

LZM1-4 circuit-breaker series up to 1600 A

Circuit breaker LZM



EAT•N

Powering Business Worldwide

Circuit-breakers LzM

Circuit-breakers LzM1, 2, 3, 4 up to 1600 A

Reliably and safely controlling, switching and managing power, in industry, in buildings and in machine construction. Enabled by innovative protection concepts.

Circuit-breaker series LzM1 to LzM4

- just 4 compact frame sizes
- available as 3 and 4-pole device
- now also up to 1600 A
- flexible mounting using modular function groups
- full rated current at 50 °C ambient temperature

Page 6



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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Circuit-breakers L2M



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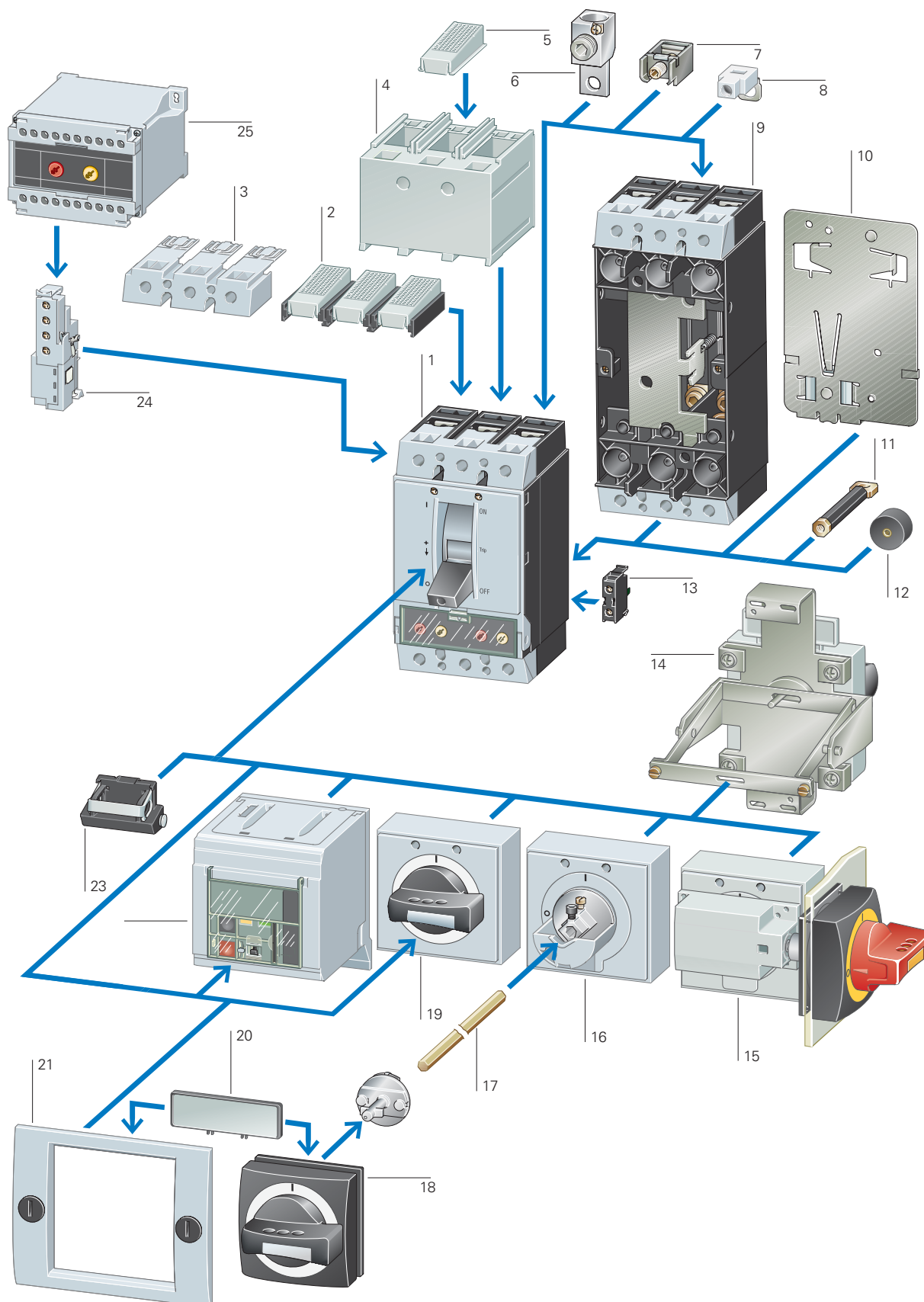
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Circuit-breakers LZM

System overview

Circuit-breakers LZM



Circuit-breakers L2M

Basic units

Circuit-breaker	1
Rated uninterrupted current up to 1600 A	
Switching capacity 25, 36, 50, 70 kA at 415 V	
Adjustable releases for overload and short-circuit	
Adjustable time selectivity	
Earth-fault protection	
Protection of systems, cables, motors, generators	
3 and 4 pole versions, IEC/EN 60947, CCC	
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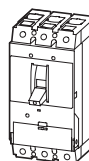
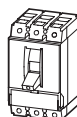
Circuit-breakers L2M

Technical overview

Circuit-breaker, 3/4 pole L2M1, L2M2, L2M3, L2M4

Circuit-breaker

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



Rated uninterrupted current I_u = Rated current I_n

Adjustable overload release I_r

Adjustable short-circuit release I_i

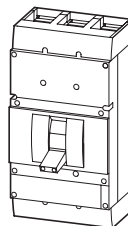
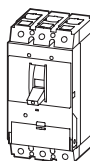
Delayed short-circuit release I_{sd}

Thermomagnetic releases

System and cable protection

		I_u A	I_u A	I_r A	I_i A
Ambient temperature at 100% I_u min./max. -25 / +50 °C		20	20	$0.8 - 1 \times I_n$	350
		25	25	$0.8 - 1 \times I_n$	350
		32	32	$0.8 - 1 \times I_n$	350
		40	40	$0.8 - 1 \times I_n$	$8 - 10 \times I_n$
		50	50	$0.8 - 1 \times I_n$	$6 - 10 \times I_n$
		63	63	$0.8 - 1 \times I_n$	$6 - 10 \times I_n$
		80	80	$0.8 - 1 \times I_n$	$6 - 10 \times I_n$
		100	100	$0.8 - 1 \times I_n$	$6 - 10 \times I_n$
		125	125	$0.8 - 1 \times I_n$	$6 - 10 \times I_n$
		160	160	$0.8 - 1 \times I_n$	L2M1: $8 \times I_n$, $6 - 10 \times I_n$
		160	200	$0.8 - 1 \times I_n$	L2M1: $8 \times I_n$, $6 - 10 \times I_n$
		160	250	$0.8 - 1 \times I_n$	L2M1: $8 \times I_n$, $6 - 10 \times I_n$
		160	300	$0.8 - 1 \times I_n$	L2M1: $8 \times I_n$, $6 - 10 \times I_n$
Basic switching capacity		L2MB1-A...		L2MB2-A...	
400/415 V	kA/cos φ	25	0.25	25	0.25
440 V	kA/cos φ	25	0.25	25	0.25
Comfort switching capacity		L2MC1-A...		L2MC2-A...	
400/415 V	kA/cos φ	36	0.25	36	0.25
440 V	kA/cos φ	30	0.25	30	0.25
525 V	kA/cos φ	12	0.5	12	0.5
690 V	kA/cos φ	8	0.5	8	0.5
Normal switching capacity		L2MN1-A...		L2MN2-A...	
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
Strong switching capacity		L2MS1-A...		L2MS2-A...	
400/415 V	kA/cos φ	70	0.20	70	0.20
440 V	kA/cos φ	35	0.25	65	0.20
525 V	kA/cos φ	20	0.30	36	0.25
690 V	kA/cos φ	10	0.50	20	0.30

Notes The stated switching capacity values are rated ultimate short-circuit breaking capacities (I_{cu})



Magnetic short-circuit release
Motor protection

Electronic releases

Systems, cable, selectivity and generator protection

l_u	l_u	l_u	l_i	l_u	l_u	l_r	l_{sd}	l_i	
A	A	A	A	A	A	A	A	A	
						$0.5 - 1 \times l_n$	$2 - 10 \times l_r$	$2 - 12 \times l_n$	
				400	800	$0.5 - 1 \times l_n$	$2 - 10 \times l_r$	$2 - 12 \times l_n$	
				630	1000	$0.5 - 1 \times l_n$	$2 - 10 \times l_r$	$2 - 12 \times l_n$	
40	$8 - 14 \times l_n$			630	1250	$0.5 - 1 \times l_n$	$2 - 10 \times l_r$	$2 - 12 \times l_n$	
50	$8 - 14 \times l_n$			630	1600	$0.5 - 1 \times l_n$	$2 - 10 \times l_r$	$2 - 12 \times l_n$	
63	$8 - 14 \times l_n$			630			$2 - 6 \times l_r$	$2 - 8 \times l_r$	
80	$8 - 14 \times l_n$			630					
100									
100	125	250							
100	160	320							
100	200	400							
100		500							
100									
LZMB1-S...		LZMB2-S...							
25	0.25	25	0.25						
25	0.25	25	0.25						
LZMC1-S...		LZMC2-S...		LZMC3-S...					
36	0.25	36	0.25	36	0.25				
30	0.25	30	0.25	30	0.25				
12	0.50	12	0.25	12	0.25				
8	0.50	8	0.50	8	0.50				
LZMN1-S...		LZMN2-S...		LZMN3-S...		LZMN3-...E...		LZMN4-...E...	
50	0.25	50	0.25	50	0.25	50	0.25	50	0.25
35	0.25	35	0.25	35	0.25	35	0.25	35	0.25
20	0.30	25	0.25	25	0.25	25	0.25	25	0.25
10	0.50	20	0.30	20	0.30	20	0.30	20	0.30
LZMS1-S...		LZMS2-S...		LZMS3-S...		LZMS3-...E...		LZMS4-...E...	
70	0.20	70	0.20	70	0.20	70	0.20	70	0.20
35	0.25	65	0.20	65	0.20	65	0.20	65	0.20
20	0.30	36	0.25	36	0.25	36	0.25	36	0.25
10	0.50	20	0.30	25	0.30	25	0.30	35	0.25

