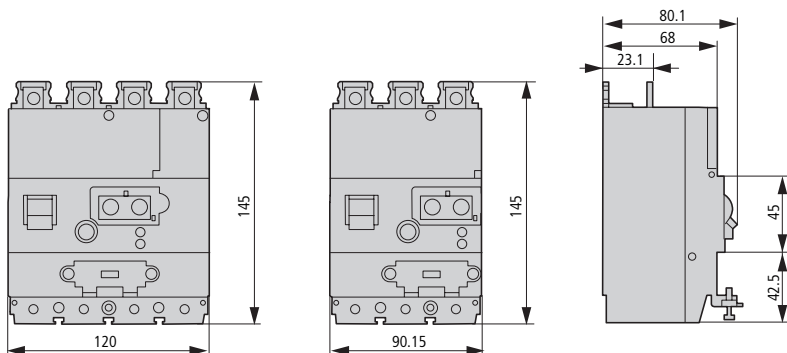
Part no.	A	ØB	ØC	A1	A2
PFR-WMA-35	91	28	40	35	28
PFR-WMA-70	105	62	75	35	35
PFR-WMA-105	153	98	110	35	60
PFR-WMA-140	153	133	145	35	60
PFR-WMA-210	153	203	215	35	60

Residual-current release

NZM1(-4)-XFI...R

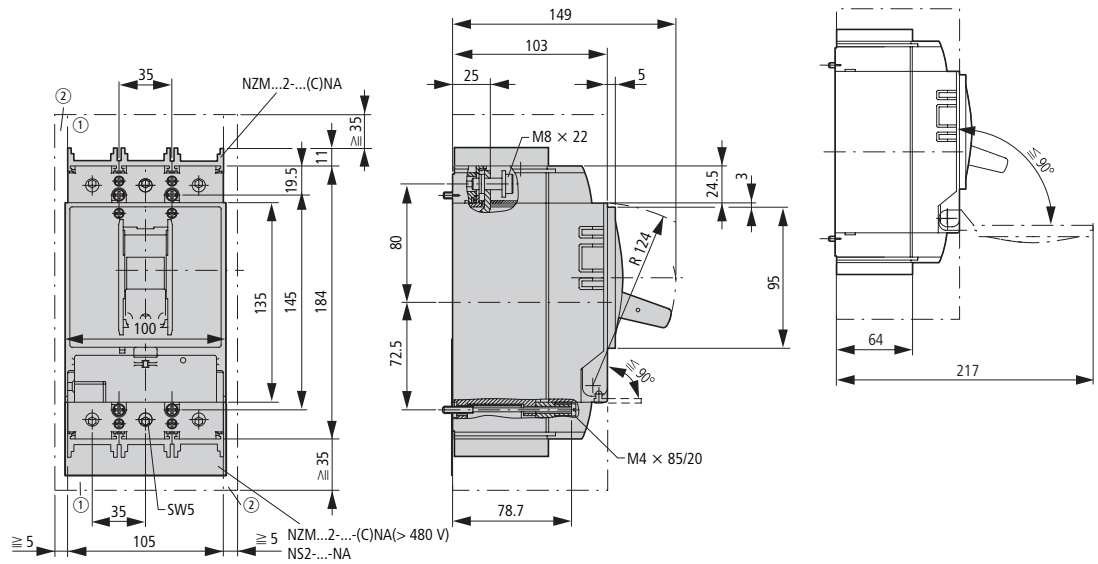


NZM1(-4)-XFI...U



**Circuit-breaker
Switch-disconnector**

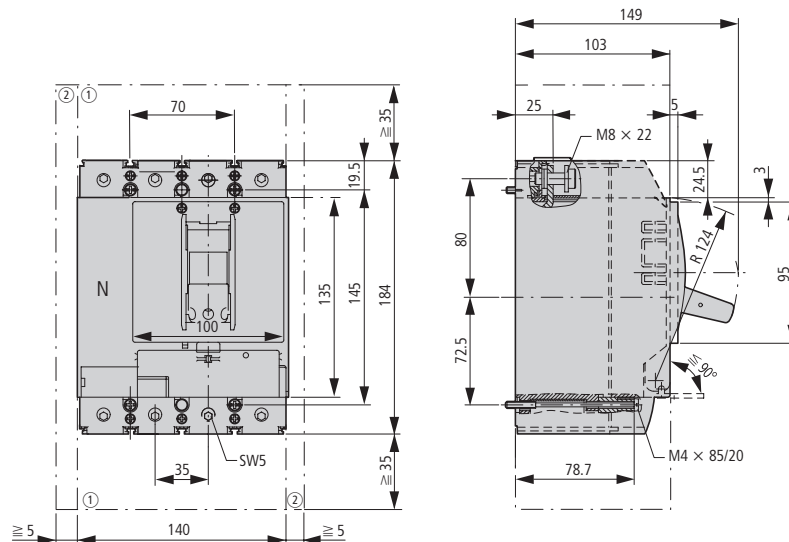
- 3 pole
- NZMB2
- NZMC2
- NZMN2
- NZMH2
- PN2
- N2
- NS2



- ① Blow out area, minimum distance to other parts ≥ 35 mm
- ② Minimum distance to adjacent parts ≥ 5 mm

**Circuit-breaker
Switch-disconnector**

- 4 pole
- NZMB2-4
- NZMN2-4
- NZMH2-4
- PN2-4
- N2-4



- ① Blow out area, minimum distance to other parts ≥ 35 mm
- ② Minimum distance to adjacent parts ≥ 5 mm



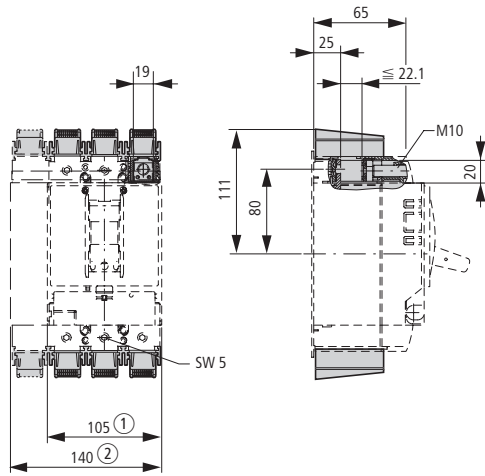


Box terminal

(+)NZM2(-4)-...-XKC(O)(U)

IP2X protection against contact with a finger

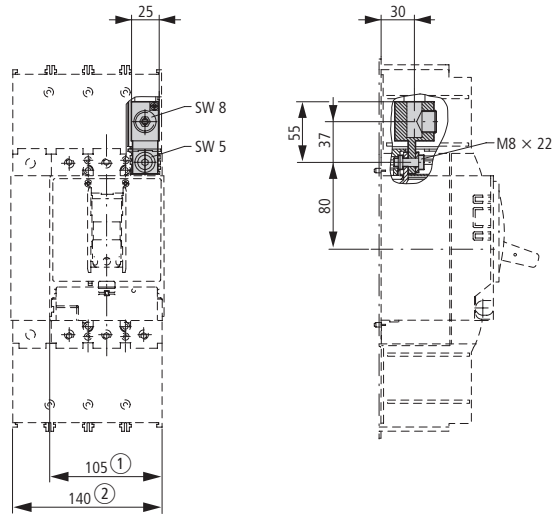
NZM2(-4)-XIPK



- ① 3 pole
- ② 4 pole

Tunnel terminal

NZM2(-4)-XKA



Covers

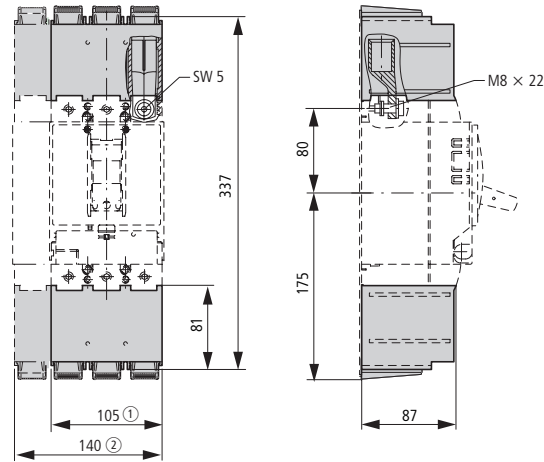
NZM2(-4)-XKSA

Cable lug

NZM2-XKS185

IP2X protection against contact with a finger for shroud

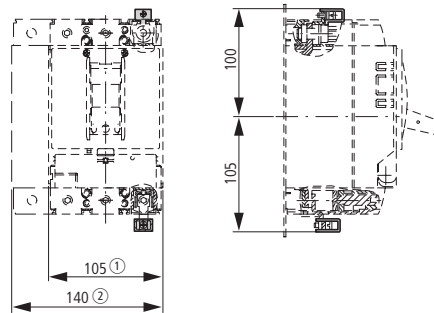
NZM2(-4)-XIPA



Control circuit terminal

NZM2-XSTS

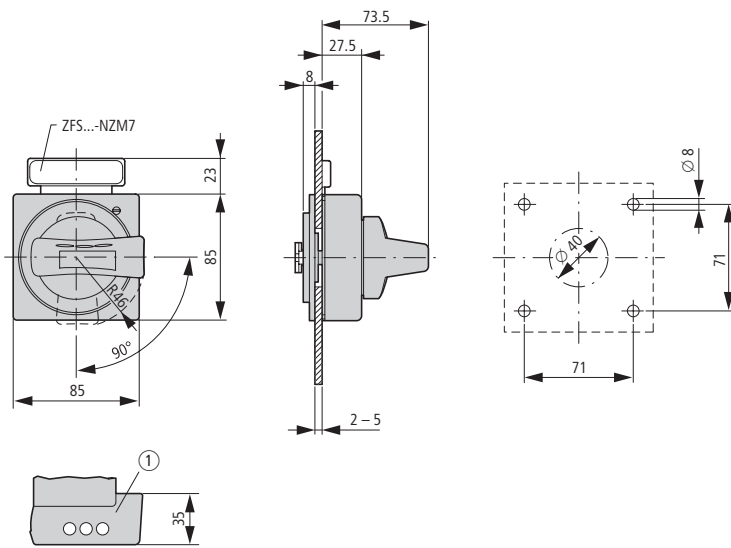
NZM-XSTK



- ① 3 pole
- ② 4 pole

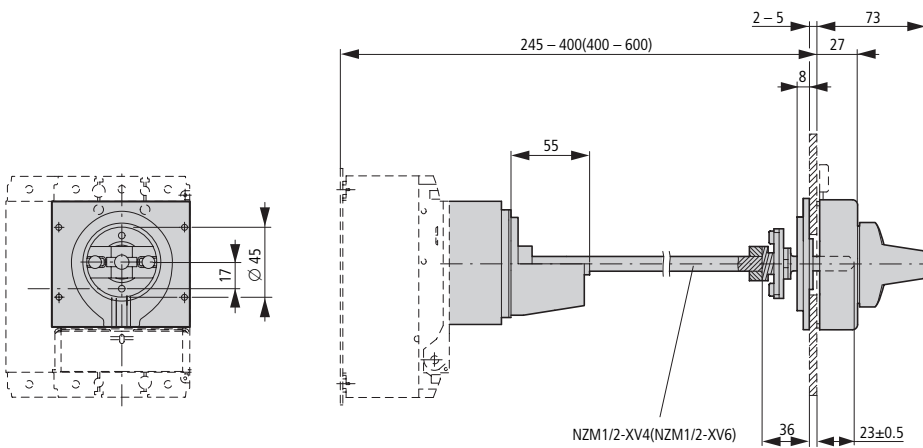


Door coupling rotary handle
NZM2-XTVD(V)(R)...



Door coupling rotary handle with extension shaft

NZM2-XTVD(V)(R)(-NA)
NZM1/2-XV4(6)

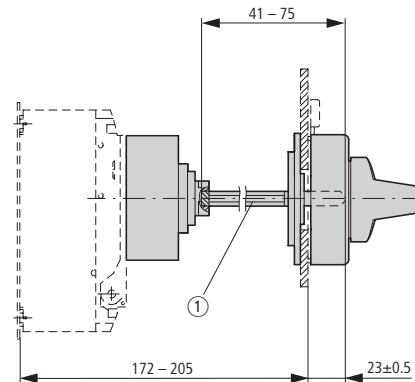
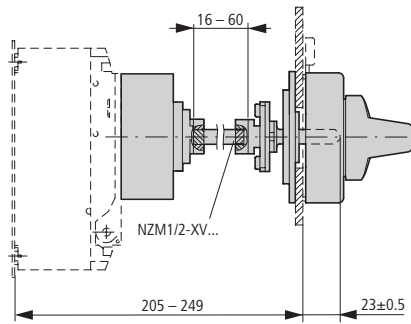


Door coupling rotary handle with extension shaft

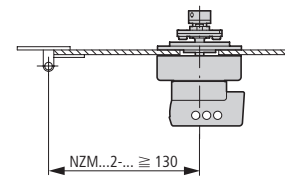
NZM2-XTVD(V)(R)-60(-NA)

NZM2-XTVD(V)(R)-0(-NA)

Minimum door coupling rotary handle clearance from door pivot point

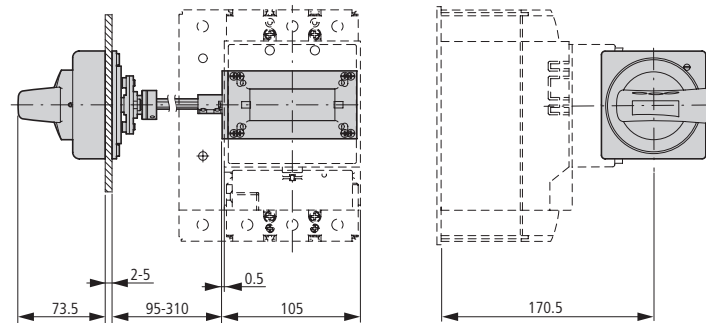


① Special tip

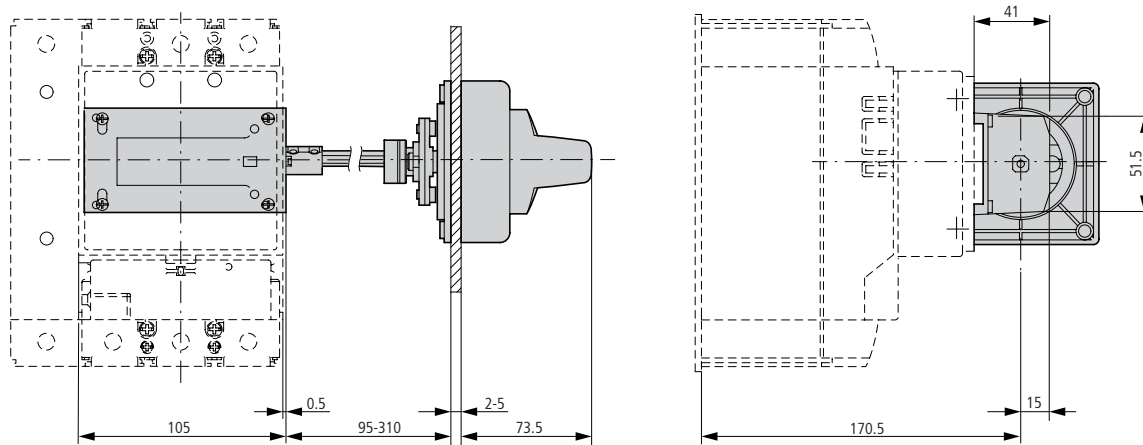


Main switch assembly kit for side panel mounting

NZM2-XS(R)-L

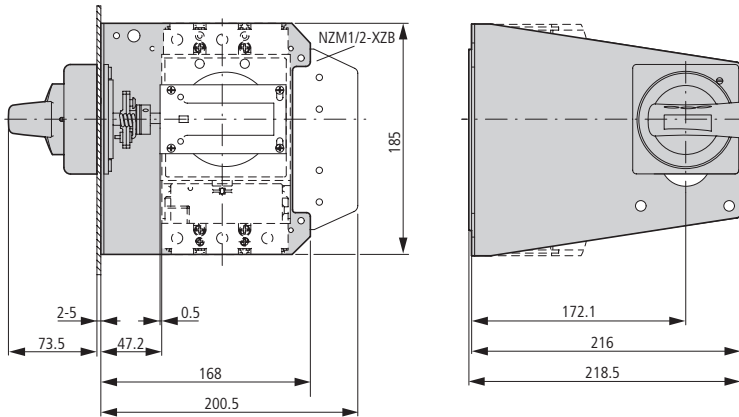


NZM2-XS(R)-R

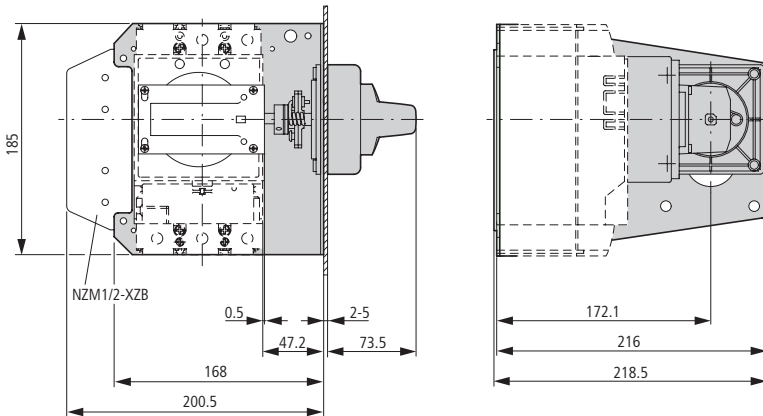


Main switch assembly kit for side panel mounting with mounting bracket

NZM2-XS(R)M-L

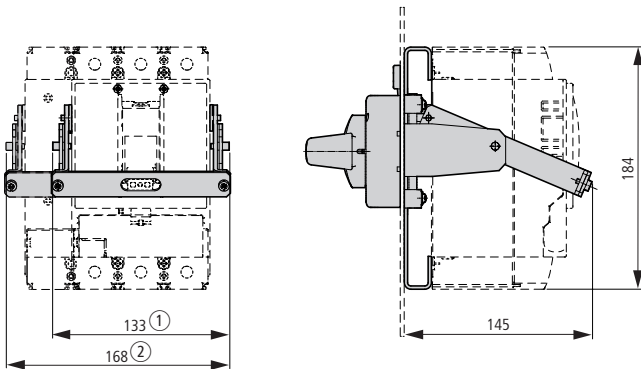


NZM2-XS(R)M-R



Rear drive

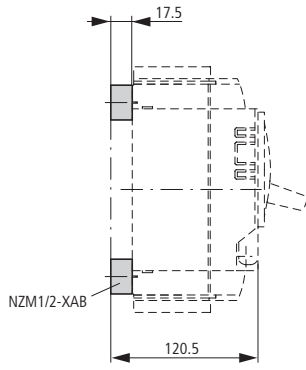
NZM2



- ① NZM2-XRAV(R)
- ② NZM2-4-XRAV(R)