Circuit-breakers LZM

Ordering

Circuit-breaker, thermo-magnetic release, 3 pole LZM...1, LZM...2, LZM...3

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

Comfort switching capacity **36 kA**
at 415 V 50/60 Hz

Rated current =
rated uninterrupted
current

Setting range

Overload releases

Short-circuit releases

$I_n = I_u$

I_r

I_i

A

A

A



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



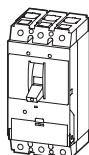
20	15...20	350	LZMB1-A20 109232	LZMC1-A20 109432
25	20...25	350	LZMB1-A25 109233	LZMC1-A25 109433
32	25...32	350	LZMB1-A32 109234	LZMC1-A32 109434
40	32...40	320...400	LZMB1-A40 109235	LZMC1-A40 109435
50	40...50	300...500	LZMB1-A50 109236	LZMC1-A50 109436
63	50...63	380...630	LZMB1-A63 109237	LZMC1-A63 109437
80	63...80	480...800	LZMB1-A80 109238	LZMC1-A80 109438
100	80...100	600...1000	LZMB1-A100 109239	LZMC1-A100 109439
125	100...125	750...1250	LZMB1-A125 109430	LZMC1-A125 109440
160	125...160	1280	LZMB1-A160 109431	LZMC1-A160 109441

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	LZMB2-A160 109522	LZMC2-A160 109526
200	160...200	1200...2000	LZMB2-A200 109523	LZMC2-A200 109527
250	200...250	1500...2500	LZMB2-A250 109524	LZMC2-A250 109528
300	240...300	1500...2500	LZMB2-A300 109525	LZMC2-A300 109529
250	200...250	1500...2500		LZMC3-A250 109597
320	250...320	1920...3200		LZMC3-A320 109598
400	320...400	2400...4000		LZMC3-A400 109599
500	400...500	3000...5000		LZMC3-A500 109600

Terminal screws standard,
terminals as accessories



Notes

Notes for terminals → 21

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

Strong switching capacity **70 kA**
at 415 V 50/60 Hz

Part no. Article no.	Price see price list	Part no. Article no.	Price see price list	Std. pack	Notes
LZMN1-A20 109442		LZMS1-A20 109452		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 $6 \times I_n$) – LZM...-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 (LZM1)
LZMN1-A25 109443		LZMS1-A25 109453		1 off	
LZMN1-A32 109444		LZMS1-A32 109454		1 off	
LZMN1-A40 109445		LZMS1-A40 109455		1 off	
LZMN1-A50 109446		LZMS1-A50 109456		1 off	
LZMN1-A63 109447		LZMS1-A63 109457		1 off	
LZMN1-A80 109448		LZMS1-A80 109458		1 off	
LZMN1-A100 109449		LZMS1-A100 109459		1 off	
LZMN1-A125 109450		LZMS1-A125 109460		1 off	
LZMN1-A160 109451		LZMS1-A160 109461		1 off	
		LZMS2-A20 109534		1 off	
		LZMS2-A25 109535		1 off	
		LZMS2-A32 109536		1 off	
		LZMS2-A40 109537		1 off	
		LZMS2-A50 109538		1 off	
		LZMS2-A63 109539		1 off	
		LZMS2-A80 109540		1 off	
		LZMS2-A100 109541		1 off	
		LZMS2-A125 109542		1 off	
LZMN2-A160 109530		LZMS2-A160 109543		1 off	
LZMN2-A200 109531		LZMS2-A200 109544		1 off	
LZMN2-A250 109532		LZMS2-A250 109545		1 off	
LZMN2-A300 109533		LZMS2-A300 109546		1 off	
LZMN3-A250 109601		LZMS3-A250 109605		1 off	
LZMN3-A320 109602		LZMS3-A320 109606		1 off	
LZMN3-A400 109603		LZMS3-A400 109607		1 off	
LZMN3-A500 109604		LZMS3-A500 109608		1 off	

Circuit-breakers LZM

Ordering

Circuit-breaker, magnetic short-circuit releases, 3 pole LZM...1, LZM...2, LZM...3

Rated current = rated uninterrupted current	Setting range Short-circuit releases	Motor rating AC-3 at 400 V 50/60 Hz	Rated operational current AC-3 at 400 V 50/60 Hz	Basic switching capacity 25 kA at 415 V 50/60 Hz Part no. Article no.	Price see price list	Comfort switching capacity 36 kA at 415 V 50/60 Hz Part no. Article no.	Price see price list
$I_n = I_u$	I_i	P	I_e				
A	A	kW	A				



Short-circuit protection

Motor protection in conjunction with overload relay

- With short-circuit release
- Without overload release

Terminals standard,
terminal screws as
accessories

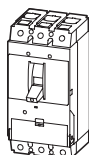


3 pole							
40	320...560	18.5	36	LZMB1-S40 109462		LZMC1-S40 109467	
50	400...700	22	41	LZMB1-S50 109463		LZMC1-S50 109468	
63	504...882	30	55	LZMB1-S63 109464		LZMC1-S63 109469	
80	640...1120	37	68	LZMB1-S80 109465		LZMC1-S80 109470	
100	800...1250	55	99	LZMB1-S100 109466		LZMC1-S100 109471	
40	320...560	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	LZMB2-S125 109547		LZMC2-S125 109550	
160	1280...2240	75	134	LZMB2-S160 109548		LZMC2-S160 109551	
200	1600...2500	110	196	LZMB2-S200 109549		LZMC2-S200 109552	
250	2000...3500		250			LZMC3-S250 109609	
320	2560...4480		320			LZMC3-S320 109610	
400	2800...5000		400			LZMC3-S400 109611	
500	3000...5000		450			LZMC3-S500 109612	

Terminal screws
standard, terminals
as accessories



Terminal screws
standard, terminals
as accessories



Notes

Notes for terminals → 21

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

Part no. **Price**
Article no. see price
list

Strong switching capacity
70 kA at 415 V 50/60 Hz

Part no. **Price**
Article no. see price
list

Std. pack **Notes**

LZMN1-S40 109472	LZMS1-S40 109477	1 off
LZMN1-S50 109473	LZMS1-S50 109478	1 off
LZMN1-S63 109474	LZMS1-S63 109479	1 off
LZMN1-S80 109475	LZMS1-S80 109480	1 off
LZMN1-S100 109476	LZMS1-S100 109481	1 off
	LZMS2-S40 109556	1 off
	LZMS2-S50 109557	1 off
	LZMS2-S63 109558	1 off
	LZMS2-S80 109559	1 off
	LZMS2-S100 109560	1 off
LZMN2-S125 109553	LZMS2-S125 109561	1 off
LZMN2-S160 109554	LZMS2-S160 109562	1 off
LZMN2-S200 109555	LZMS2-S200 109563	1 off
LZMN3-S250 109613	LZMS3-S250 109617	1 off
LZMN3-S320 109614	LZMS3-S320 109618	1 off
LZMN3-S400 109615	LZMS3-S400 109619	1 off
LZMN3-S500 109616	LZMS3-S500 109620	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 $12 \times I_n$)
– LZM...1-S100, LZM...2-S200: $8 - 12.5 \times I_n$ (ex-works $12 \times I_n$)
Without overload release I_r
– LZM...3-S400: $7 - 12.5 \times I_n$
– LZM...3-S500: $6 - 10 \times I_n$

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.

	I_n in A	Maximum permissible tripping class CLASS
LZM...1-S...	40	30
	50	30
	63	30
	80	20
	100	15
LZM...2-S...	40	30
	50	30
	63	30
	80	30
	100	30
LZM...3-S...	125	30
	160	20
	200	10
	250	30
	320	30
	400	30
	500	20

Tripping class	Tripping time T_p with load on all poles of 7.2 times current setting value
10 A	$2 \text{ s} < T_p \leq 10 \text{ s}$
10	$4 \text{ s} < T_p \leq 10 \text{ s}$
20	$6 \text{ s} < T_p \leq 20 \text{ s}$
30	$9 \text{ s} < T_p \leq 30 \text{ s}$

Motor-starter combination of classification types 1 and 2 can be found in the "Fuseless motor-starter combinations" section of the Main Catalogue.

Circuit-breakers LZM

Ordering

Electronic releases, 3 pole LZM...3, LZM...4

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

Non-delayed

Delayed short-
circuit release

$I_n = I_u$
A

I_r
A

I_i
A

I_{sd}
A



Protection of systems and cables

3 pole

400	200...400	800...4400	LZMN3-AE400 109639
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630	315...630	1260...5040	LZMN3-AE630 109640
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800	400...800	1600...9600	LZMN4-AE800 110942
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1000	500...1000	2000...12000	LZMN4-AE1000 110943
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1250	630...1250	2500...15000	LZMN4-AE1250 110944
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1600	800...1600	3200...19200	LZMN4-AE1600 110945
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Systems and cable protection, selectivity and generator protection

3 pole

400	200...400	800...4400	400...4000	LZMN3-VE400 109651
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630	315...630	1260...5040	472...4410	LZMN3-VE630 109652
-----	-----------	-------------	------------	------------------------------

800	400...800	1600...9600	800...8000	LZMN4-VE800 110960
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1000	500...1000	2000...12000	1000...10000	LZMN4-VE1000 110961
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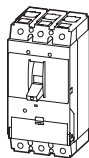
1250	630...1250	2500...15000	1250...12500	LZMN4-VE1250 110962
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1600	800...1600	3200...19200	1600...16000	LZMN4-VE1600 110963
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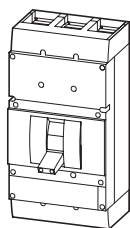
Notes

Notes for terminals → 29

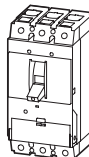
Terminal screws standard,
terminals as accessories



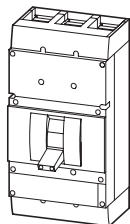
Terminal screws standard,
terminals as accessories



Terminal screws standard,
terminals as accessories



Terminal screws standard,
terminals as accessories



Strong switching capacity **70 kA**
at 415 V 50/60 Hz

Part no. Article no.	Price see price list	Std. pack	Notes
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LZMS3-AE400 109641	1 off	IEC/EN 60947-2
LZMS3-AE630 109642	1 off	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 short-circuit releases I_i • LZM...3-AE400: $2 - 11 \times I_n$ (ex-works $6 \times I_n$) • LZM...3-AE630: $2 - 8 \times I_n$ (ex-works $6 \times I_n$) • LZM...4-AE...: $2 - 12 \times I_n$ (ex-works $6 \times I_n$)
LZMS4-AE800 110946	1 off	
LZMS4-AE1000 110947	1 off	
LZMS4-AE1250 110948	1 off	
LZMS4-AE1600 110949	1 off	

LZMS3-VE400 109653	1 off	IEC/EN 60947-2
LZMS3-VE630 109654	1 off	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)
LZMS4-VE800 110964	1 off	Adjustable delayed short-circuit releases I_{sd} • $2 - 10 \times I_r$ (ex-works $6 \times I_r$) – LZM...3-VE630: $1.5 - 7 \times I_r$ (ex-works $6 \times I_r$)
LZMS4-VE1000 110965	1 off	
LZMS4-VE1250 110966	1 off	Adjustable delay time t_{sd} • Steps: 0, 20, 60, 100, 200, 300, 500, 750, 1000 ms (ex-works 0 ms)
LZMS4-VE1600 110967	1 off	Adjustable non-delayed short-circuit releases I_i • LZM...3-VE400: $2 - 11 \times I_n$ (ex-works $6 \times I_n$) • LZM...3-VE630: $2 - 8 \times I_n$ (ex-works $6 \times I_n$) • LZM...4-VE...: $2 - 12 \times I_n$ (ex-works $12 \times I_n$) i ² t constant function • LZM3, LZM4 switched (ex-works OFF)

Circuit-breakers LZW

Ordering

Terminals standard,
terminal screws as
accessories



Thermomagnetic release, 4 pole LZW...1

Rated current =
rated uninterrupted
current

Setting range

Overload releases

Short-circuit
releases

$I_n = I_u$

Main pole

Neutral
conductor

I_r

I_r

I_i

A

A



A



A



Protection of systems and cables

4 pole

20	15...20	15...20	350	LZMB1-4-A20 109482	LZMC1-4-A20 109492
25	20...25	20...25	350	LZMB1-4-A25 109483	LZMC1-4-A25 109493
32	25...32	25...32	350	LZMB1-4-A32 109484	LZMC1-4-A32 109494
40	32...40	32...40	320...400	LZMB1-4-A40 109485	LZMC1-4-A40 109495
50	40...50	40...50	300...500	LZMB1-4-A50 109486	LZMC1-4-A50 109496
63	50...63	50...63	380...630	LZMB1-4-A63 109487	LZMC1-4-A63 109497
80	63...80	63...80	480...800	LZMB1-4-A80 109488	LZMC1-4-A80 109498
100	80...100	80...100	600...1000	LZMB1-4-A100 109489	LZMC1-4-A100 109499
125	100...125	100...125	750...1250	LZMB1-4-A125 109490	LZMC1-4-A125 109500
160	125...160	125...160	1280	LZMB1-4-A160 109491	LZMC1-4-A160 109501

Notes

Notes for terminals → 21

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

Part no.
Article no.

Price
see price list

Comfort switching capacity
36 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

Strong switching capacity **70 kA**
at 415 V 50/60 Hz

Part no.	Price	Part no.	Price	Std. pack	Notes
Article no.	see price list	Article no.	see price list		

LZMN1-4-A20 109502	LZMS1-4-A20 109512	1 off	IEC/EN 60947-2
LZMN1-4-A25 109503	LZMS1-4-A25 109513	1 off	Adjustable overload releases I_r • $0.8 - 1 \times I_n$ (ex-works $0.8 \times I_n$)
LZMN1-4-A32 109504	LZMS1-4-A32 109514	1 off	Setting on neutral pole implemented via the main pole setting I_r of the main pole.
LZMN1-4-A40 109505	LZMS1-4-A40 109515	1 off	Adjustable short-circuit releases I_i • $6 - 10 \times I_n$ (ex-works $6 \times I_n$) – LZM...1-4-A40: $8 - 10 \times I_n$ (ex-works $8 \times I_n$)
LZMN1-4-A50 109506	LZMS1-4-A50 109516	1 off	Fixed short-circuit release I_i • 350 A at $I_n = 20 - 32$ A • 1280 A at $I_n = 160$ A ($8 \times I_n$)
LZMN1-4-A63 109507	LZMS1-4-A63 109517	1 off	LZM..1-4-A...
LZMN1-4-A80 109508	LZMS1-4-A80 109518	1 off	• With 100 % overload and short-circuit protection in 4th pole
LZMN1-4-A100 109509	LZMS1-4-A100 109519	1 off	
LZMN1-4-A125 109510	LZMS1-4-A125 109520	1 off	
LZMN1-4-A160 109511	LZMS1-4-A160 109521	1 off	

Circuit-breakers LZM

Ordering

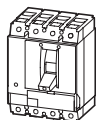
Thermomagnetic release, 4 pole LZM...2, LZM...3

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

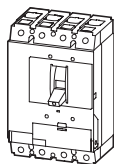
Comfort switching capacity **36 kA**
at 415 V 50/60 Hz

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
	Overload releases						
	Main pole	Neutral conductor					
$I_n = I_u$	I_r	I_r	I_i				
A	A	A	A				
							
Protection of systems and cables							
4 pole							
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	LZMB2-4-A160 109564		LZMC2-4-A160 109570	
160	125...160	80...100	960...1600	LZMB2-4-A160/100 109565		LZMC2-4-A160/100 109571	
200	160...200	160...200	1200...2000	LZMB2-4-A200 109566		LZMC2-4-A200 109572	
200	160...200	100...125	1200...2000	LZMB2-4-A200/125 109567		LZMC2-4-A200/125 109573	
250	200...250	200...250	1500...2500	LZMB2-4-A250 109568		LZMC2-4-A250 109574	
250	200...250	125...160	1500...2500	LZMB2-4-A250/160 109569		LZMC2-4-A250/160 109575	
320	250...320	250...320	1920...3200			LZMC3-4-A320 109621	
320	250...320	160...200	1920...3200			LZMC3-4-A320/200 109622	
400	320...400	320...400	2400...4000			LZMC3-4-A400 109623	
400	320...400	200...250	2400...4000			LZMC3-4-A400/250 109624	
500	400...500	400...500	3000...5000			LZMC3-4-A500 109625	
500	400...500	250...320	3000...5000			LZMC3-4-A500/320 109626	
Notes Notes for terminals → 25							

Terminal screws
standard, terminals
as accessories



Terminal screws
standard, terminals
as accessories



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

Part no.
Article no.

Price
see price
list

Strong switching capacity **70 kA**
at 415 V 50/60 Hz

Part no.
Article no.