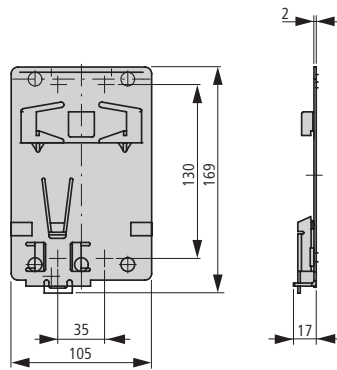
Spacers

NZM1/2-XAB



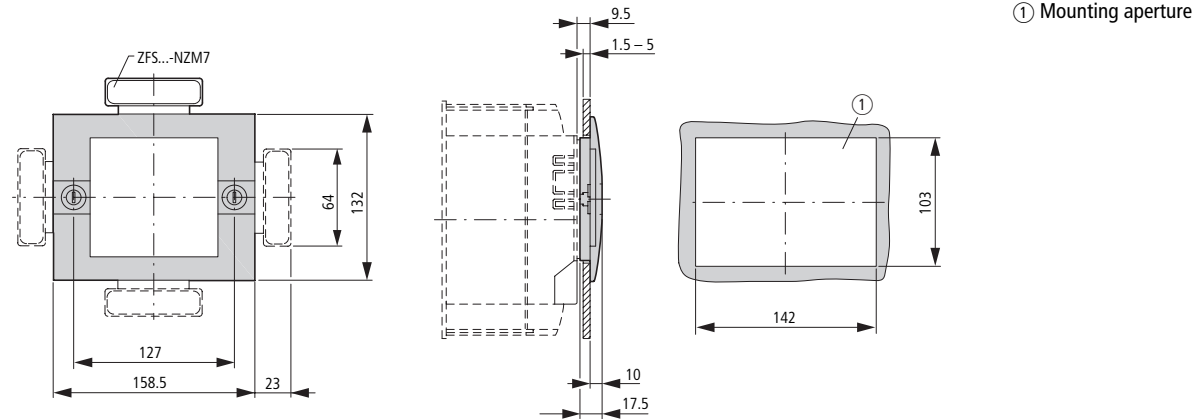
Clip plate

NZM2-XC75



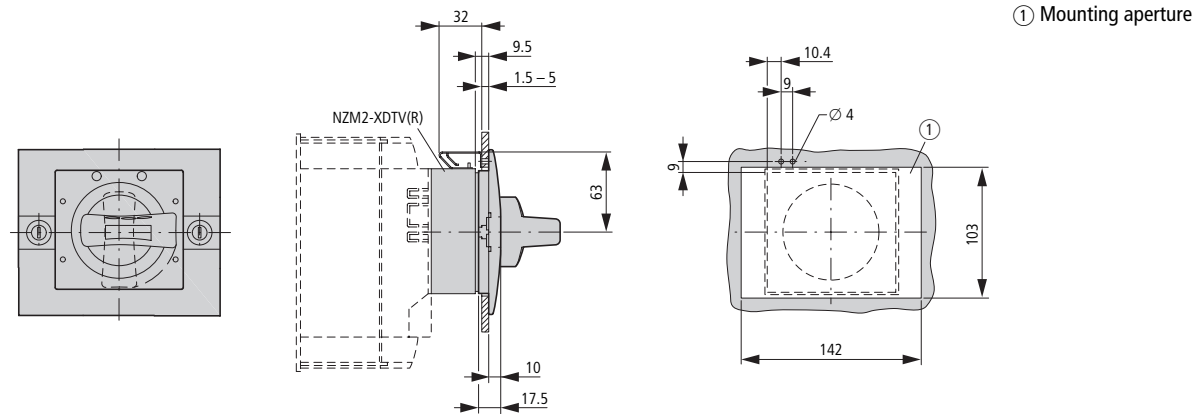
Insulating surrounds

NZM2-XBR



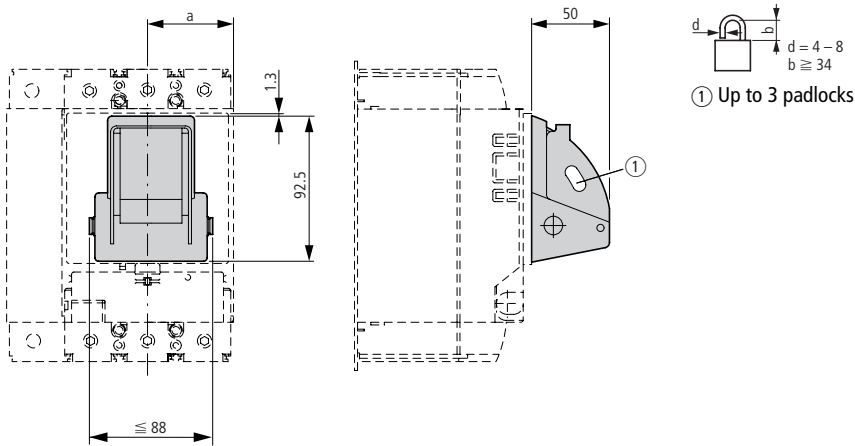
Rotary handle on switch with door interlock

NZM2-XDTV(R)



Toggle lever locking device

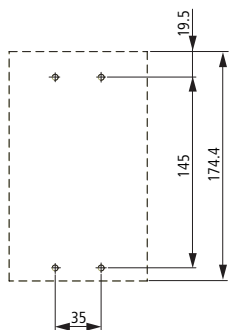
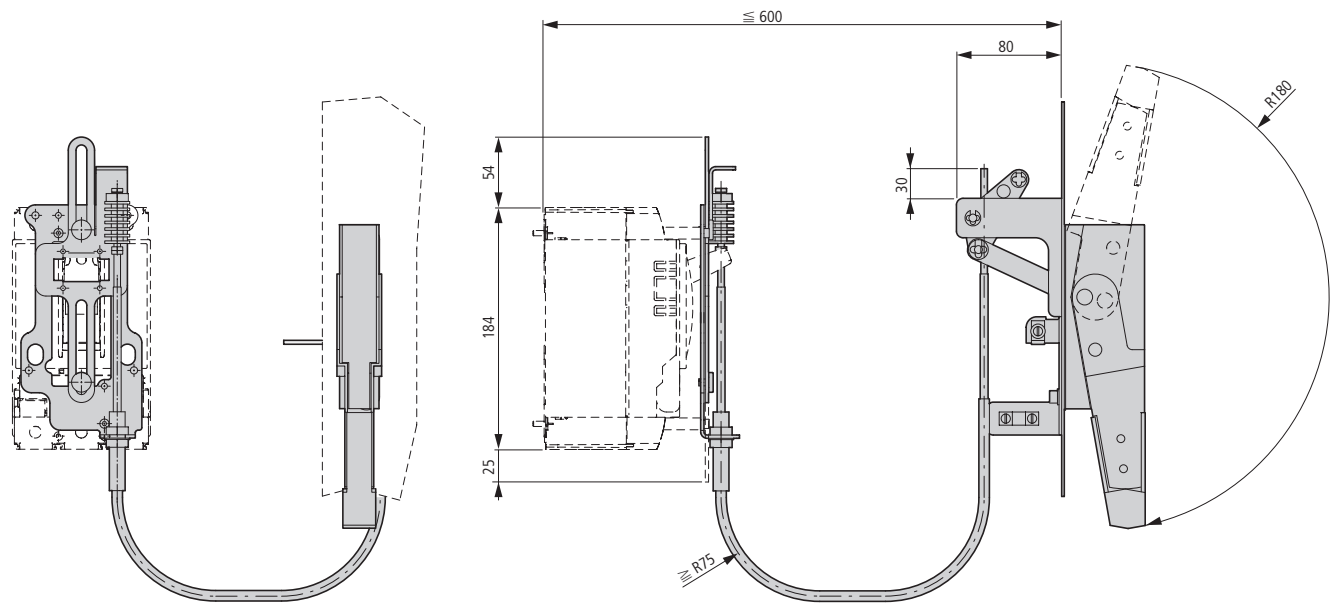
NZM2/3-XKAV



Part no.	a
NZM2, PN2, N2	52.5
NZM3, PN3, N3	70

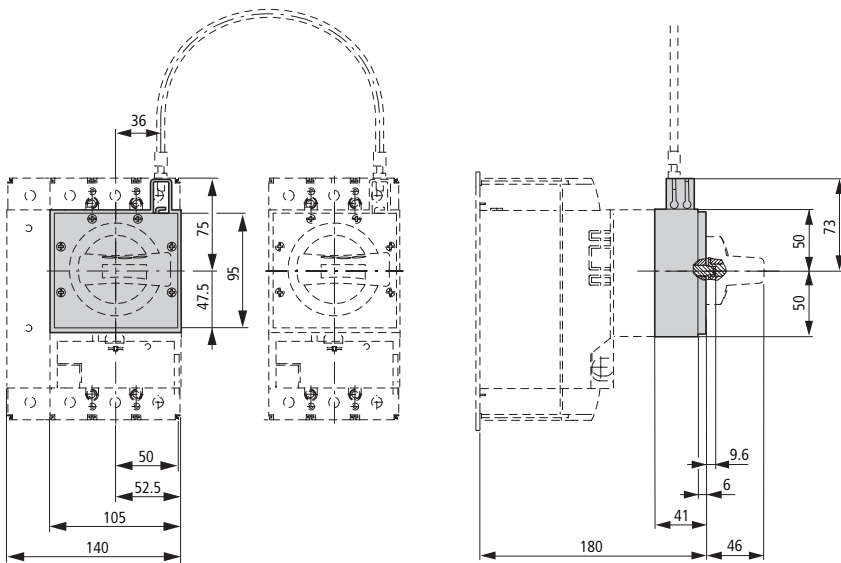
Side-mounted handle

NZM2...

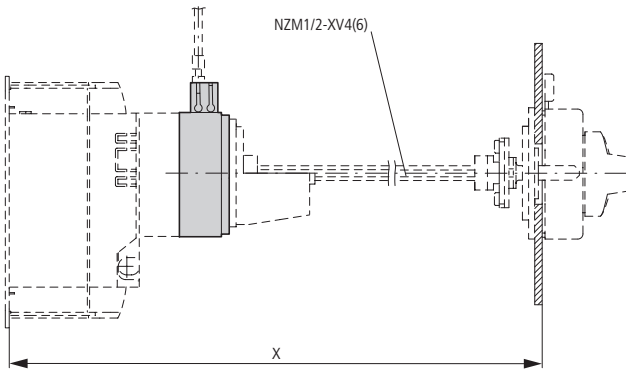


Drilling template

Mechanical interlock
NZM2-XMV + NZM2-XD

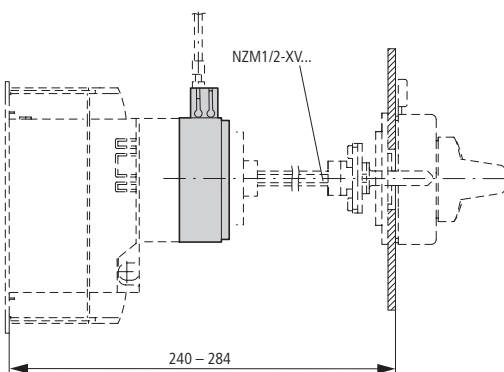


NZM2-XMV + NZM2-XTVD(V)(R)

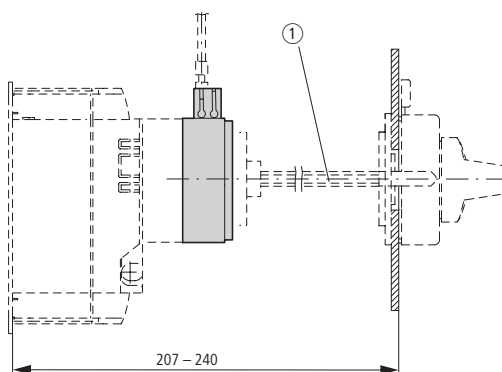


Mechanical interlock

NZM2-XMV + NZM2-XTVD(V)(R)-60



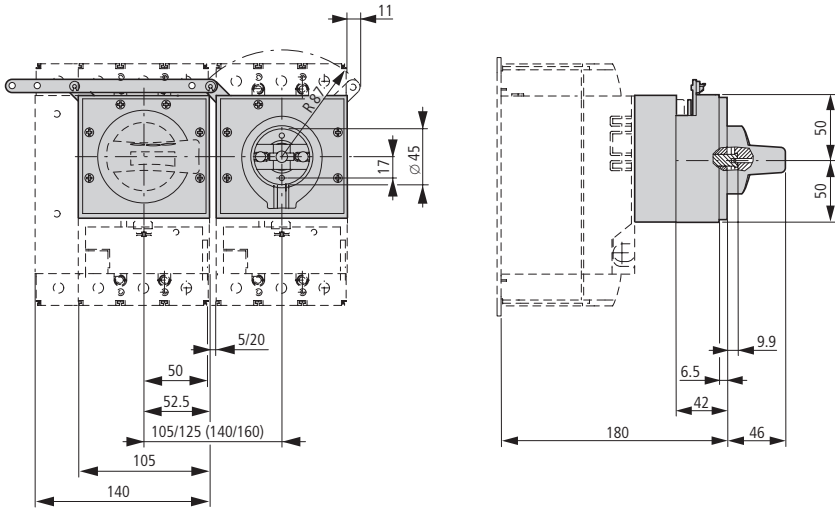
NZM2-XMV + NZM2-XT(V)D(V)(R)-0



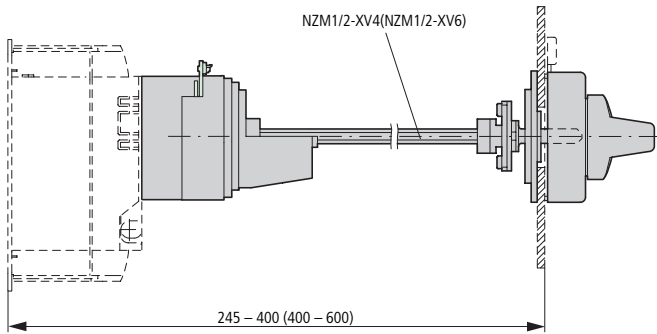
① Special tip



Paralleling mechanism
PN2-XPA

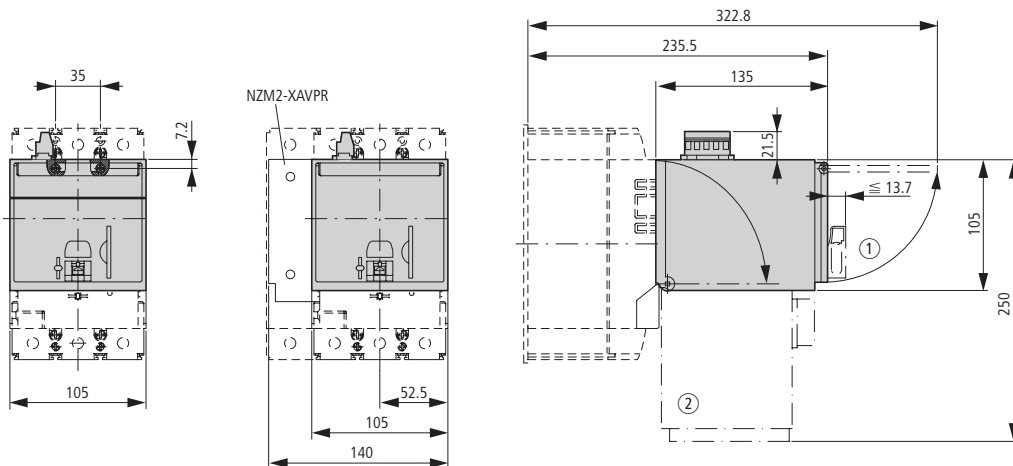


PN2-XPA

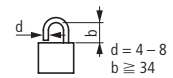


Remote operator

NZM2-XR...