Price
see price
list

Std.
pack

Notes

	LZMS2-4-A20 109582	1 off	IEC/EN 60947-2
	LZMS2-4-A25 109583	1 off	Adjustable overload releases I_r • $0.8 - 1 \times I_n$ (ex-works $0.8 \times I_n$)
	LZMS2-4-A32 109584	1 off	Setting on neutral pole implemented via the main pole setting I_r of the main pole.
	LZMS2-4-A40 109585	1 off	Adjustable short-circuit releases I_i • $6 - 10 \times I_n$ (ex-works $6 \times I_n$)
	LZMS2-4-A50 109586	1 off	Fixed short-circuit release I_i • 350 A at $I_n = 20 - 32$ A
	LZMS2-4-A63 109587	1 off	LZM..2/3-4-A...
	LZMS2-4-A80 109588	1 off	• With 100 % overload and short-circuit protection in 4th pole LZM..2/3-4-A.../60
	LZMS2-4-A100 109589	1 off	• With 60 % overload and short-circuit protection in 4th pole
	LZMS2-4-A125 109590	1 off	
LZMN2-4-A160 109576	LZMS2-4-A160 109591	1 off	
LZMN2-4-A160/100 109577	LZMS2-4-A160/100 109592	1 off	
LZMN2-4-A200 109578	LZMS2-4-A200 109593	1 off	
LZMN2-4-A200/125 109579	LZMS2-4-A200/125 109594	1 off	
LZMN2-4-A250 109580	LZMS2-4-A250 109595	1 off	
LZMN2-4-A250/160 109581	LZMS2-4-A250/160 109596	1 off	
LZMN3-4-A320 109627	LZMS3-4-A320 109633		
LZMN3-4-A320/200 109628	LZMS3-4-A320/200 109634		
LZMN3-4-A400 109629	LZMS3-4-A400 109635		
LZMN3-4-A400/250 109630	LZMS3-4-A400/250 109636		
LZMN3-4-A500 109631	LZMS3-4-A500 109637		
LZMN3-4-A500/320 109632	LZMS3-4-A500/320 109638		

Circuit-breakers LZW

Ordering

Circuit-breakers, electronic releases, 4 pole LZW...3, LZW...4

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

Rated current = rated uninterrupted current	Setting range		Short-circuit releases	Part no. Article no.	Price see price list
	Overload releases Main pole	Neutral conductor			
$I_n = I_u$	I_r	I_r	I_i		
A	A	A	A		
					

Protection of systems and cables

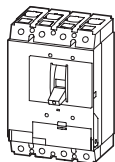
4 pole

400	200...400	200...400	800...4400	LZMN3-4-AE400 109643
400	200...400	125...250	800...4400	LZMN3-4-AE400/250 109644
630	315...630	315...630	1260...5040	LZMN3-4-AE630 109645
630	315...630	200...400	1260...5040	LZMN3-4-AE630/400 109646
800	400...800	400...800	1600...9600	LZMN4-4-AE800 110968
800	400...800	250...500	1600...9600	LZMN4-4-AE800/500 110969
1000	500...1000	500...1000	2000...12000	LZMN4-4-AE1000 110970
1000	500...1000	315...630	2000...12000	LZMN4-4-AE1000/630 110971
1250	630...1250	630...1250	2500...15000	LZMN4-4-AE1250 110972
1250	630...1250	400...800	2500...15000	LZMN4-4-AE1250/800 110973
1600	800...1600	800...1600	3200...19200	LZMN4-4-AE1600 110974
1600	800...1600	500...1000	3200...19200	LZMN4-4-AE1600/1000 110975

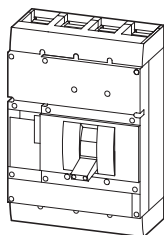
Notes

Notes for terminals → 29

Terminal screws standard,
terminals as accessories



Terminal screws standard,
terminals as accessories



Strong switching capacity **70 kA**
at 415 V 50/60 Hz

Part no. Article no.	Price see price list	Std. pack	Notes
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LZMS3-4-AE400 109647	1 off	IEC/EN 60947-2 Adjustable overload releases I_r
LZMS3-4-AE400/250 109648	1 off	• $0.5 - 1 \times I_n$ (ex-works $0.8 \times I_n$)
LZMS3-4-AE630 109649	1 off	Setting on neutral pole implemented via the main pole setting I_r of the main pole.
LZMS3-4-AE630/400 109650	1 off	R.m.s. value measurement and "thermal memory" Adjustable short-circuit releases I_i • LZM...3-4-AE400: $2 - 11 \times I_n$ (ex-works $6 \times I_n$) • LZM...3-4-AE630: $2 - 8 \times I_n$ (ex-works $6 \times I_n$) • LZM...4-4-AE...: $2 - 12 \times I_n$ (ex-works $6 \times I_n$)
LZMS4-4-AE800 110976	1 off	LZM...-4-AE...
LZMS4-4-AE800/500 110977	1 off	• With 100 % overload and short-circuit protection in 4th pole
LZMS4-4-AE1000 110978	1 off	LZM...-4-AE.../...
LZMS4-4-AE1000/630 110979	1 off	• With 60 % overload and short-circuit protection in 4th pole
LZMS4-4-AE1250 110980	1 off	
LZMS4-4-AE1250/800 110981	1 off	
LZMS4-4-AE1600 110982	1 off	
LZMS4-4-AE1600/1000 110983	1 off	

Circuit-breakers LZW

Ordering

Circuit-breakers, electronic releases, 4 pole LZW...3, LZW...4

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

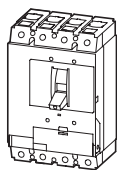
Rated current = rated uninterrupted current	Setting range		Short-circuit releases		Part no. Article no.	Price see price list
	Overload releases					
	Main pole	Neutral conductor	Non-delayed	Delayed short- circuit release		
$I_n = I_u$ A	I_r A	I_r A	I_i A	I_{sd} A		
						

Systems and cable protection, selectivity and generator protection

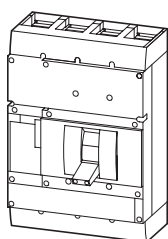
4 pole

400	200...400	200...400	800...4400	400...4000	LZMN3-4-VE400 109655
400	200...400	125...250	800...4400	400...4000	LZMN3-4-VE400/250 109656
630	315...630	315...630	1260...5040	472...4410	LZMN3-4-VE630 109657
630	315...630	200...400	1260...5040	472...4410	LZMN3-4-VE630/400 109658
800	400...800	400...800	1600...9600	800...8000	LZMN4-4-VE800 110984
800	400...800	250...500	1600...9600	800...8000	LZMN4-4-VE800/500 110985
1000	500...1000	500...1000	2000...12000	1000...10000	LZMN4-4-VE1000 110986
1000	500...1000	315...630	2000...12000	1000...10000	LZMN4-4-VE1000/630 110987
1250	630...1250	630...1250	2500...15000	1250...12500	LZMN4-4-VE1250 110988
1250	630...1250	400...800	2500...15000	1250...12500	LZMN4-4-VE1250/800 110989
1600	800...1600	800...1600	3200...19200	1600...16000	LZMN4-4-VE1600 110990
1600	800...1600	500...1000	3200...19200	1600...16000	LZMN4-4-VE1600/1000 110991

Terminal screws standard,
terminals as accessories



Terminal screws standard,
terminals as accessories



Notes

Notes for terminals → 29

Strong switching capacity **70 kA**
at 415 V 50/60 Hz

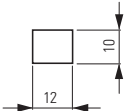
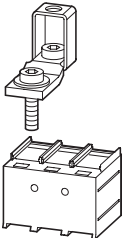
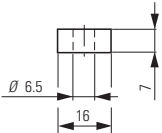
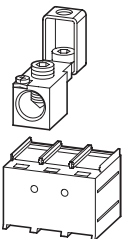
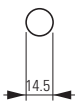
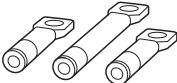
Part no. Article no.	Price see price list	Std. pack	Notes
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LZMS3-4-VE400 109659	1 off	IEC/EN 60947-2
LZMS3-4-VE400/250 109660	1 off	Adjustable overload releases I_r • $0.5 - 1 \times I_n$ (ex-works $0.8 \times I_n$)
LZMS3-4-VE630 109661	1 off	Setting on neutral pole implemented via the main pole setting I_r of the main pole.
LZMS3-4-VE630/400 109662	1 off	R.m.s. value measurement and "thermal memory"
LZMS4-4-VE800 110992	1 off	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) – LZM...3-4-VE630: $2 - 14$ s at $6 \times I_r$ also infinity (without overload release)
LZMS4-4-VE800/500 110993	1 off	Adjustable delayed short-circuit releases I_{sd} • $2 - 10 \times I_r$ (ex-works $6 \times I_r$) – LZM...3-4-VE630: $1.5 - 7 \times I_r$ (ex-works $6 \times I_r$)
LZMS4-4-VE1000 110994	1 off	Adjustable delay time t_{sd} • Steps: 0, 20, 60, 100, 200, 300, 500, 750, 1000 ms (ex-works 0 ms)
LZMS4-4-VE1250 110996	1 off	Adjustable non-delayed short-circuit releases I_i • LZM...3-4-VE400: $2 - 11 \times I_n$ (ex-works $6 \times I_n$) • LZM...3-4-VE630: $2 - 8 \times I_n$ (ex-works $6 \times I_n$) • LZM...4-4-VE...: $2 - 12 \times I_n$ (ex-works $12 \times I_n$)
LZMS4-4-VE1250/800 110997	1 off	
LZMS4-4-VE1600 110998	1 off	i^2t constant function (ex-works OFF) • LZM3, LZM4 switched (ex-works OFF)
LZMS4-4-VE1600/1000 110999	1 off	LZM...-4-VE... • With 100 % overload and short-circuit protection in 4th pole LZM...-4-VE.../... • With 60 % overload and short-circuit protection in 4th pole

Circuit-breakers LZM

Ordering

Connection types LZM1

	Max. cable connection area	For use with	Terminal capacities	Type of conductor	mm ²	AWG/kcmil
Box terminal Standard equipment 		LZM1(-4)	Three- and four-pole	Cu cable	1 × 10 – 70 ¹⁾ 2 × 6 – 25	1 × 8 – 2/0 2 × 9 – 4
Screw connection 		LZM1(-4)	Three- and four-pole	Copper cable lugs Aluminium cable lug	1 × 10 – 70 2 × 6 – 25 1 × 10 – 35 2 × 10 – 35	1 × 8 – 2/0 2 × 8 – 4 1 × 8 – 2 2 × 8 – 2
Tunnel terminal 		LZM1(-4)	Three- and four-pole	Copper cable Al cable	1 × 16 – 95	1 × 6 – 3/0 –
Connection on rear 	–	LZM1(-4)	Three- and four-pole	Copper cable lugs Aluminium cable lug	1 × 2.5 – 25 2 × 2.5 – 25 1 × 10 – 35 2 × 10 – 35	

Notes

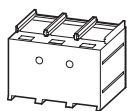
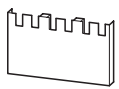
¹⁾ Up to 240 mm² can be connected depending on the cable manufacturer.

Terminal capacities Cu strip (number of segments x width x segment thickness)	Copper busbar width x 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 LZW1. Conversion kit for circuit-breaker with screw connection.
		NZM1-4-XKC 267075	1 off	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	

Circuit-breakers LZM

Ordering

Connection types LZM1

	Max. cable connection area	For use with	Terminal capacities Type of conductor	mm ²	AWG/kcmil
Control circuit terminal 	–	LZM1(-4)	Three- and four-pole	Screw connection	$1 \times 0.75 - 2.5$ $2 \times 0.75 - 1.5$ $1 \times 18 - 14$ $2 \times 18 - 16$
Control circuit terminal 	–	LZM1(-4)	Three- and four-pole	Box terminal	$1 \times 0.75 - 2.5$ $2 \times 0.75 - 1.5$ $1 \times 18 - 14$ $2 \times 18 - 16$
Cover 	–	LZM1(-4)	3 pole		
	–	LZM1(-4)	4 pole		
For box terminals 					
For box terminals 					
For cover NZM1(-4)-XKSA 					

Part no.Article no. when
ordered separately

Std. pack

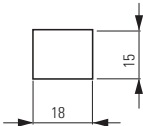
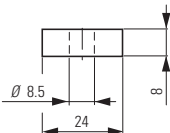
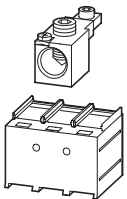
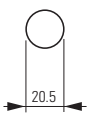
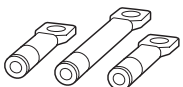
Notes

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	

Circuit-breakers LZM

Ordering

Connection types LZM2

	Max. cable connection area	For use with	Terminal capacities		Terminal capacities	AWG/kcmil	Terminal capacities
				Type of conductor	Terminal capacities		Cu strip (number of segments × width × segment thickness)
					mm ²		mm
Box terminal 		LZM2(-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
Screw connection Standard equipment 		LZM2(-4)	Three- and four-pole	Copper cable lugs Aluminium cable lug	1 × 4 – 185 2 × 4 – 70 1 × 10 – 50 2 × 10 – 50	1 × 11 – 3/0 2 × 12 1 × 8 – 1/0 2 × 8 – 1/0	≧ 2 × 16 × 0.8
Tunnel terminal 		LZM2(-4)	Three- and four-pole	Copper cable Al cable	1 × 16 ... 185 1 × 16 ... 185	1 × 6 – 350 –	
Connection on rear 	Connection on rear When using cable lugs without NZM3(-4)-XKSA cover, they must be insulated.						
		LZM2(-4)	Three- and four-pole	Copper cable lugs Aluminium cable lug	1 × 4 – 185 2 × 4 – 70 1 × 10 – 50 2 × 10 – 50		≧ 2 × 16 × 0.8 ≧ 6 × 24 × 0.5

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 $U_e \geq 525$ 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		1 off	
	+NZM2-250-XKCO 262242	NZM2-250-XKC 262244	1 off	
	+NZM2-250-XKCU 262243		1 off	
	+NZM2-4-160-XKCO 266751	NZM2-4-160-XKC 266755	1 off	
	+NZM2-4-160-XKCU 266753		1 off	
	+NZM2-4-250-XKCO 266752	NZM2-4-250-XKC 266756	1 off	
	+NZM2-4-250-XKCU 266754		1 off	
$\geq 16 \times 5$		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 LZW circuit-breakers. Conversion kit for circuit-breaker with box terminal. Use special cable lug narrow version, → 27 Fitted within the switch housing If a busbar is used, insulation (400 mm) e.g. sleeving and a NZM2(4)-XKSA cover are required. $U_e \geq 525$ V AC: • For all other connection material a NZM2(4)-XKSA shroud must be used.
		NZM2-4-XKS 266750	1 off	
		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 $1 \times 0.75 - 2.5$ mm ² (18 – 14 AWG) or $2 \times 0.75 - 1.5$ mm ² (18 – 16 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 NZM2(4)-XKSA obligatory (supplied).
		NZM2-4-XKA 271458	1 off	
$\geq 16 \times 5$ $\geq 20 \times 5$	+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	1 off	
	+NZM2-4-XKRO 266766		1 off	
	+NZM2-4-XKRU 266767		1 off	

Circuit-breakers L2M

Ordering

Connection types L2M2

Max. cable connection
area

For use with

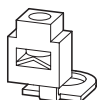
Terminal capacities

Type of conductor

Terminal capacities

AWG/kcmil

Control circuit terminal



L2M2(-4)

Three- and four-
pole

Screw connection

mm²

2 × 0.75 – 2.5
2 × 0.75 – 1.5

1 × 18 – 14
2 × 18 – 16

Control circuit terminal



L2M3(-4)

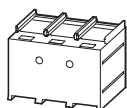
Three- and four-
pole

Box terminal

1 × 0.75 – 2.5
2 × 0.75 – 1.5

1 × 18 – 14
2 × 18 – 16

Cover



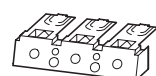
L2M2

3 pole

L2M2(-4)

4 pole

Connection cover, knockout



L2M2

3 pole

L2M2(-4)

4 pole

IP2X protection against contact with a finger

For box terminals



L2M2

3 pole

L2M2(-4)

4 pole

For covers N2M2(-4)-XKSA or N2M2(-4)



L2M2

3 pole

L2M2(-4)

4 pole

Copper cable lug



Copper cable lug

When using cable lugs without N2M2(-4)-XKSA cover, they must be insulated.

95 mm²

L2M2(-4)

Three- and four-
pole

120 mm²

L2M2(-4)

Three- and four-
pole

150 mm²

L2M2(-4)

Three- and four-
pole

185 mm²

L2M2(-4)

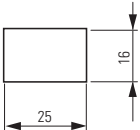
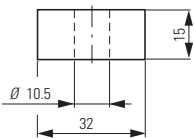
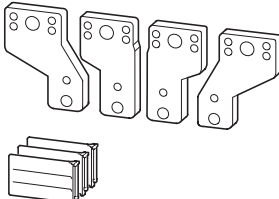
Three- and four-
pole

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
	NZM2-4-XKSA 266770	1 off	Degree of protection IP1X on the connection side when using insulated conductor material.
	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.
	NZM2-4-XIPK 266774	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 25 mm ² . 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	
	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	3 off	
	KS150-NZM7 059777	3 off	
	NZM2-XKS185 260032	3 off	

Circuit-breakers LZM

Ordering

Connection types LZM3

	Max. cable connection area	Rated current ¹⁾ <i>I</i> _n	For use with	Terminal capacities			
				Type of conductor	Terminal capacities	AWG/kcmil	
		A			mm ²		
Box terminal		max. 500 400 UL/CSA	LZM3(-4)	Three- and four-pole	Copper conductors Cu cable	1 × 35 – 240 2 × 16 – 120	1 × 2 – 500
		630	LZM3(-4)	Three- and four-pole	Copper conductors Cu cable	1 × 35 – 240 2 × 16 – 120	1 × 2 – 500
Screw connection		630 max. 400	LZM3(-4)	Three- and four-pole	Copper cable lugs Aluminium cable lug	1 × 16 – 240 2 × 16 – 240 1 × 10 – 120 2 × 10 – 120	1 × 4 – 350 2 × 350
Connection width extension		630	LZM3(-4)	Three- and four-pole	Copper cable lugs Aluminium cable lug	2 × 300	2 × 500

Notes

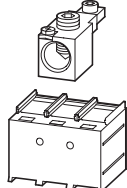
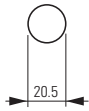
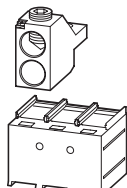
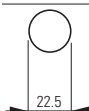
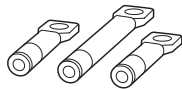
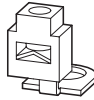
¹⁾ The following applies for the rated current: The values have been determined conform to IEC/EN 60947 (switchgear standard) and generally relate to the max. defined cross-sections and are intended for the purpose of orientation.