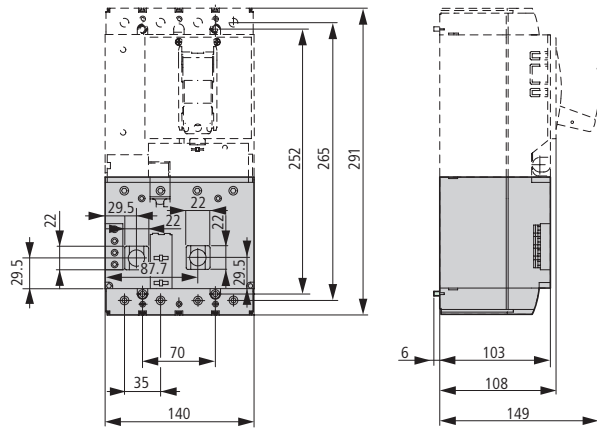


- ① Up to 3 padlocks
- ② Remote operator hinged



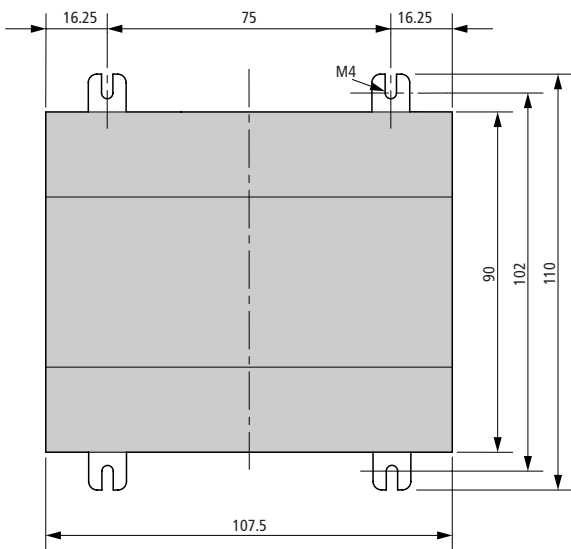
Residual-current release

NZM2(-4)-XFI...

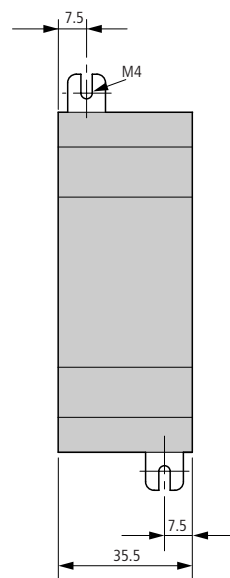


Data Management Interface (DMI Module)

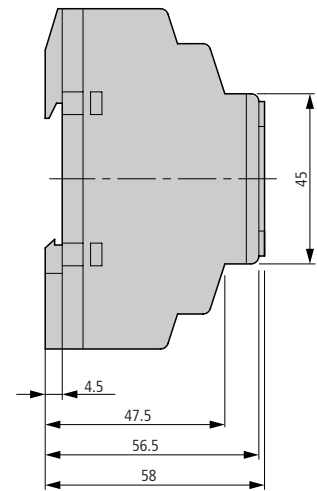
NZM-XDMI612



NZM-XDMI-DPV1
EASY2...



NZM-XDMI...
EASY2...

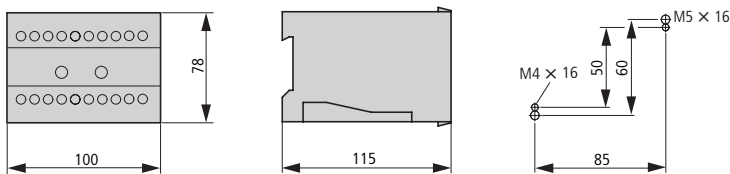


Undervoltage releases, off-delayed

UVU-NZM

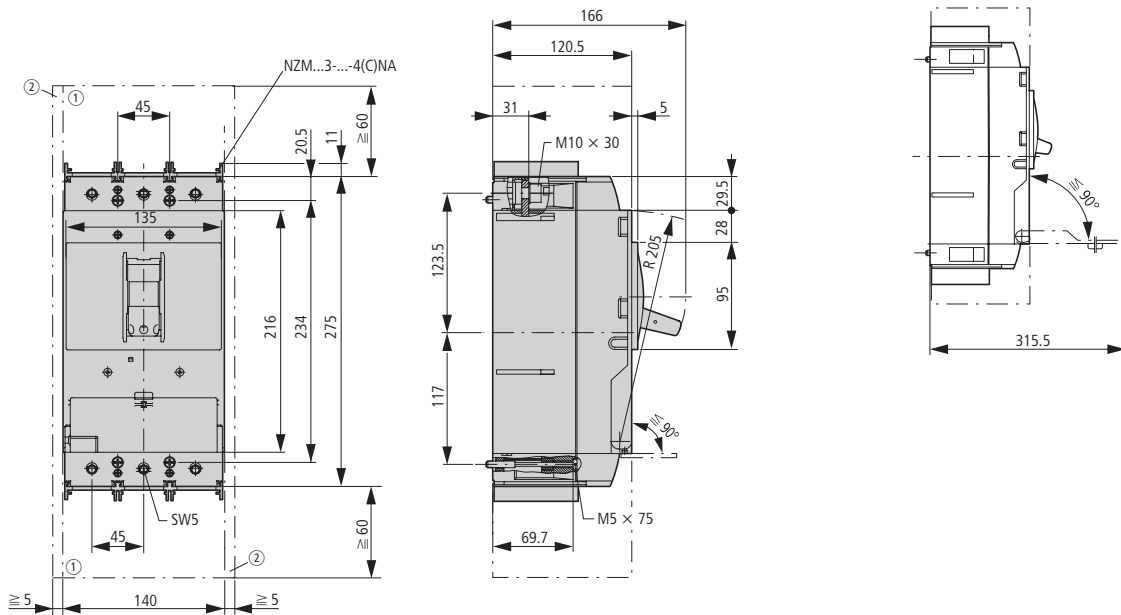
Capacitor unit

NZM-XCM



Circuit-breaker
Switch-disconnector

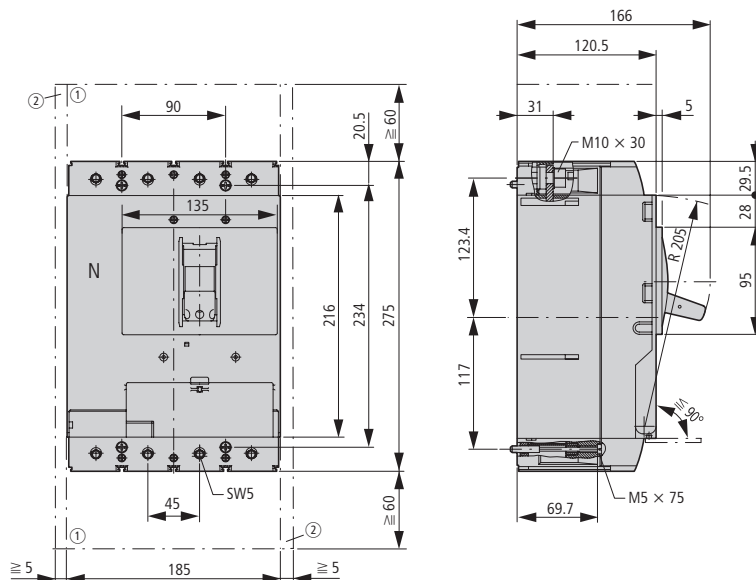
3 pole
NZMN3
NZMH3
PN3
N3
NS3



- ① Blow-out space, minimum distance to other parts ≥ 60 mm
- ② Minimum distance to adjacent parts ≥ 5 mm

Circuit-breaker
Switch-disconnector

4 pole
NZMN3-4
NZMH3-4
PN3-4
N3-4



- ① Blow-out space, minimum distance to other parts ≥ 60 mm
- ② Minimum distance to adjacent parts ≥ 5 mm



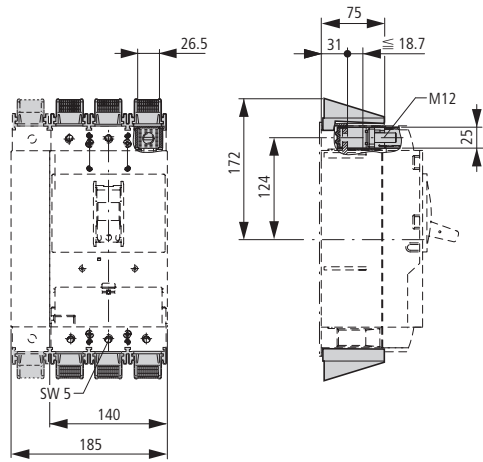


Box terminal

(+)NZM3(-4)-XKC(O)(U)

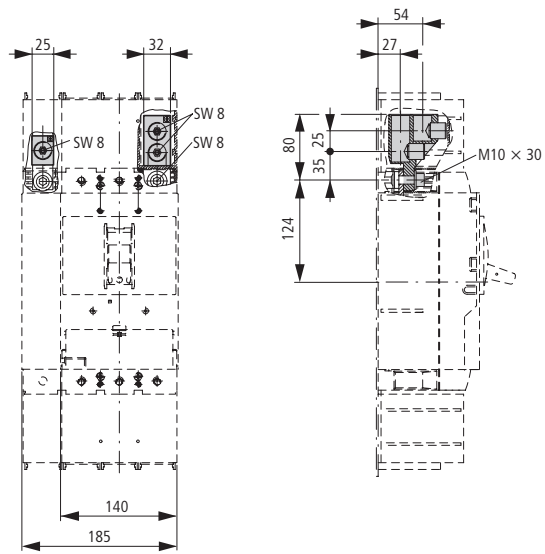
IP2X protection against contact with a finger

NZM3(-4)-XIPK



Tunnel terminal

NZM3(-4)-XKA1(2)



Covers

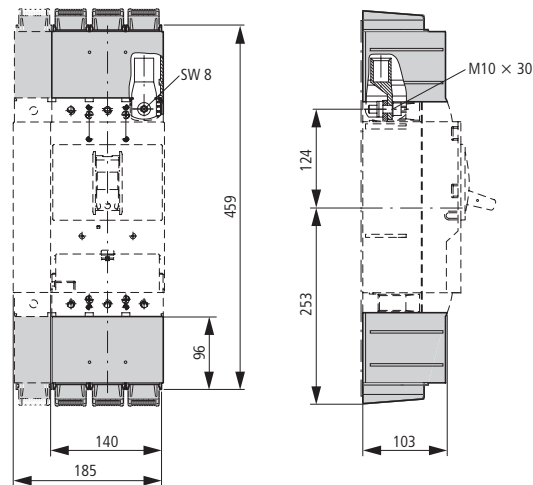
NZM3(-4)-XKSA

Cable lug

NZM3-XKS185

IP2X protection against contact with a finger

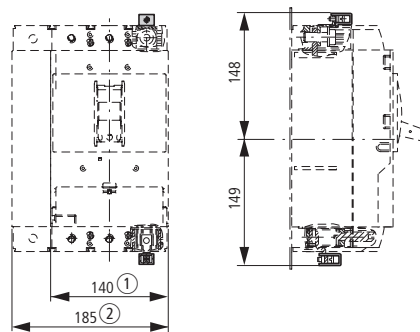
NZM3(-4)-XIPA



Control circuit terminal

NZM3/4-XSTS

NZM-XSTK



- ① 3 pole
- ② 4 pole

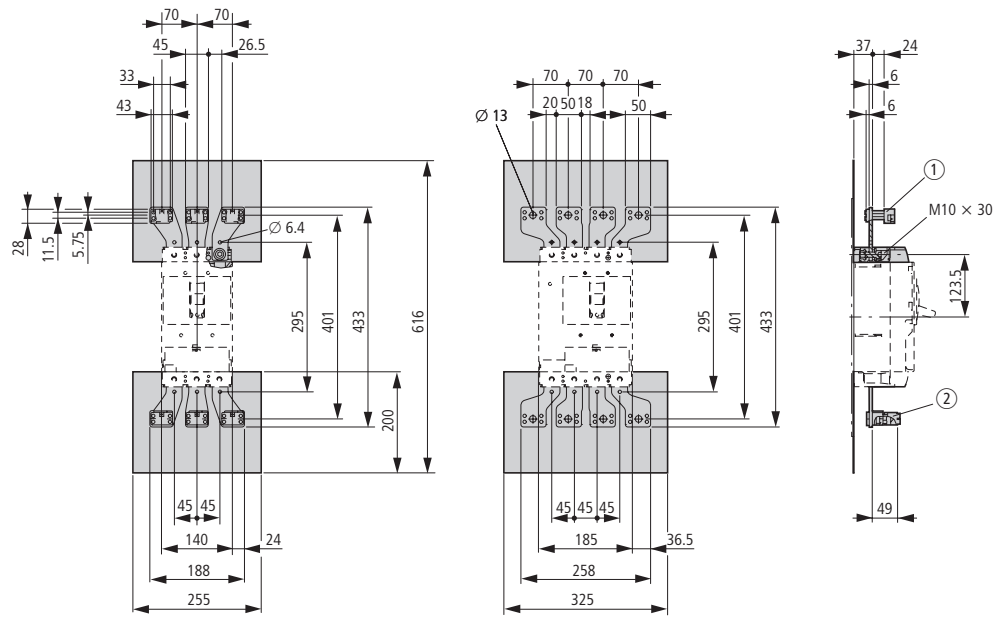
Connection width extension

NZM3(-4)-XKV70

Terminals

NZM3(-4)-XK22X21

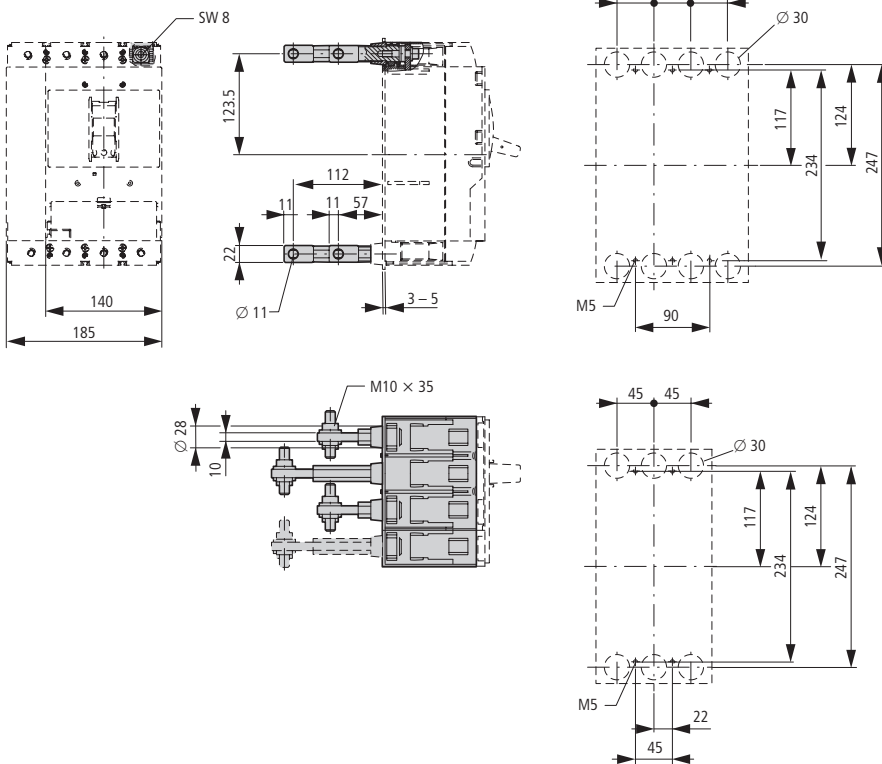
NZM3(-4)-XK300



- ① NZM3(-4)-XK22X21
- ② NZM3(-4)-XK300

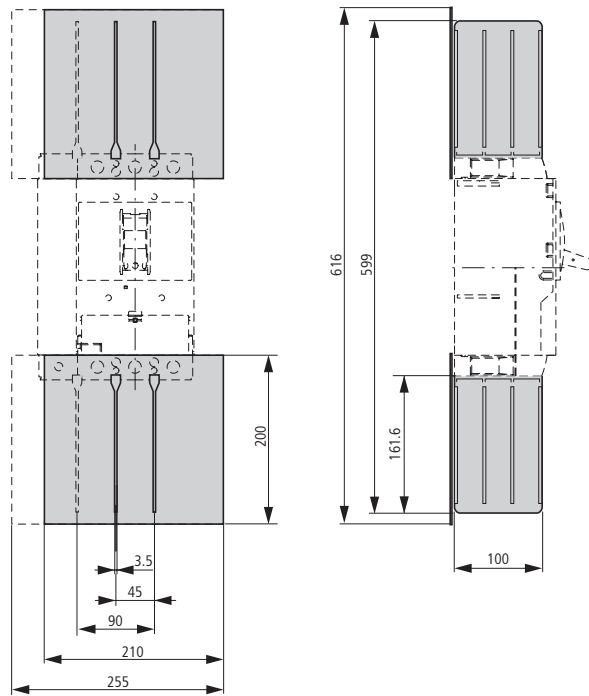
Connection on rear

(+)NZM3(-4)-XKR(O)(U)