Terminal capacities		Part no. Article no. when ordered with basic unit	Part no. Article no. when ordered separately	Std. pack	Notes
Cu strip (number of segments × width × segment thickness) mm	Copper busbar width × thickness mm				
min. 6 × 16 × 0.8 max. 20 × 24 × 0.5 or max. 11 × 21 × 1		+NZM3-XKCO 262246	NZM3-XKC 260042	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-XKCU 262245		1 off	Conversion kit for circuit-breaker with screw connection.
min. 6 × 16 × 0.8 max. 20 × 24 × 0.5 or max. 11 × 21 × 1		+NZM3-4-XKCO 266781	NZM3-4-XKC 266783	1 off	Fitted within the switch housing O = for fitting at the top U = for fitting at the bottom $U_e \geq 525 \text{ V AC}$: • Use NZM3(-4)-XKSA cover.
		+NZM3-4-XKCU 266782		1 off	Use with flexible and highly flexible conductors ferrules, note the max. terminal capacity when using ferrules.
10 × 32 × 1.0 + 5 × 32 × 1.0	30 × 10 + 30 × 5		NZM3-XKS 260039	1 off	Type contains parts for a terminal located at top or bottom for 3 or 4 pole circuit-breakers.
			NZM3-4-XKS 266780	1 off	Standard connection with all LZW3 circuit-breakers.
					Conversion kit for circuit-breaker with box terminal.
					Use special cable lugs narrow version, → 32
					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.
					$U_e \geq 525 \text{ V AC}$: A shroud NZM3(-4)-XKSA must be used with all other connection types.
(2 ×) 10 × 50 × 1..0	(2 ×) 10 × 50		NZM3-XKV70 100514	1 off	Type contains parts for a terminal located at top or bottom for 3 or 4 pole circuit-breakers.
			NZM3-4-XKV70 100515	1 off	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.

Circuit-breakers LZW

Ordering

Connection types LZW3

	Max. cable connection area	Rated current ¹⁾	For use with	Terminal capacities		
				Type of conductor	Terminal capacities	AWG/kcmil
		I_n A			mm ²	
Terminals for connection width extension 		max. 500	LZW3	3 pole	Cu cable	1 × 120 – 300
		max. 500	LZW3(-4)	4 pole	Cu cable	1 × 120 – 300
Terminals for connection width extension 		630	LZW3	3 pole		
		630	LZW3(-4)	4 pole		
Tunnel terminal 	–	max. 350	LZW3(-4)	Three- and four-pole	Copper conductors	1 × 16 – 185 ²⁾
		max. 350	LZW3(-4)		Cu cable Al conductors Al cable	1 × 6 – 350
Tunnel terminal 	–	max. 630	LZW3(-4)	Three- and four-pole	Copper conductors	1 × 50 – 240
		max. 630	LZW3(-4)		Cu cable Al conductors Al cable	2 × 50 – 240 1 × 0 – 500 2 × 0 – 500
Connection on rear not UL/CSA approved 		max. 630	LZW3(-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 	–		LZW3(-4)	Three- and four-pole	Screw connection	1 × 0.75 – 2.5 2 × 0.75 – 1.5 1 × 18 – 14 2 × 18 – 16
Control circuit terminal 	–		LZW3(-4)	Three- and four-pole	Box terminal	1 × 0.75 – 2.5 2 × 0.75 – 1.5 1 × 18 – 14 2 × 18 – 16

Notes

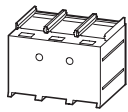
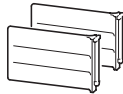
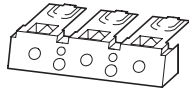
¹⁾ The following applies for the rated current: The values have been determined conform to IEC/EN 60947 (switchgear standard) and generally relate to the max. defined cross-sections and are intended for the purpose of orientation.
The engineering standards which apply in each case must be observed.

Terminal capacities		Part no. Article no. when ordered with basic unit	Part no. Article no. when ordered separately	Std. pack	Notes
Cu strip (number of segments × width × segment thickness)	Copper busbar width × thickness				
mm	mm				
			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. Use with flexible and highly flexible conductors ferrules.
(2 ×) 11 × 21 × 1..0			NZM3-XK22X21 100784	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.
(2 ×) 11 × 21 × 1..0			NZM3-4-XK22X21 100785	1 off	
			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. 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 NZM3(-4)-XKSA obligatory (supplied).
			NZM3-XKA2 271461	1 off	
			NZM3-4-XKA2 271462	1 off	
		+NZM3-XKRO 266790	NZM3-XKR 266792	1 off	Type suffix and type c 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 mix. 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. Included as standard with tunnel terminal Degree of protection IP1X Height or thickness of the control circuit terminals NZM-XSTS = 2 mm
			NZM-XSTK 266739	1 off	

Circuit-breakers LZM

Ordering

Connection types LZM3

	Max. cable connection area	For use with		Part no. Article no. when ordered separately
Cover 	—	LZM3(-4)	3 pole	NZM3-XKSA 260045
	—		4 pole	NZM3-4-XKSA 266801
Phase isolator 	—	LZM3(-4)	3 pole	NZM3-XKP 100512
	—		4 pole	NZM3-4-XKP 100513
Connection cover, knockout 	—	LZM3(-4)	3 pole	NZM3-XKSFA 104642
	—		4 pole	NZM3-4-XKSFA 104643
IP2X protection against contact with a finger 	—	LZM3(-4)	3 pole	NZM3-XIPK 266804
			4 pole	NZM3-4-XIPK 266805
For cover NZM3(-4)-XKSA 	—	LZM3(-4)	3 pole	NZM3-XIPA 266808
	—		4 pole	NZM3-4-XIPA 266809
Copper cable lug 	Copper cable lug When using cable lugs without NZM3(-4)-XKSA cover, they must be insulated.			
	185 mm ²	LZM3(-4) LZM4(-4)	3 and 4 pole	NZM3-XKS185 260040
	900 mm ²		3 and 4 pole	NZM3-XKS240 260041

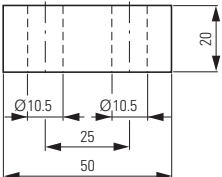
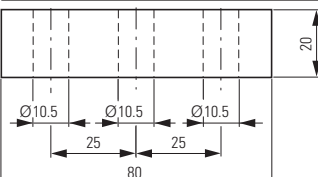
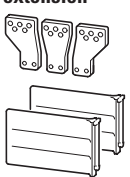
Std. pack **Notes**

1 off	Type contains parts for a terminal located at top or bottom for 3 or 4 pole circuit-breakers.
1 off	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.
1 off	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.
1 off	Enhancement of the protection against direct contact to (simplified protection against contact with a finger).
1 off	
1 off	Type contains parts for a terminal located at top or bottom for 3 or 4 pole circuit-breakers.
1 off	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 .
	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.
1 off	Enhancement of the protection against direct contact to IP2X.
1 off	
3 off	Type contains a cable lug for 3-pole or 4 pole switches.
3 off	Special cable lug, narrow style

Circuit-breakers LZM

Ordering

Connection types LZM4

	Max. cable connection area	Rated current ¹⁾ I_n A	For use with	Terminal capacities		
				Type of conductor	Terminal capacities mm ²	AWG/kcmil
2-hole	Screw connection Standard equipment 	max. 1250	LZM4(-4)	Three- and four-pole	Cu cable lugs 1 × 120 – 185 4 × 50 – 185	1 × 250 – 350 4 × 0 – 350
		1600	LZM4(-4)	Three- and four-pole		
3-hole		2000	LZM4	3 pole	Cu cable lugs	
Single hole		max. 1250	LZM4	3 pole	Copper cable lugs 1 × 120 – 300 2 × 95 – 300	1 × 250 – 600 2 × 000 – 600
		max. 1250	LZM4-4	4 pole	Copper cable lugs 1 × 120 – 300 2 × 95 – 300	1 × 250 – 600 2 × 000 – 600
Double hole		max. 1400	LZM4	3 pole	Copper cable lugs 2 × 95 – 185 4 × 35 – 185	2 × 000 – 350 4 × 2 – 350
		max. 1400	LZM4-4	4 pole	Copper cable lugs 4 × 50	
Double hole		max. 1250	LZM4	3 pole	Copper cable lugs 2 × 95 – 300	2 × 000 – 600
		max. 1250	LZM4-4	4 pole	Copper cable lugs 2 × 95 – 300	2 × 000 – 600
		max. 1600	LZM4	3 pole	Copper cable lugs 2 × 95 – 300	2 × 000 – 500
		max. 1600	LZM4-4	4 pole	Copper cable lugs 2 × 95 – 300	2 × 000 – 500
Connection width extension		max. 1600	LZM4	3 pole	Cu cable lugs 4 × 300 6 × 95 – 240	4 × 600 6 × 000 – 500
		max. 1600	LZM4	3 pole	Cu cable lugs 4 × 300 6 × 95 – 240	4 × 600 6 × 000 – 500
		max. 1600	LZM4-4	4 pole	Cu cable lugs 4 × 300 6 × 95 – 240	4 × 600 6 × 000 – 500
		max. 1600	LZM4-4	4 pole	Cu cable lugs 4 × 300 6 × 95 – 240	4 × 600 6 × 000 – 500

Notes

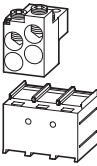
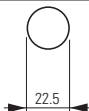
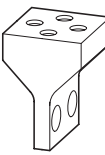
¹⁾ The following applies for the rated current: The values have been determined conform to IEC/EN 60947 (switchgear standard) and generally relate to the max. defined cross-sections and are intended for the purpose of orientation.

Terminal capacities		Part no. Article no. when ordered separately	Std. pack	Notes
Cu strip (number of segments × width × segment thickness)	Copper busbar width × thickness			
mm	mm			
(2 ×) 10 × 50 × 1.0	(2 ×) 50 × 10		1 off	Double hole fitting for M10 screws with 25 mm clearance. Use special cable lug narrow version. $U_0 \geq 525$ V or cross-section > 185 mm ² : Use of shroud NZM4(-4)-XKSA required.
(2 ×) 10 × 50 × 1.0	(2 ×) 50 × 10		1 off	
	(2 ×) 80 × 10		1 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	1 off	Type contains parts for a terminal located at top or bottom for 3 or 4 pole circuit-breakers.
(2 ×) 10 × 40 × 1.0 (2 ×) 10 × 50 × 1.0	(2 ×) 40 × 10 (2 ×) 50 × 10	NZM4-4-XKM1 266815	1 off	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
(2 ×) 10 × 40 × 1.0 (2 ×) 10 × 50 × 1.0	(2 ×) 40 × 10 (2 ×) 50 × 10	NZM4-XKM2 266820	1 off	
(2 ×) 10 × 40 × 1.0 (2 ×) 10 × 50 × 1.0	(2 ×) 40 × 10 (2 ×) 50 × 10	NZM4-4-XKM2 266821	1 off	
(2 ×) 10 × 40 × 1.0 (2 ×) 10 × 50 × 1.0	(2 ×) 40 × 10 (2 ×) 50 × 10	NZM4-XKM2S-1250 284471	1 off	Type contains parts for a terminal located at top or bottom for 3 or 4 pole circuit-breakers.
(2 ×) 10 × 40 × 1.0 (2 ×) 10 × 50 × 1.0	(2 ×) 40 × 10 (2 ×) 50 × 10	NZM4-4-XKM2S-1250 284472	1 off	Insulation through cover NZM4(-4)-XKSA or phase isolator NZM4(4)-XKP necessary.
(2 ×) 10 × 40 × 1.0 (2 ×) 10 × 50 × 1.0	(2 ×) 40 × 10 (2 ×) 50 × 10	NZM4-XKM2S-1600 284473	1 off	
(2 ×) 10 × 40 × 1.0 (2 ×) 10 × 50 × 1.0	(2 ×) 40 × 10 (2 ×) 50 × 10	NZM4-4-XKM2S-1600 284474	1 off	
min. 10 × 50 × 1.0	min. (2 ×) 80 × 10	NZM4-XKV95 281591	1 off	Type contains parts for a terminal located at top or bottom for 3 or 4 pole circuit-breakers.
min. 10 × 50 × 1.0	min. (2 ×) 80 × 10	NZM4-XKV110 281593	1 off	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.
min. 10 × 50 × 1.0	min. (2 ×) 80 × 10	NZM4-4-XKV95 281592	1 off	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.
min. 10 × 50 × 1.0	min. (2 ×) 80 × 10	NZM4-4-XKV120 281594	1 off	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.

Circuit-breakers LZW

Ordering

Connection types LZW4

	Max. cable connection area	Rated current ¹⁾	For use with		Terminal capacities		
		I_n			Type of conductor	Terminal capacities	AWG/kcmil
		A				mm ²	
Flat cable terminal 	—	max. 1100	LZW4	3 pole			
	—	max. 1100	LZW4-4	4 pole			
Tunnel terminal 	—	max. 1400	LZW4	3 pole	Copper conductors	1 × 50 – 240	1 × 0 – 500
						4 × 50 – 240	4 × 0 – 500
		max. 1400	LZW4-4	4 pole	Cu cable	1 × 50 – 240	1 × 0 – 500
					Al conductors	4 × 50 – 240	4 × 0 – 500
					Al cable		
Connection on rear 	—	max. 1250	LZW4(-4)	Three- and four-pole	Copper cable lugs	1 × 120 – 185	
						2 × 95 – 185	
						4 × 35 – 185	
						1 × 185	
					Aluminium cable lug	2 × 70 – 185	
						4 × 50 – 185	
	—	1600	LZW4(-4)	—			

Notes

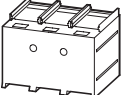
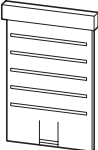
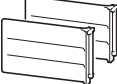
¹⁾ The following applies for the rated current: The values have been determined conform to IEC/EN 60947 (switchgear standard) and generally relate to the max. defined cross-sections and are intended for the purpose of orientation.

Terminal capacities		Part no.	Std. pack	Notes
Cu strip (number of segments × width × segment thickness)	Copper busbar width × thickness	Article no. when ordered separately		
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.
(2 ×) 10 × 50 × 1.0	(2 ×) 50 × 10	NZM4-4-XKR 266843	1 off	Can also be retrofitted: NZM4...-XKM... module plate or NZM4...-XKV... connection width extension
(2 ×) 10 × 50 × 1.0	(2 ×) 50 × 10		1 off	

Circuit-breakers LZW

Ordering

Connection types LZW4

	Max. cable connection area	For use with	Terminal capacities	Type of conductor	Terminal capacities	AWG/kcmil
					mm ²	
Control circuit terminal 	–	LZW3(-4)	Three- and four-pole	Screw connection	1 × 0.75 – 2.5 2 × 0.75 – 1.5	1 × 18 – 14 2 × 18 – 16
Cover 	–	LZW4	3 pole			
	–	LZW4-4	4 pole			
Connection cover, knockout 	–	LZW4	3 pole			
	–	LZW4-4	4 pole			
Phase isolators 	–	LZW4	3 pole			
Phase isolators 	–	LZW4-4	4 pole			
Cable lug 	185 mm ²	LZW3(-4) LZW4(-4)	3 and 4 pole			
	900 mm ²	LZW3(-4) LZW4(-4)	3 and 4 pole			

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	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.
NZM4-4-XKSA 266847	1 off	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	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).
NZM4-4-XKSFA 292194	1 off	
NZM4-XKP 281595	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.
NZM4-4-XKP 281596	1 off	
NZM3-XKS185 260040	3 off	Type contains a cable lug for 3-pole or 4 pole switches. Special cable lug, narrow style
NZM3-XKS240 260041	3 off	

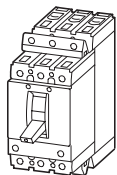
Circuit-breakers LZW

Ordering

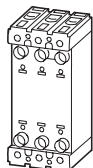
Plug-in units NZM2-XSV...

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 LZM								
Plug-in adapter elements								
Complete								
Only in combination with circuit-breaker								
Terminal screws standard, terminals as accessories								
LZM2-4	4 pole	+NZM2-4-XSV 266698				1 off	<i>I</i> _{max} at: 20 °C: 250 A 40 °C: 230 A (LZM...2-...) Mounting position: vertical, 90° right, 90° left Order control circuit plug unit separately!	
LZM2	3 pole	+NZM2-XSV 266697				1 off		
Sockets								
e.g. for reserved slots								
Retrofit of circuit-breaker with plug-in module.								
Terminal screws standard, terminals as accessories								
LZM2	3 pole			NZM2-XSVS 266699		1 off		
LZM2-4	4 pole			NZM2-4-XSVS 266700		1 off		
Removable module								
Fits socket base								
Only in combination with circuit-breaker								
LZM2	3 pole	+NZM2-XSVE 266701				1 off		
LZM2-4	4 pole	+NZM2-4-XSVE 266702				1 off		
Control circuit plug unit								
LZM2(-4)	for auxiliary contact, shunt/undervoltage release			NZM2-XSVHI 266705		1 off	—	
LZM2(-4)	for remote operator			NZM2-XSVR 266706		1 off	—	

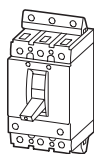
Plug-in adapter elements



Sockets



Removable module



Control circuit plug unit



Withdrawable units NZM3-XAV...

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
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Withdrawable unit with control circuit plug unit

For circuit-breakers L2M

Withdrawable unit with auxiliary plug-in adapter

Complete

Only in combination with circuit-breaker

Terminal screws standard, terminals as accessories

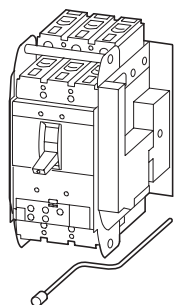
L2M3	3 pole	+NZM3-XAV 266707				1 off	I_{nmax} at: 20 °C: 605 A (L2M3), 1600 A (L2M4) 40 °C: 550 A (L2M3), 1500 A (L2M4)
L2M3-4	4 pole	+NZM3-4-XAV 266708				1 off	
L2M4	3 pole	+NZM4-XAV 266709				1 off	Mounting position L2M3: vertical, 90° left L2M4: vertical
L2M4-4	4 pole	+NZM4-4-XAV 266710				1 off	

3 positions
Connected, test, disconnected
The 3 positions are indicated mechanically.

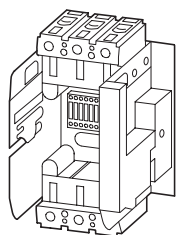
Additionally, auxiliary contacts are used for remote signalling. An optional M22-(C)K01 normally closed contact or M22-(C)K10 normally open contact per position
Also see the RMQ-Titan control circuit device range in the Main Catalogue

All connections of auxiliary switches (HIA, HIN, HIV) and voltage releases to the control circuit plug units are already present.

Withdrawable unit with auxiliary plug-in adapter



Socket base



Socket base

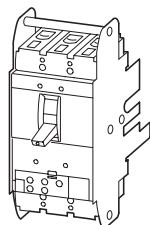
e.g. for reserved slots

Retrofit of circuit-breaker with withdrawable carrier.

Terminal screws standard, terminals as accessories

L2M3	3 pole		NZM3-XAVS 266711			1 off	
L2M3-4	4 pole		NZM3-4-XAVS 266712			1 off	
L2M4	3 pole		NZM4-XAVS 266713			1 off	
L2M4-4	4 pole		NZM4-4-XAVS 266714			1 off	

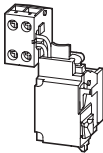
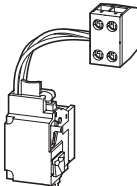
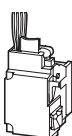
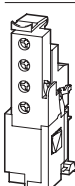
Withdrawable carrier



Withdrawable carrier

L2M3	3 pole	+NZM3-XAVE 266715				1 off	
L2M3-4	4 pole	+NZM3-4-XAVE 266716				1 off	
L2M4	3 pole	+NZM4-XAVE 266717				1 off	
L2M4-4	4 pole	+NZM4-4-XAVE 266718				1 off	

Auxiliary contact with screw terminals LZW, M22-...