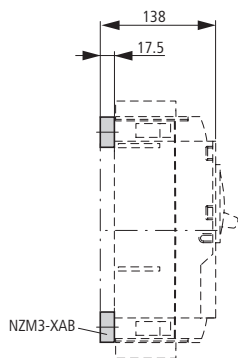
Phase isolators

NZM3-4-XKP



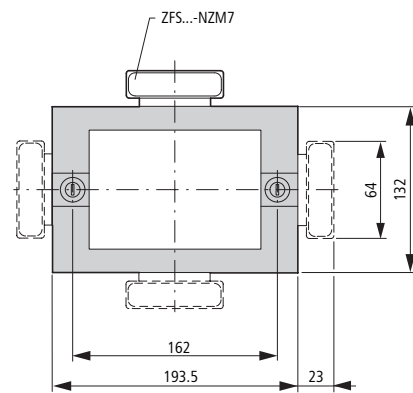
Spacers

NZM3-XAB

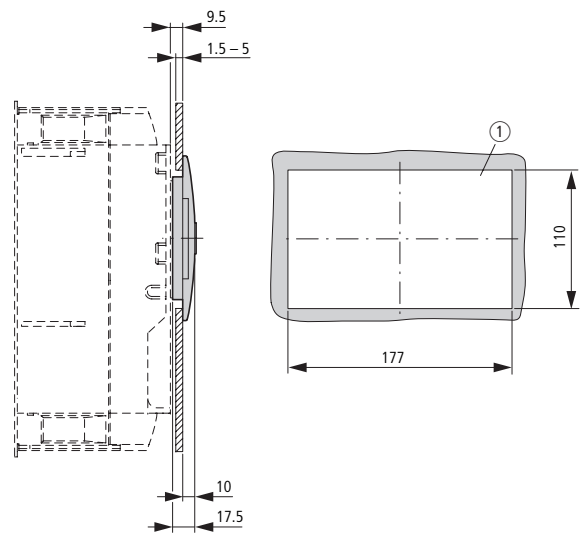


Insulating surrounds

NZM3-XBR

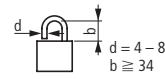
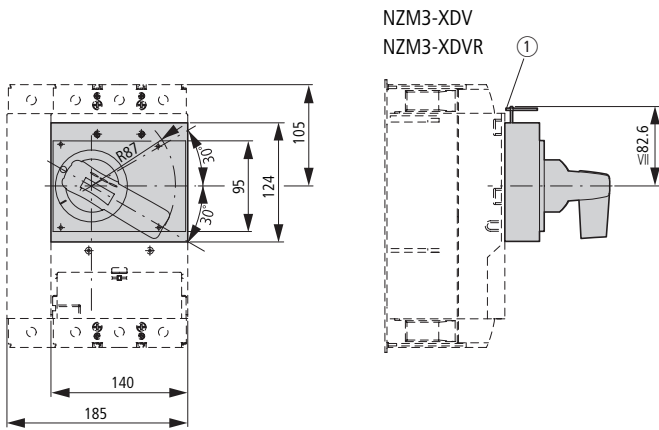


① Mounting aperture



Rotary drive

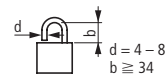
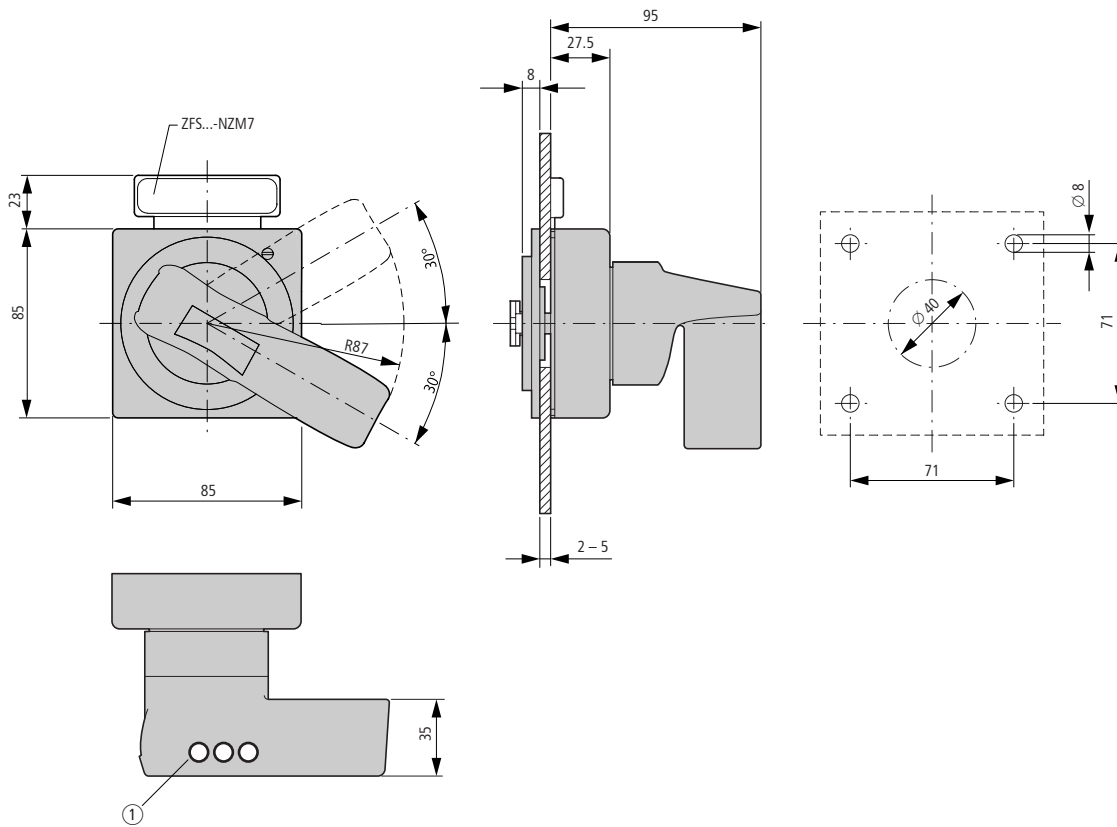
Rotary handle on circuit-breaker



① Up to 3 padlocks

Door coupling rotary handle

NZM3-XTVD(V)(R)...

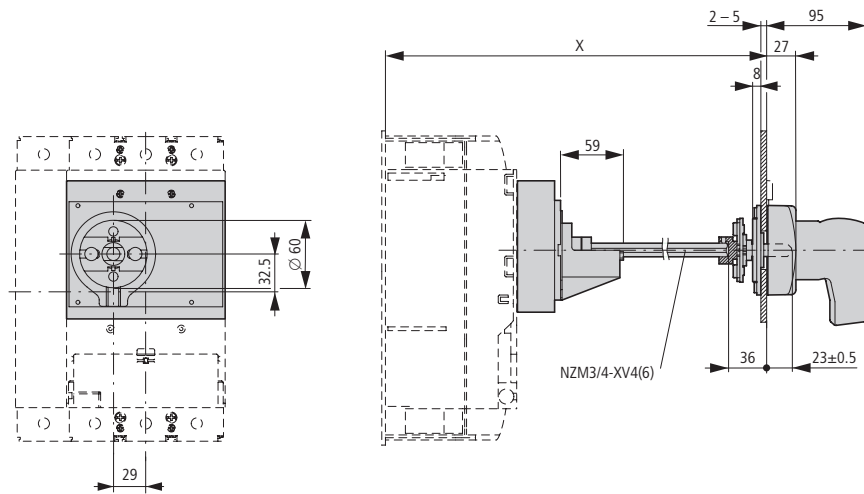


① Up to 3 padlocks



Door coupling rotary handle with extension shaft

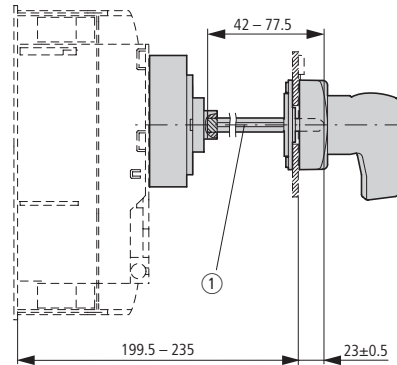
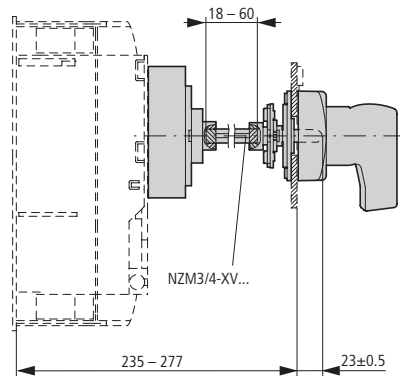
NZM3-XTVD(V)(R)(-NA)
NZM3/4-XV4(6)



Part no.	x
NZM3/4-XV4	270 – 400
NZM3/4-XV6	400 – 600

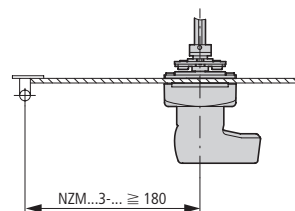
NZM3-XTVD(V)(R)-60(-NA)

NZM3-XTVD(V)(R)-0(-NA)

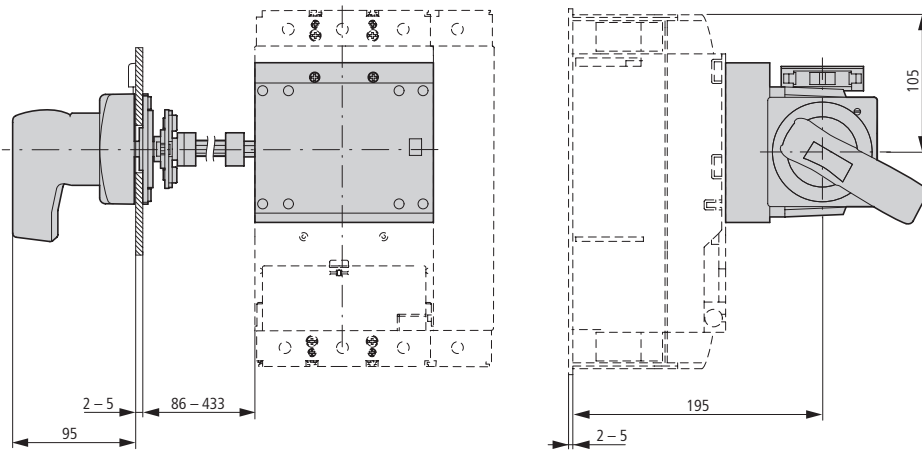


① Special tip

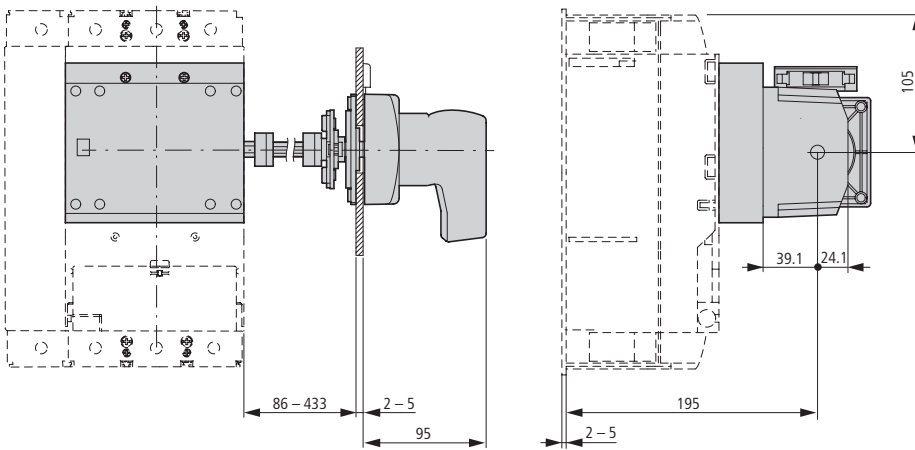
Minimum door coupling rotary handle clearance from door pivot point



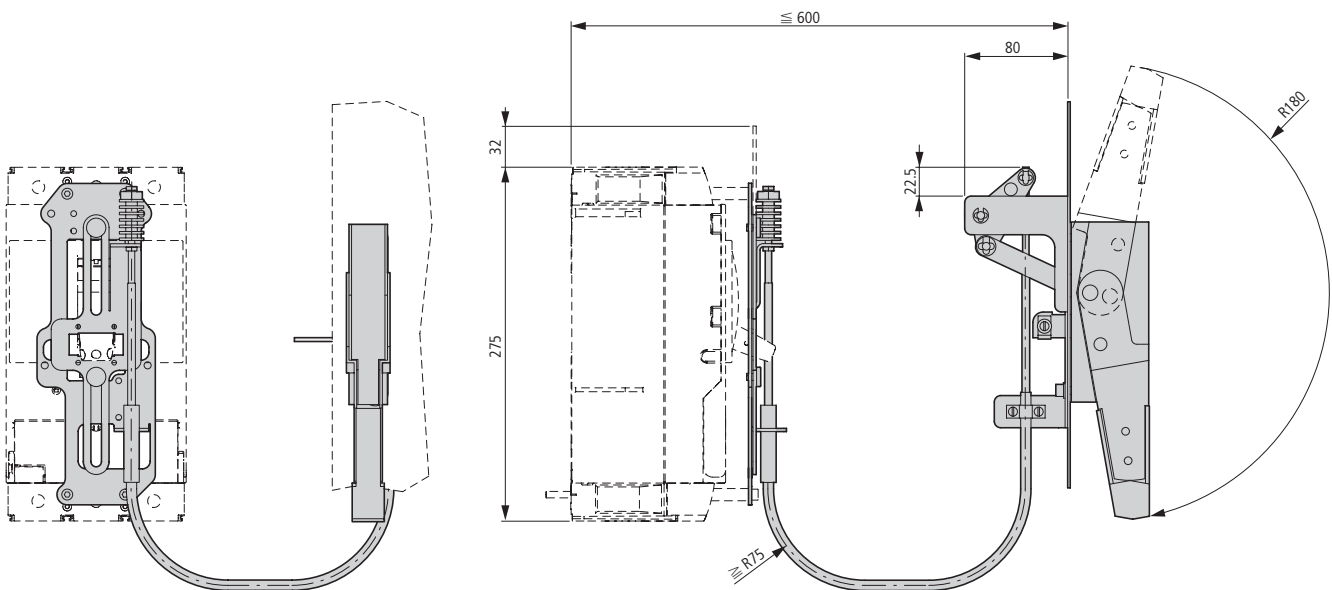
Main switch assembly kit for side panel mounting
NZM3-XS(R)-L



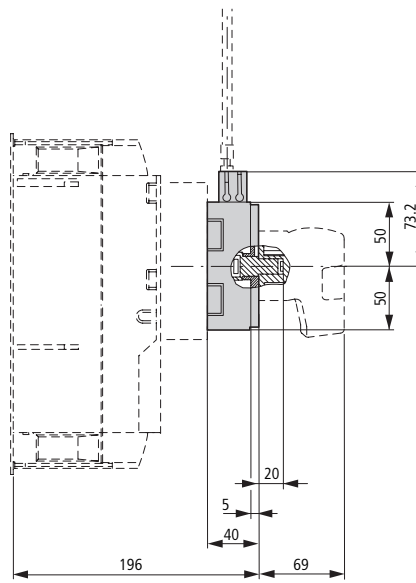
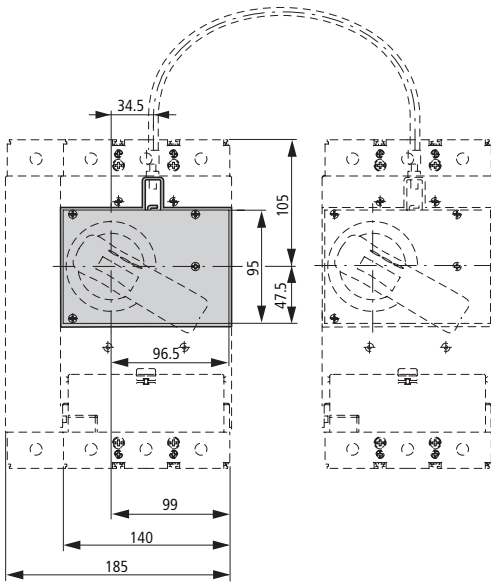
NZM3-XS(R)-R



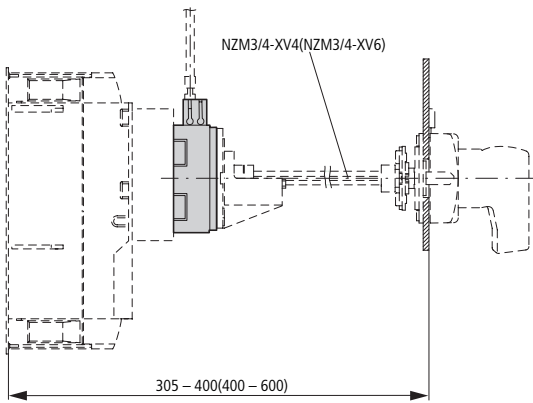
Side-mounted handle
NZM3...



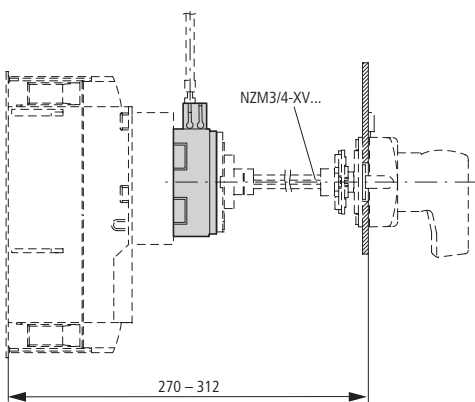
Mechanical interlock
NZM3-XMV + NZM3-XDV(R)



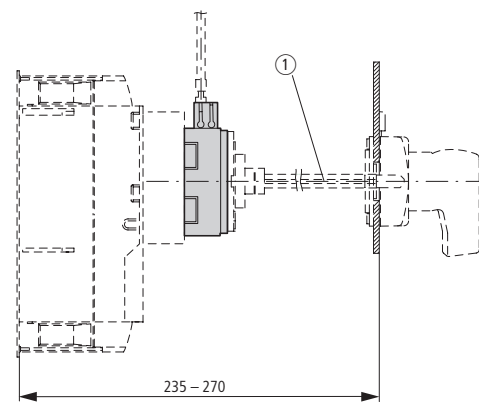
NZM3-XMV + NZM3-XTVD(V)(R)



NZM3-XMV + NZM3-XTVD(V)(R)-60



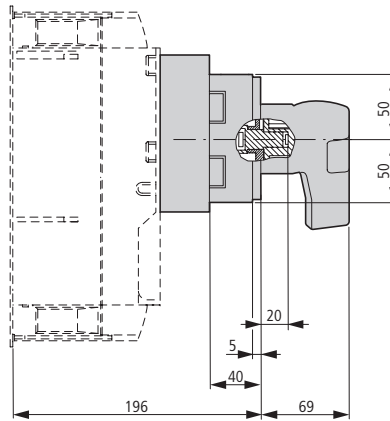
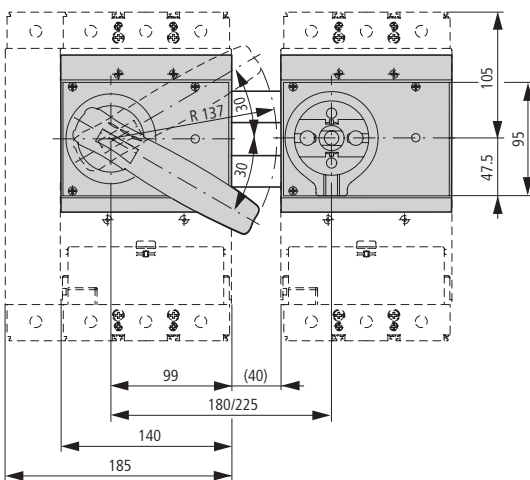
NZM3-XMV + NZM3-XTVD(V)(R)-0



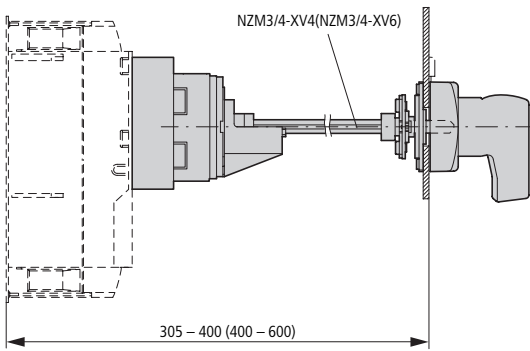
① Special tip

Paralleling mechanism

PN3-XPA

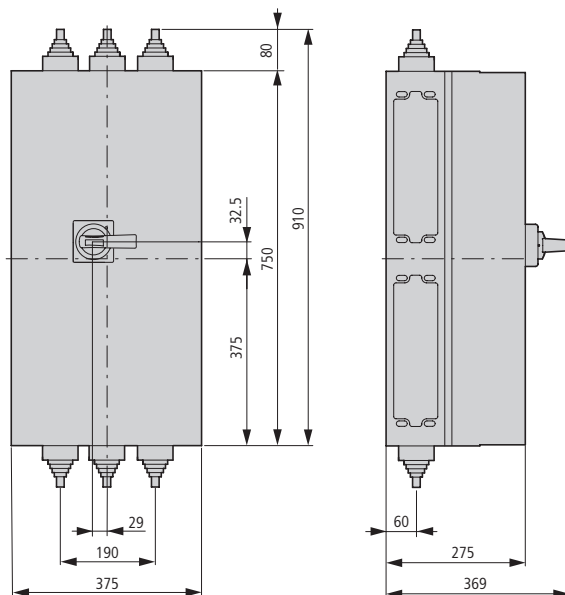


PN3-XPA



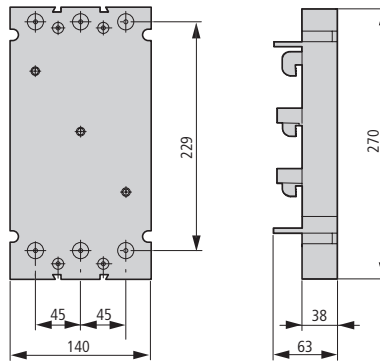
Insulated enclosures

NZM3-XCI48-TD



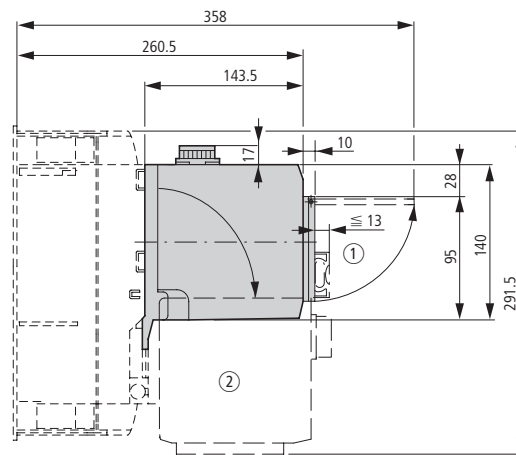
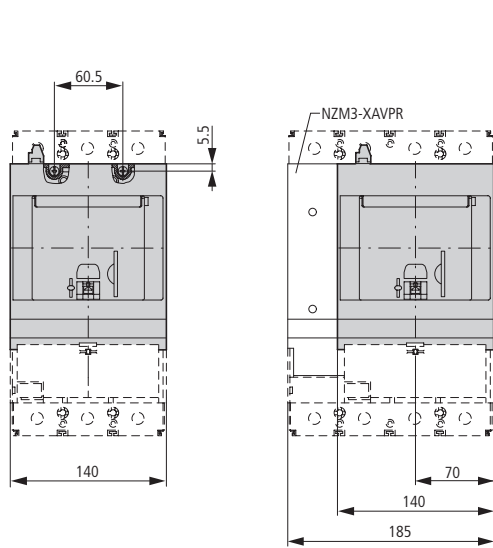
Component adapter

NZM3-XAD550



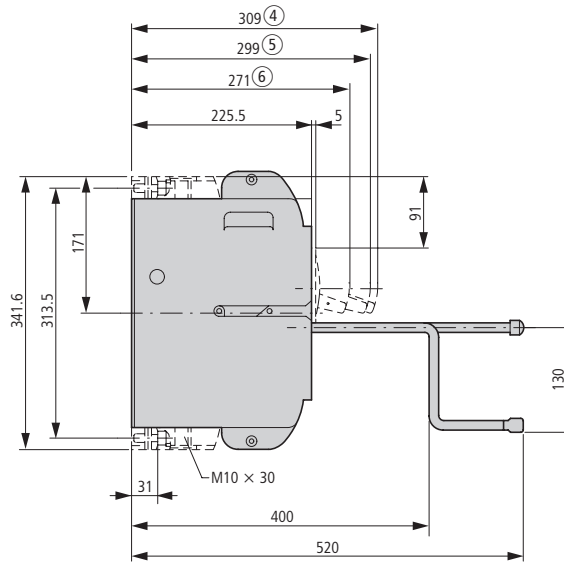
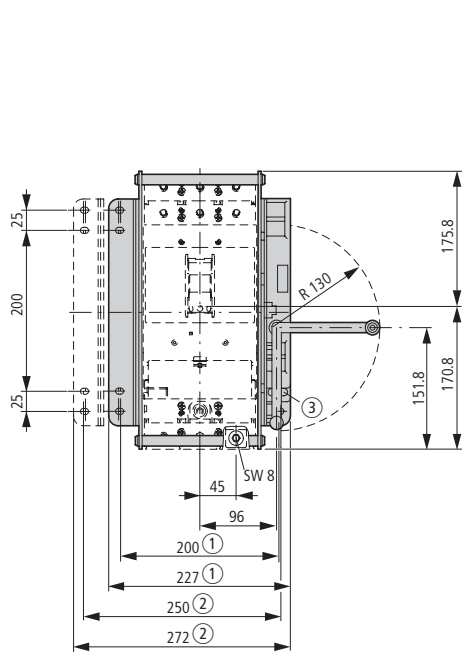
Remote operator

NZM3-XR...

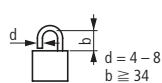


Withdrawable unit

+NZM3(-4)-XAV



- ① 3-pole
- ② 4-pole

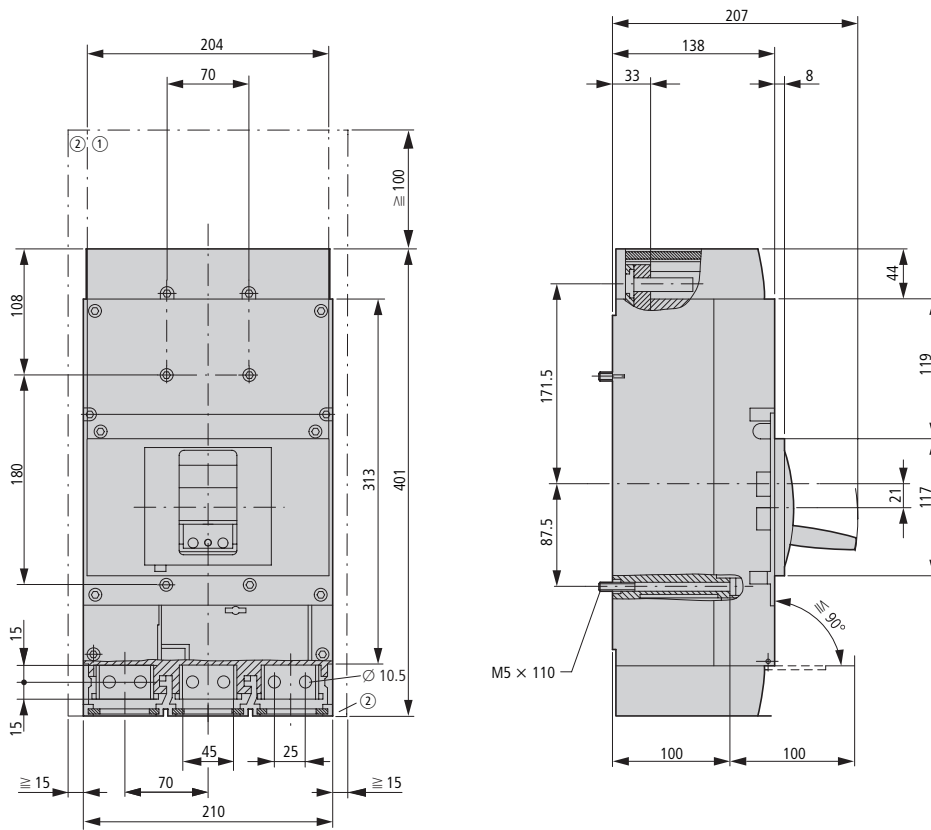


③ Up to 3 padlocks

- ④ withdrawn
- ⑤ test
- ⑥ connected

**Circuit-breaker
Switch-disconnector**

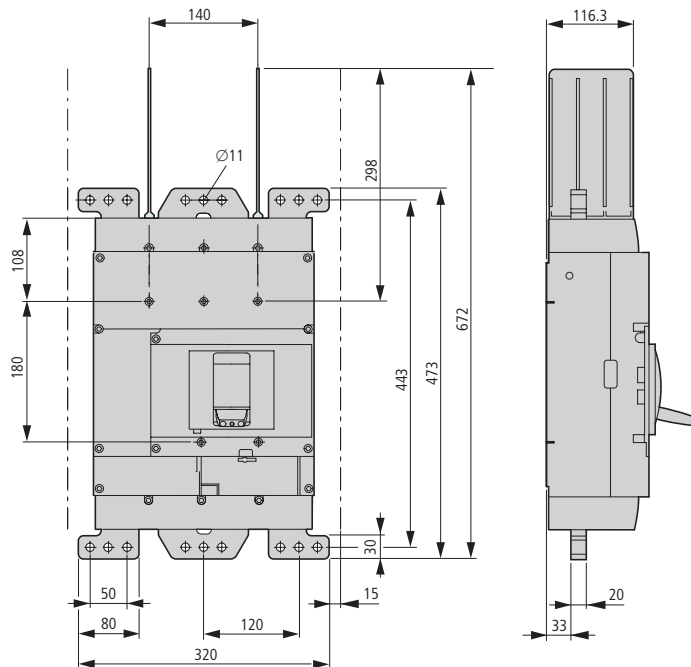
3 pole
NZMN4
NZMH4
N4
NS4



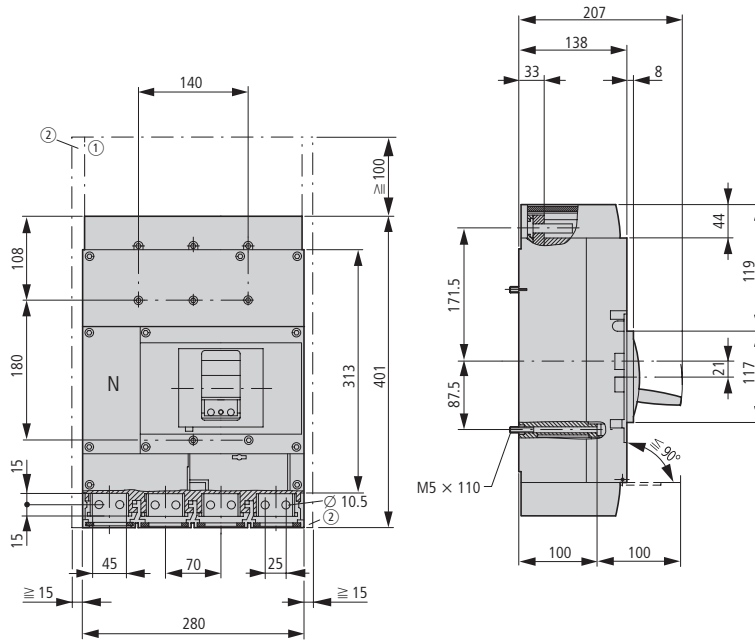
- ① Blow out area, minimum distance to other parts \cong 100 mm up to 690 V; \cong 200 mm up to 1000 V
- ② Minimum distance to adjacent parts \cong 15 mm

Circuit-breaker

3 pole
NZMN4-VE2000
NZMH4-VE2000



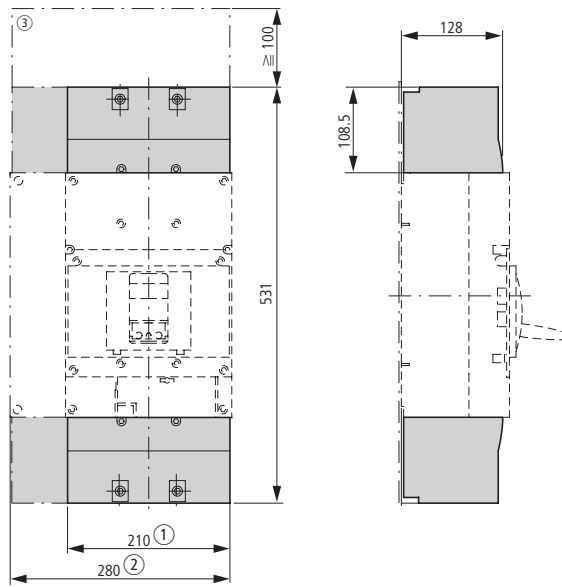
Circuit-breaker
Switch-disconnector
4 pole
NZMN4-4
NZMH4-4
N4-4



- ① Blow out area, minimum distance to other parts ≥ 100 mm up to 690 V; ≥ 200 mm up to 1000 V
- ② Minimum distance to adjacent parts ≥ 15 mm

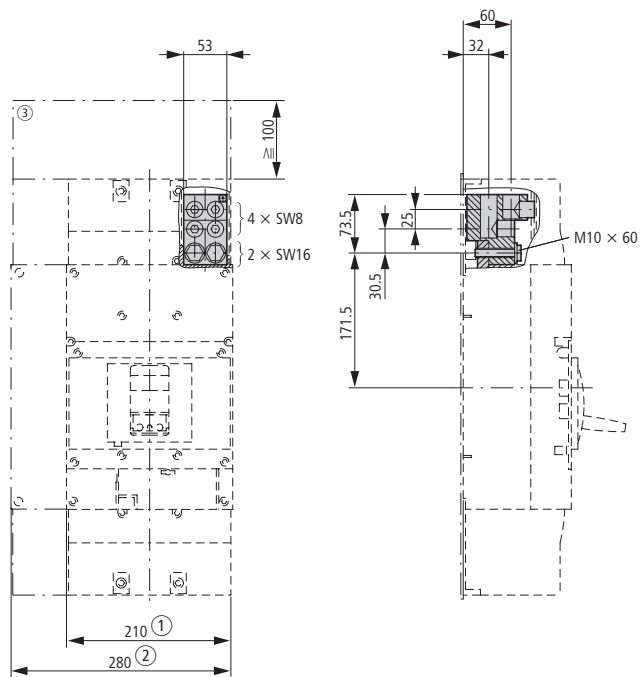
Covers

NZM4(-4)-XKSA



Tunnel terminal

NZM4-4-XKA



- ① 3 pole
- ② 4 pole
- ③ Clearance from conductive parts ≥ 100 mm up to 690 V; ≥ 200 mm up to 1000 V

Screw connection

Module plate Flat cable terminal

Single hole NZM4(-4)-XKB

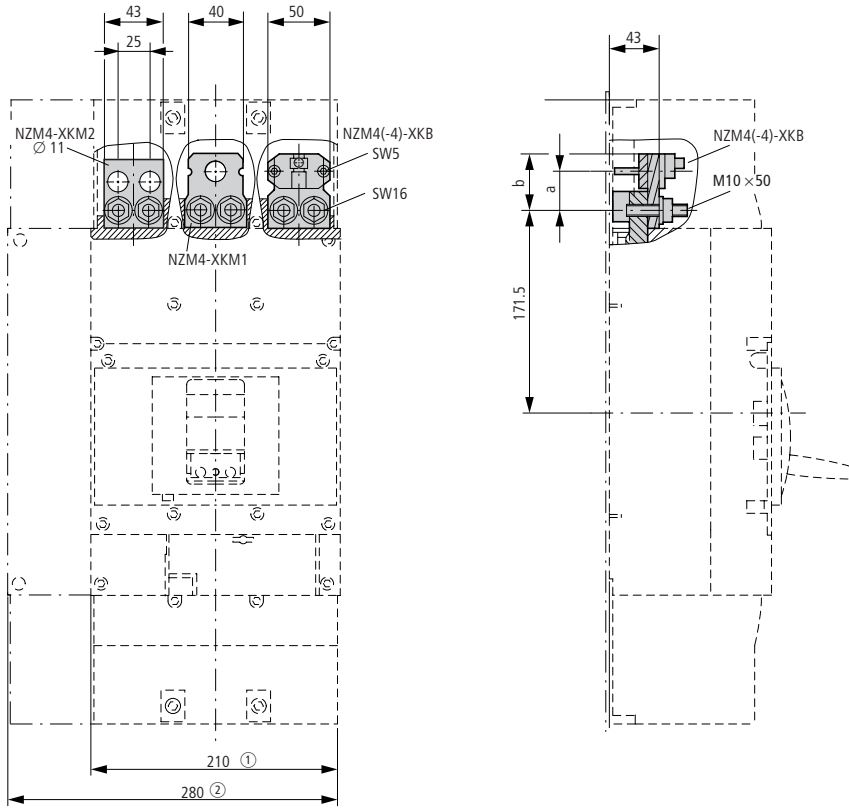
NZM4(-4)-XKM1

2-hole

NZM4(-4)-XKM2

Part no.	a	b
NZM4(-4)-XKM1	36	47
NZM4(-4)-XKM2	32	40
NZM4(-4)-XKB	-	47

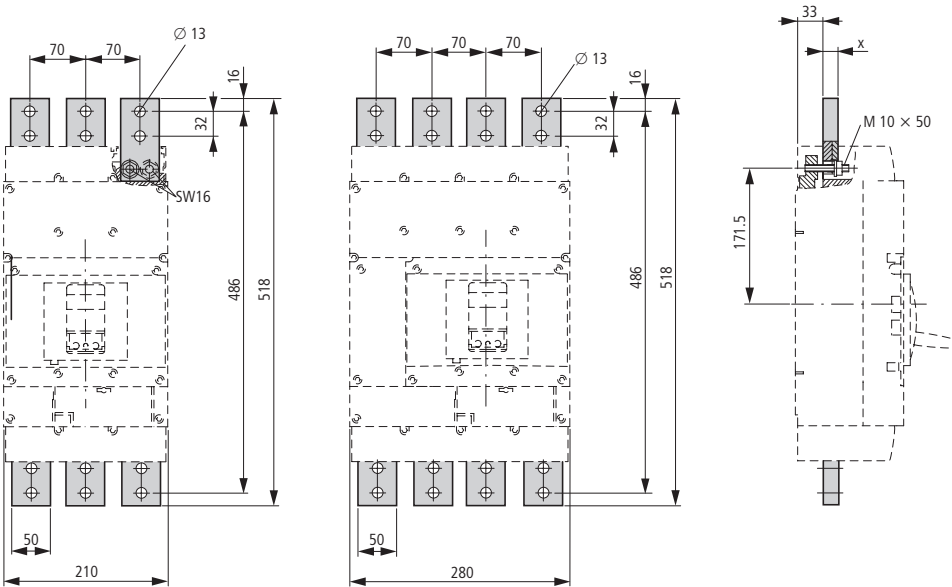
- ① 3 pole
- ② 4 pole
- ③ Clearance from conductive parts ≥ 100 mm up to 690 V; ≥ 200 mm up to 1000 V



Module plate

2 holes, vertical

NZM4(-4)-XKM2S...

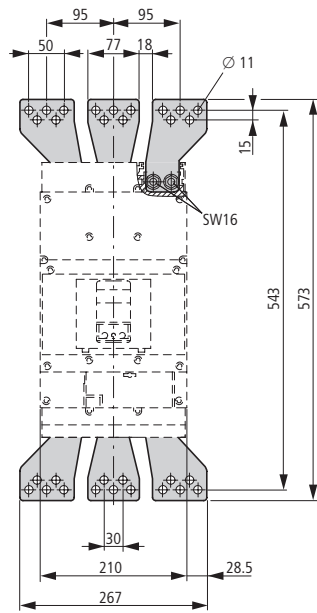


Part no.	x
NZM4(-4)-XKM2S-1250	12
NZM4(-4)-XKM2S-1600	20

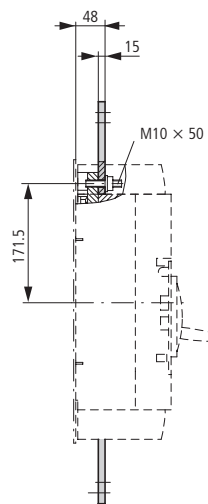
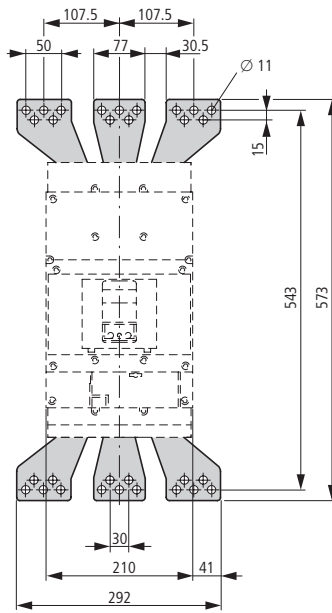


Connection width extension

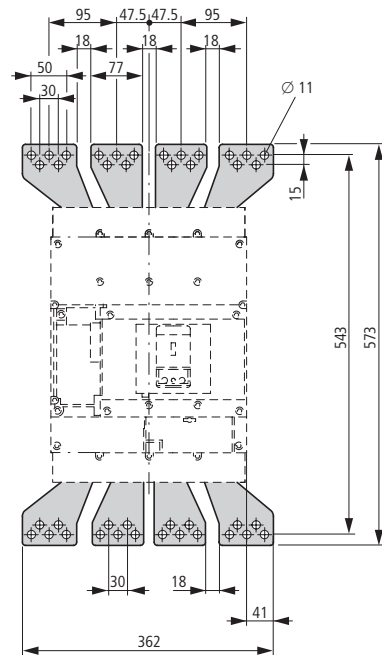
NZM4-XKV95



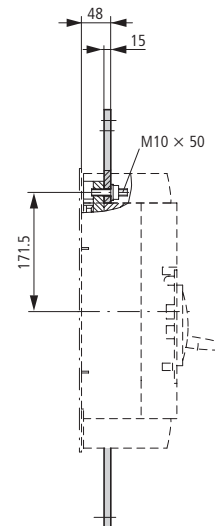
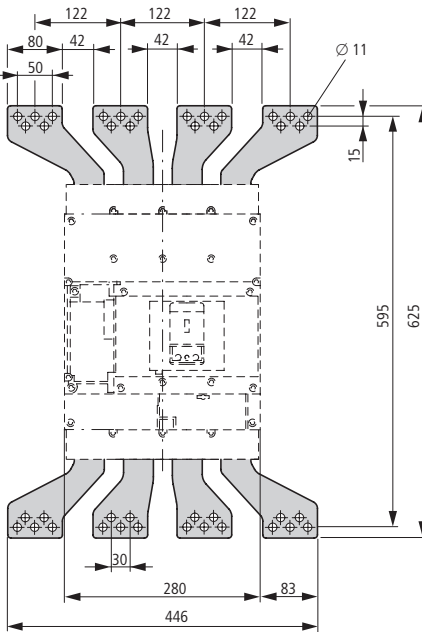
NZM4-XKV110



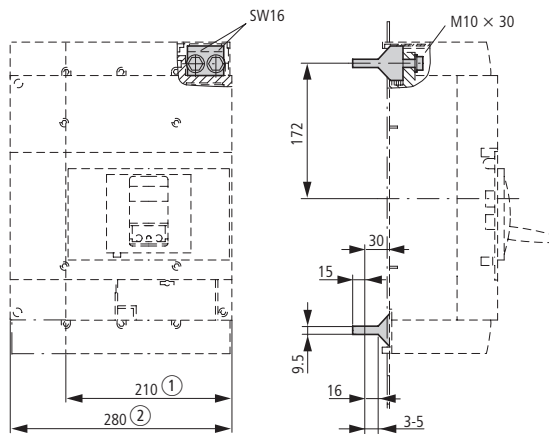
NZM4-4-XKV95



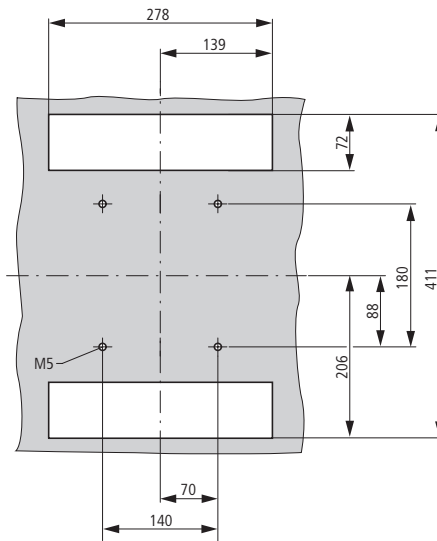
NZM4-4-XKV120



Connection on rear
NZM4(-4)-XKR

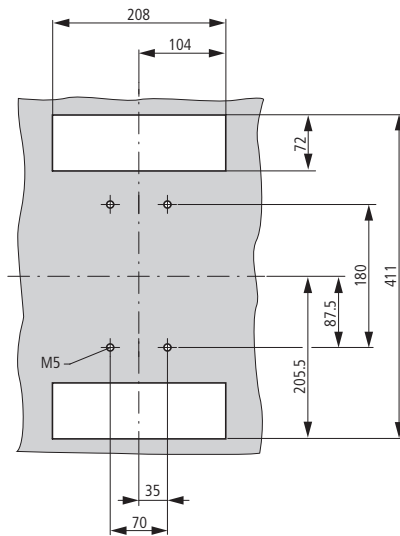
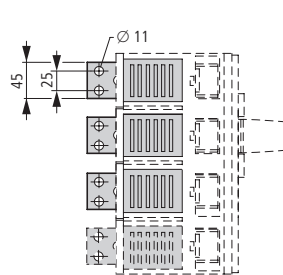


Fitting on mounting plate



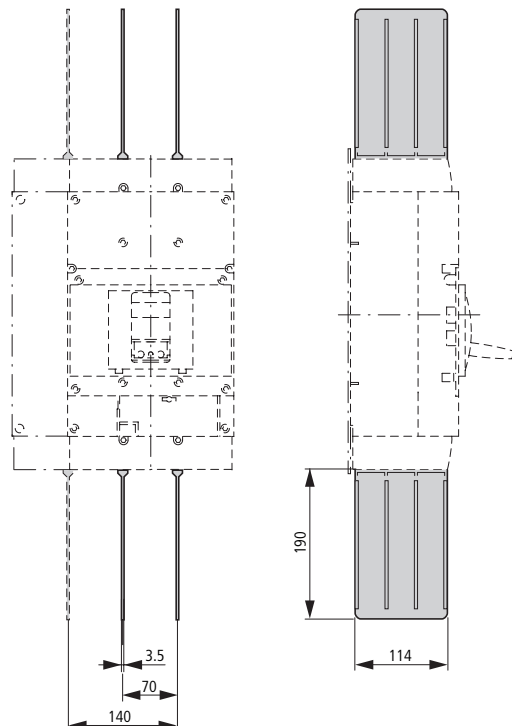
Rear connection possible also with rotation by 90°.

- ① 3 pole
- ② 4 pole

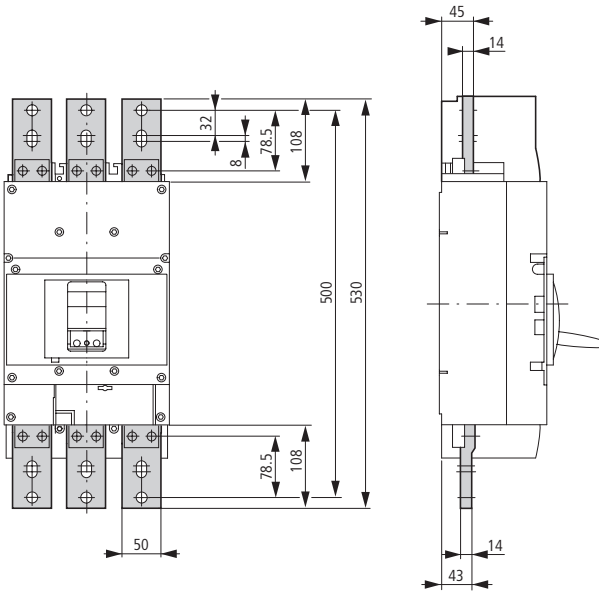


Phase isolators

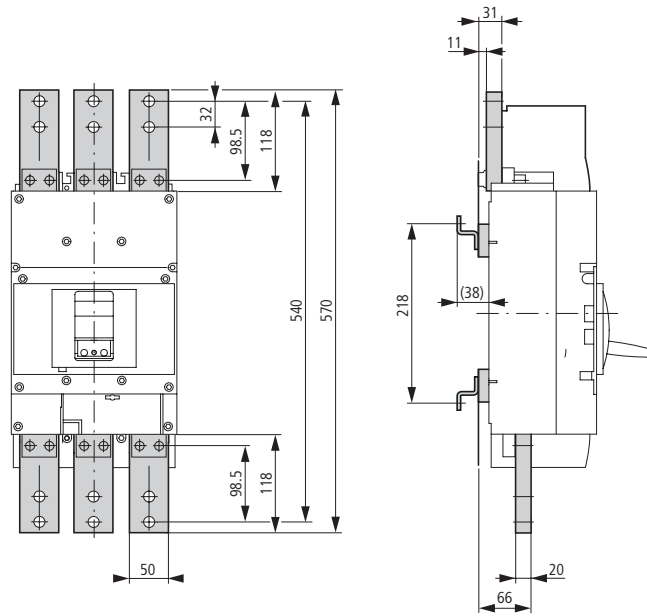
NZM4-4-XKP



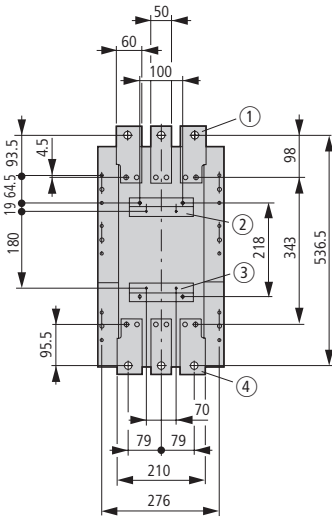
Set of adapters
NZM4-XAS14-1250



NZM4-XAS14-1600



Drilling template NZM12-1000 (1250) change to NZM4



- ① Module plate NZM4-XAS12-1000(1250)
- ② Drillings for mounting bracket NZM4-XAS12(M5)
- ③ Mounting bracket NZM4-XAS12
- ④ Mounting rail NZM12



Frame size 4: NZM12 replacement

http://catalog.moeller.net

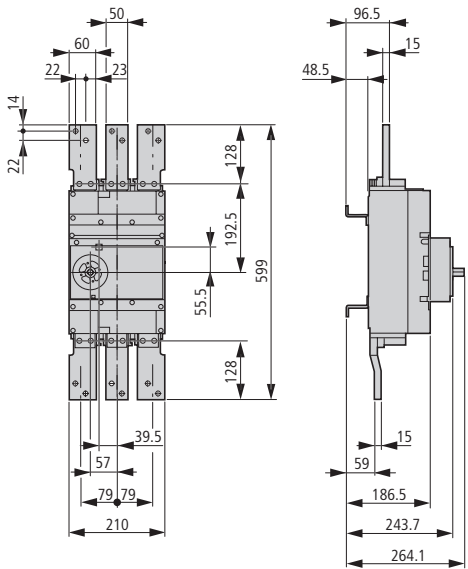
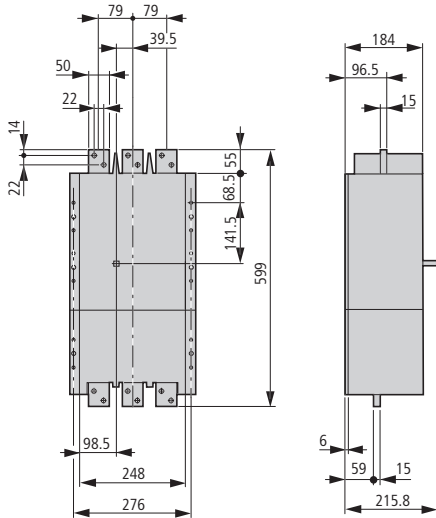
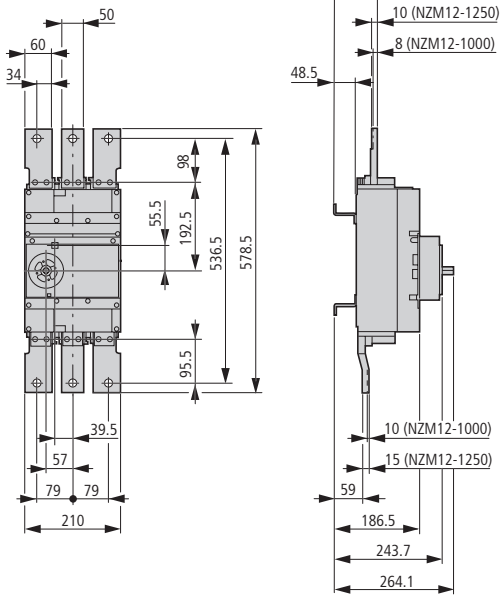
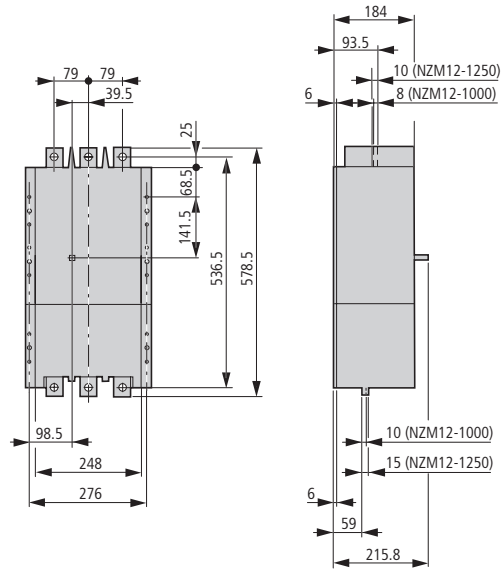
Moeller HPL0211-2007/2008

NZM12, NZM4-XAS...



Replacement of NZM12-1000(1250) with NZM4 with module plate, fixed mounted on mounting plate
NZM4-XAS12-1000(1250)

Replacement of NZM12-1600 with NZM4 with module plate, fixed mounted on mounting plate
NZM4-XAS12-1600

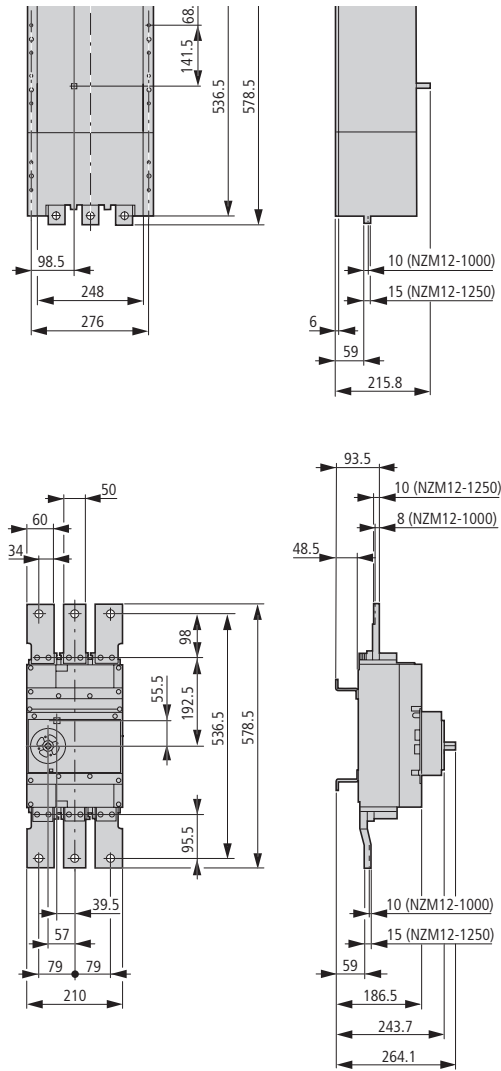


Circuit-breakers, switch-disconnectors



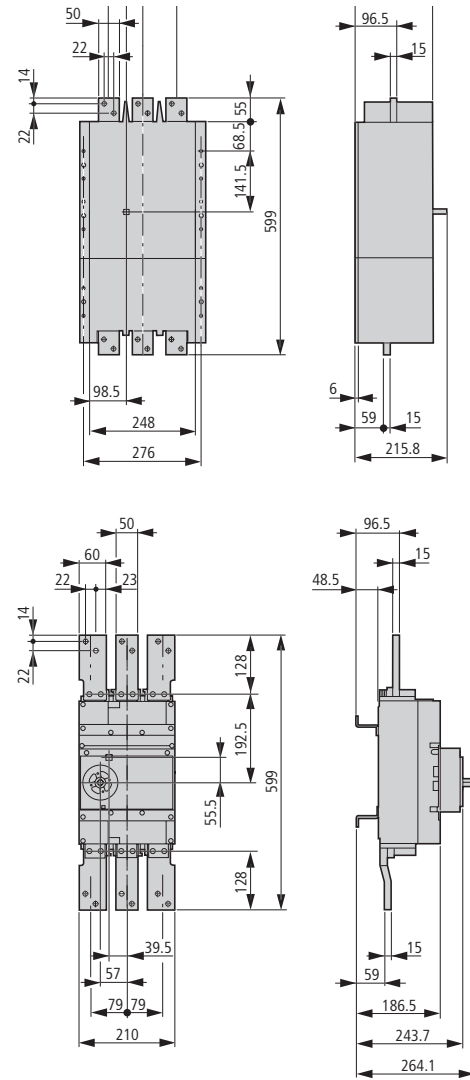
Replacement of N12-1000(1250) with N4 with module plate, fixed mounted on mounting plate

N4-XAS12-1000(1250)

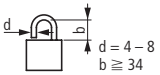
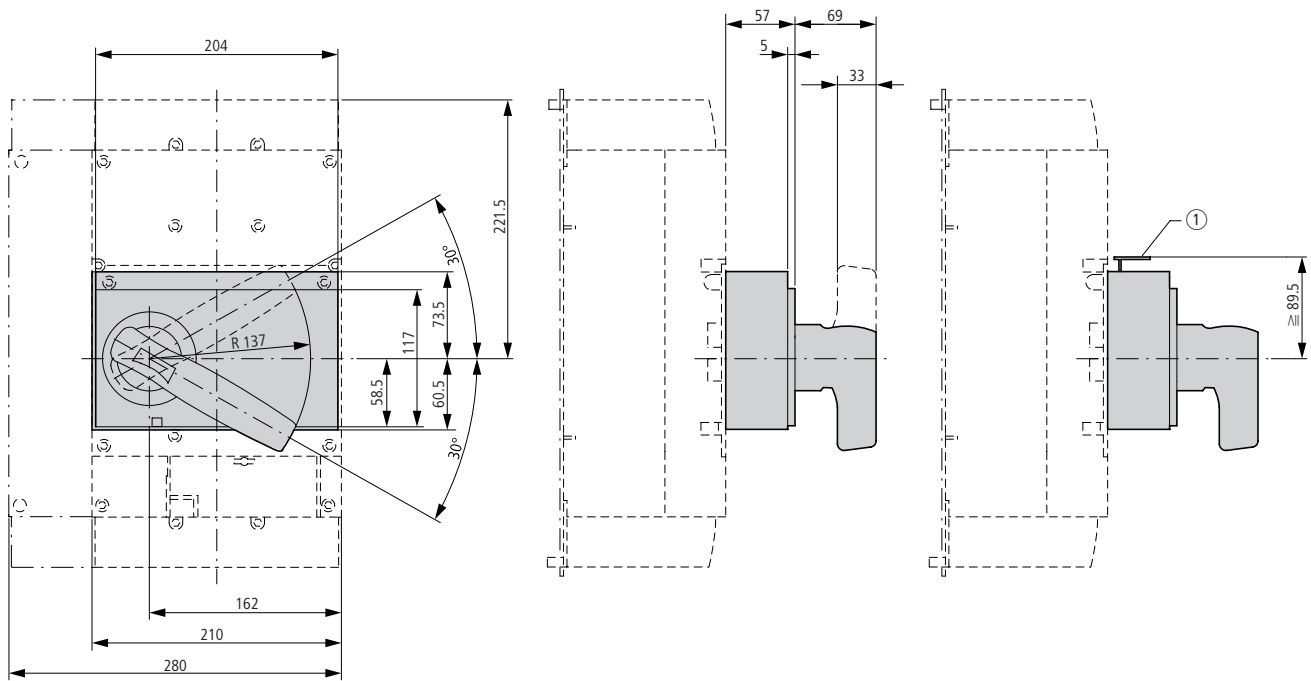


Replacement of N12-1600 with N4 with module plate, fixed mounted on mounting plate

N4-XAS12-1600

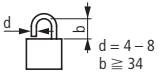
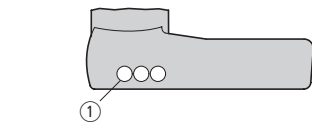
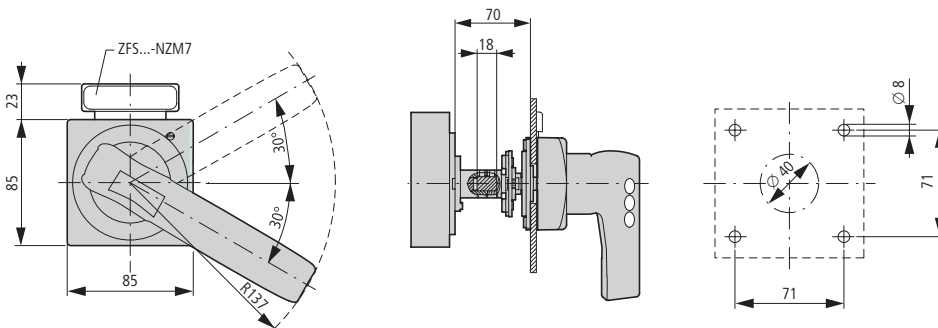


Rotary handle on circuit-breaker
NZM4-XDV(R)



① Up to 3 padlocks

Door coupling rotary handle
NZM4-XTVD(V)(R)...

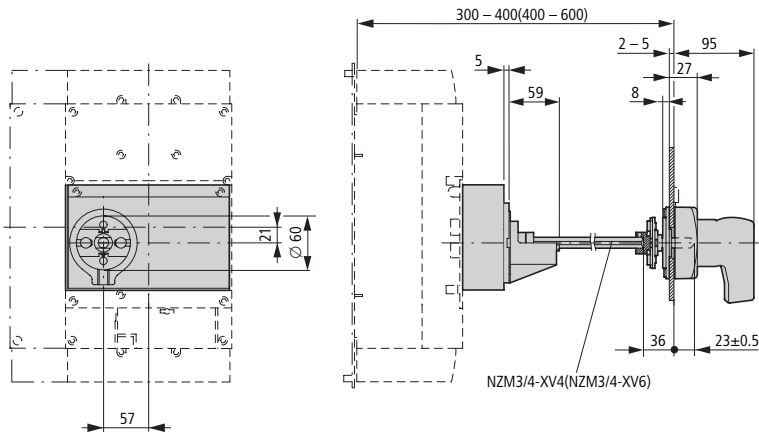


① Up to 3 padlocks

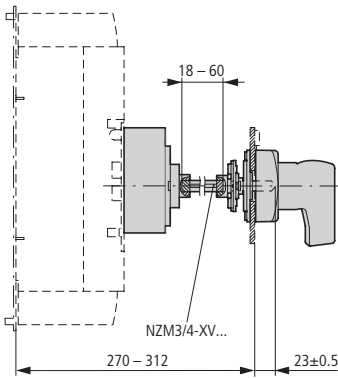


Door coupling rotary handle with extension shaft

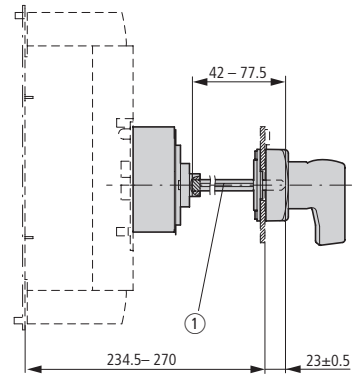
NZM4-XTVD(V)(R)(-NA)
NZM3/4-XV4(6)



NZM4-XTVD(V)(R)-60(-NA)

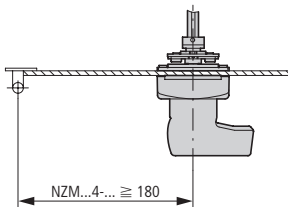


NZM4-XTVD(V)(R)-0(-NA)



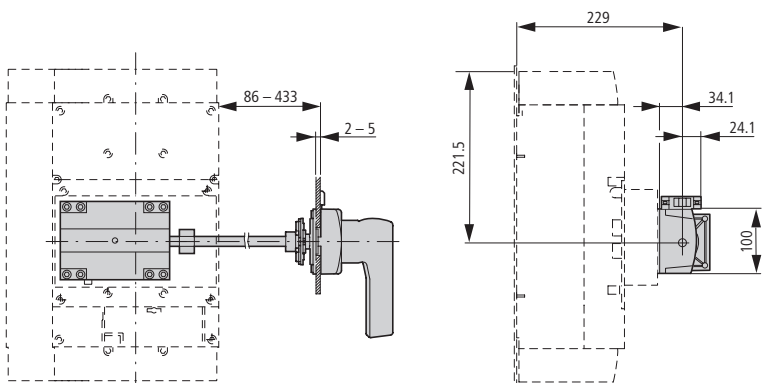
① Special tip

Minimum door coupling rotary handle clearance from door pivot point



Main switch mounting kits for side-wall mounting

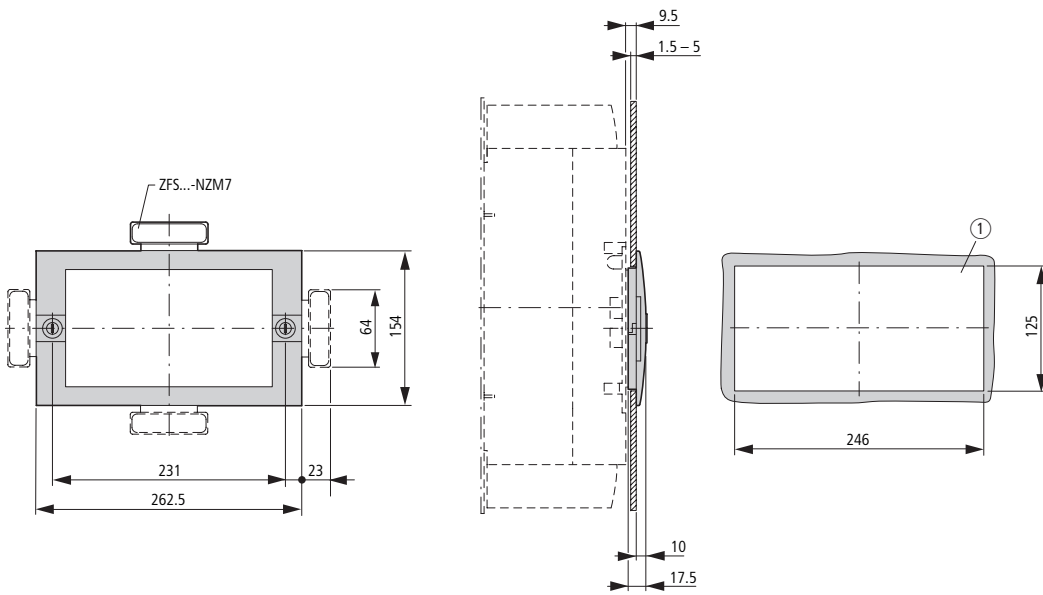
NZM4-XS(R)-L
NZM4-XS(R)-R



Insulating surrounds

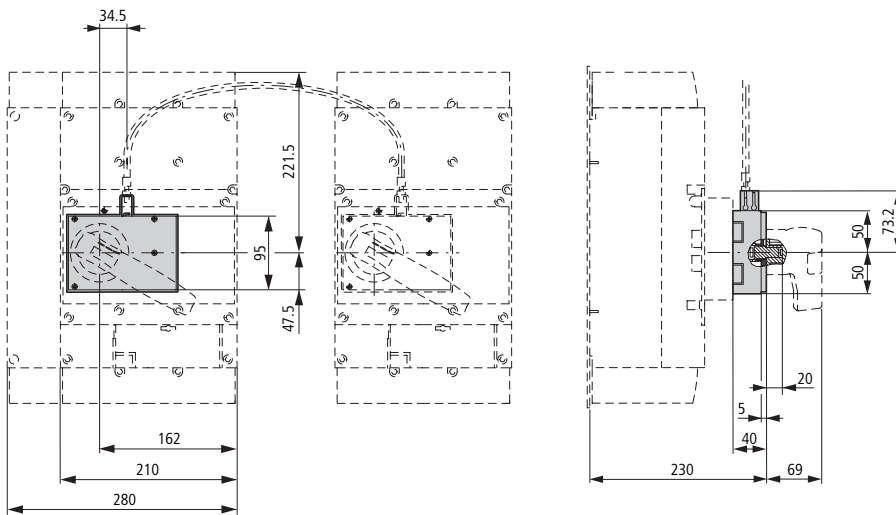
NZM4-XBR

① Mounting aperture

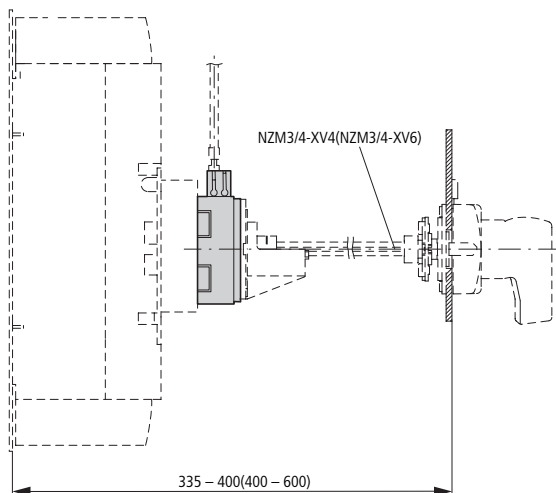


Mechanical interlock

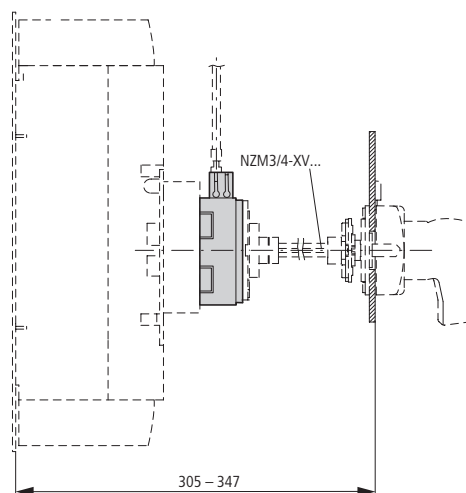
NZM4-XMV + NZM4-XDV(R)



NZM4-XMV + NZM4-XTVD(V)(R)

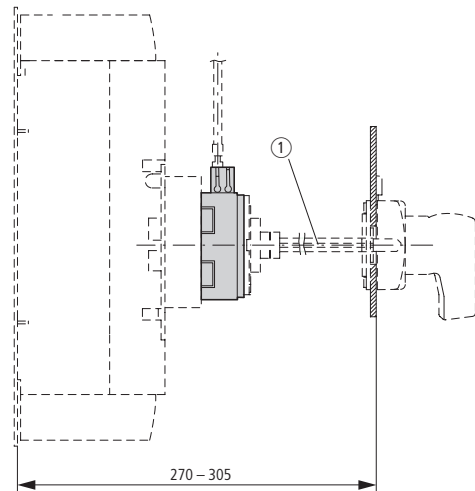


NZM4-XMV + NZM4-XTVD(V)(R)-60



Mechanical interlock

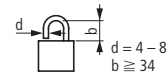
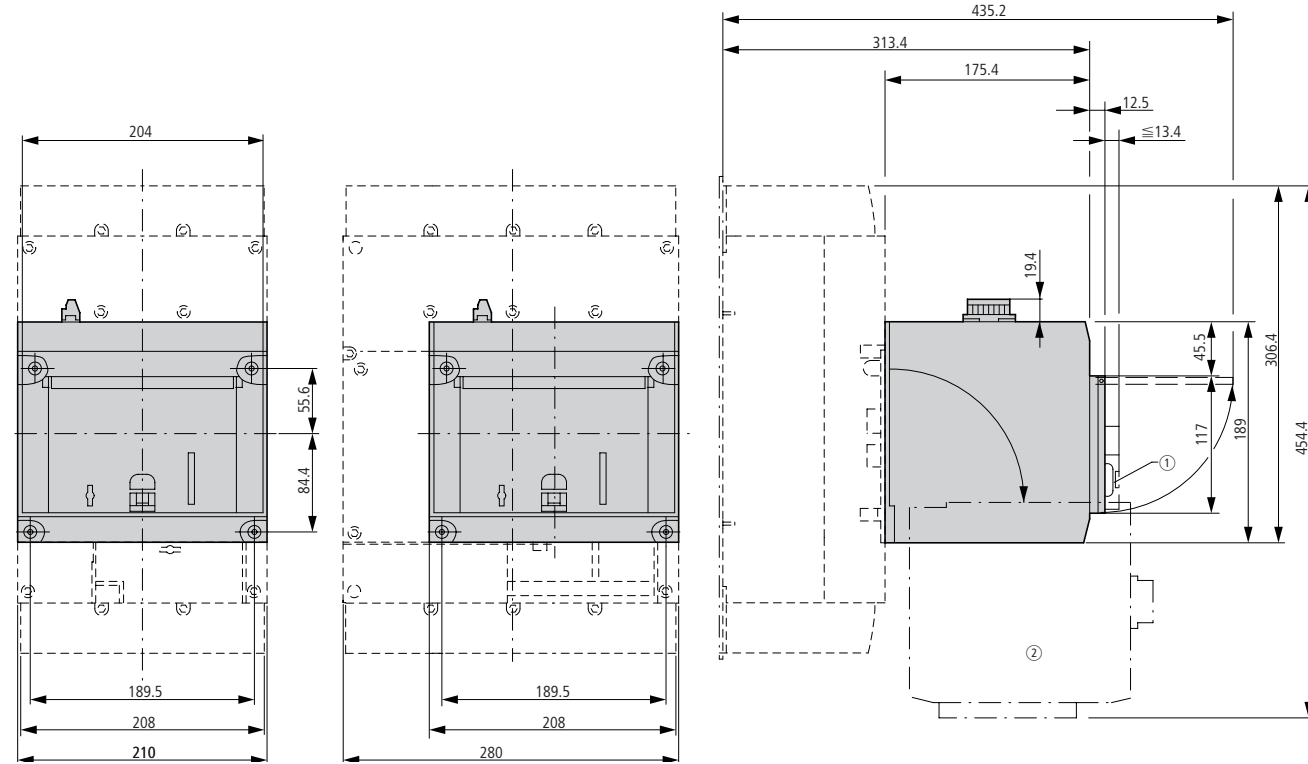
NZM4-XMV + NZM4-XTVD(V)(R)-0



① Special tip

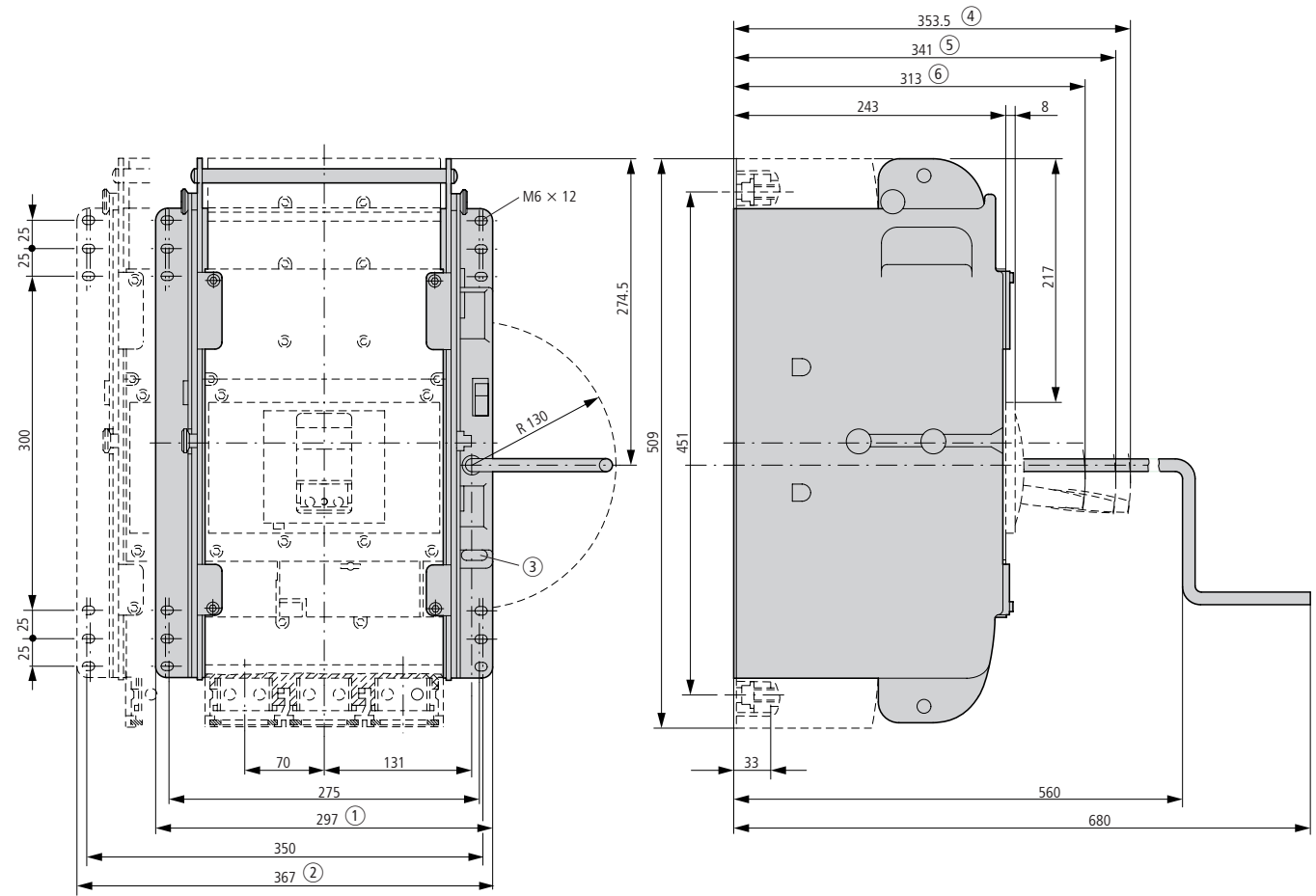
Remote operator

NZM4-XR...

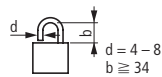


① Up to 3 padlocks
Remote operator folded

Withdrawable unit
+NZM4-4-XAV



- ① 3-pole
- ② 4-pole



- ③ Up to 3 padlocks

- ④ Disconnected
- ⑤ Test
- ⑥ Connected