	For use with	Auxiliary contacts: ☹ = safety function, by positive opening to IEC/EN 60947-5-1 N/O = Normally open N/C = Normally closed	Contact sequence	Part no. Article no. when ordered separately	Price see price list
Auxiliary contacts					
Standard auxiliary contact (HIN) Switching with the main contacts Used for indicating and interlocking tasks					
	LZM1(-4), 2(-4), 3(-4), 4(-4)	1 N/O		M22-K10 216376	
		1 N/C ☹		M22-K01 216378	
	With 3 m connection cable instead of screw termination. LZM1(-4), 2(-4), 3(-4), 4(-4)	1 N/O			
		1 N/C ☹			
		2 N/O			
		2 N/C ☹			
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. LZM1(-4)	2 N/O		NZM1-XHIV 259426	
	With clamp terminal on the right-hand switch side. LZM1(-4)	2 N/O		NZM1-XHIVR 292195	
	With 3 m connection cable instead of screw termination. LZM1(-4)	2 N/O		NZM1-XHIVL 259432	
	LZM2(-4), 3(-4)	2 N/O		NZM2/3-XHIV 259430	
	LZM4(-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.					
	LZM1(-4), 2(-4), 3(-4), 4(-4)	1 N/O		M22-K10 216376	
		1 N/C ☹		M22-K01 216378	
	With 3 m connection cable instead of screw termination. LZM1(-4), 2(-4), 3(-4), 4(-4)	1 N/O			
		1 N/C ☹			
		2 N/O			
		2 N/C ☹			

	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: • L2M1 - one standard auxiliary contact • L2M2 - up to 2 standard auxiliary contacts M22-(C)K... • L2M3 and L2M4 - 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		
	M22-CK11 107940		20 off		
	M22-CK20 107898		20 off		
	M22-CK02 107899		20 off		
			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
			1 off		
			1 off		
			1 off		
			1 off		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: • L2M1 - one trip-indicating auxiliary switch • L2M2 - one M22-(C)K... trip-indicating auxiliary switch • L2M3 - one M22-(C)K... trip-indicating auxiliary switch • L2M4 - up to two M22-(C)K... trip-indicating auxiliary switches Any combinations of the auxiliary contact types is possible. Marking on switch: HIA Labeling in FI-Block: HIAFI.
	M22-CK01 216385		20 off		
	M22-CK11 107940		20 off		
	M22-CK20 107898		20 off		
	M22-CK02 107899		20 off		
					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)

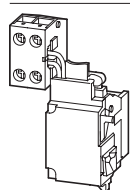
Undervoltage release with screw terminal LZM1

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

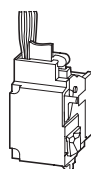
V

Undervoltage releases

Without auxiliary contact
 Non-delayed disconnection of LZM circuit-breakers 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.	LZM1(-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	1 off	
		208 V 240 V 50/60 Hz	NZM1-XU208-240AC 259442	1 off	
		380 V – 440 V 50/60 Hz	NZM1-XU380-440AC 259444	1 off	
		480 V – 525 V 50/60 Hz	NZM1-XU480-525AC 259446	1 off	
		600 V 50/60 Hz	NZM1-XU600AC 259448	1 off	
		12 V DC	NZM1-XU12DC 259450	1 off	
		24 V DC	NZM1-XU24DC 259452	1 off	
		110 V – 130 V DC	NZM1-XU110-130DC 259458	1 off	
		220 V – 250 V DC	NZM1-XU220-250DC 259460	1 off	
With 3 m connection cable instead of screw termination.	LZM1(-4)	24 V 50/60 Hz	NZM1-XUL24AC 259462	1 off	
		110 V – 130 V 50/60 Hz	NZM1-XUL110-130AC 259468	1 off	
		208 V 240 V 50/60 Hz	NZM1-XUL208-240AC 259471	1 off	
		380 V – 440 V 50/60 Hz	NZM1-XUL380-440AC 259473	1 off	
		480 V – 525 V 50/60 Hz	NZM1-XUL480-525AC 259475	1 off	
		600 V 50/60 Hz	NZM1-XUL600AC 259477	1 off	
		12 V DC	NZM1-XUL12DC 259479	1 off	
		24 V DC	NZM1-XUL24DC 259481	1 off	
		110 V 130 V DC	NZM1-XUL110-130DC 259487	1 off	
		220 V – 250 V DC	NZM1-XUL220-250DC 259489	1 off	



Undervoltage release with screw terminal LZW2/3..., LZW4

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

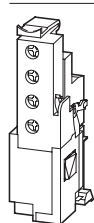
V

Undervoltage releases

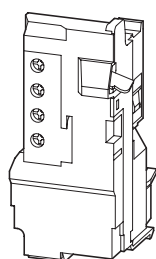
Without auxiliary contact

Non-delayed disconnection of LZW circuit-breakers when the control voltage sinks below 35 – 70% U_s .

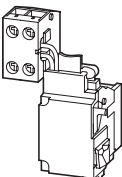
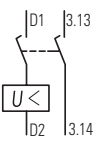
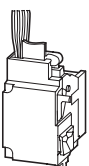
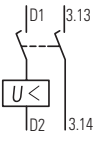
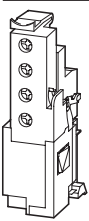
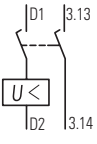
For use with Emergency-Stop devices in conjunction with Emergency-Stop button.

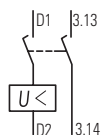
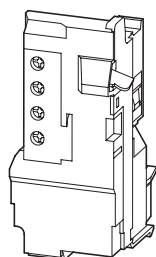


LZW2(-4)	24 V 50/60 Hz	NZW2/3-XU24AC 259491	1 off	When the undervoltage release is de-energized, accidental contact with the main contacts of the switch during attempts to switch on, is safely prevented .
LZW3(-4)	110 V – 130 V 50/60 Hz	NZW2/3-XU110-130AC 259497	1 off	
	208 V – 240 V 50/60 Hz	NZW2/3-XU208-240AC 259499	1 off	
	380 V – 440 V 50/60 Hz	NZW2/3-XU380-440AC 259501	1 off	Undervoltage release cannot be installed simultaneously with NZM...-XHIV... early-make auxiliary contact or NZM...-XA... shunt release.
	480 V – 525 V 50/60 Hz	NZW2/3-XU480-525AC 259503	1 off	
	600 V 50/60 Hz	NZW2/3-XU600AC 259505	1 off	
	12 V DC	NZW2/3-XU12DC 259507	1 off	
	24 V DC	NZW2/3-XU24DC 259509	1 off	
	110 V – 130 V DC	NZW2/3-XU110-130DC 259515	1 off	
	220 V – 250 V DC	NZW2/3-XU220-250DC 259517	1 off	
LZW4(-4)	24 V 50/60 Hz	NZW4-XU24AC 266189	1 off	
	110 V – 130 V 50/60 Hz	NZW4-XU110-130AC 266192	1 off	
	208 V – 240 V 50/60 Hz	NZW4-XU208-240AC 266193	1 off	
	380 V – 440 V 50/60 Hz	NZW4-XU380-440AC 266194	1 off	
	480 V – 525 V 50/60 Hz	NZW4-XU480-525AC 266195	1 off	
	600 V 50/60 Hz	NZW4-XU600AC 266196	1 off	
	12 V DC	NZW4-XU12DC 266203	1 off	
	24 V DC	NZW4-XU24DC 266204	1 off	
	110 V – 130 V DC	NZW4-XU110-130DC 266207	1 off	
	220 V – 250 V DC	NZW4-XU220-250DC 266208	1 off	



Undervoltage release with screw terminal LZM1, LZM2/3

	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.						
 	LZM1(-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		1 off	
		208 V – 240 V 50/60 Hz	NZM1-XUHIV208-240AC 259539		1 off	
		380 V – 440 V 50/60 Hz	NZM1-XUHIV380-440AC 259541		1 off	
		480 V – 525 V 50/60 Hz	NZM1-XUHIV480-525AC 259543		1 off	
		12 V DC	NZM1-XUHIV12DC 259545		1 off	
		24 V DC	NZM1-XUHIV24DC 259547		1 off	
		110 V – 130 V DC	NZM1-XUHIV110-130DC 259553		1 off	
		220 V – 250 V DC	NZM1-XUHIV220-250DC 259555		1 off	
 	LZM1(-4)	24 V 50/60 Hz	NZM1-XUHIVL24AC 259557		1 off	
		110 V – 130 V 50/60 Hz	NZM1-XUHIVL110-130AC 259563		1 off	
		208 V – 240 V 50/60 Hz	NZM1-XUHIVL208-240AC 259565		1 off	
		380 V – 440 V 50/60 Hz	NZM1-XUHIVL380-440AC 259567		1 off	
		480 V – 525 V 50/60 Hz	NZM1-XUHIVL480-525AC 259569		1 off	
		12 V DC	NZM1-XUHIVL12DC 259571		1 off	
		24 V DC	NZM1-XUHIVL24DC 259573		1 off	
		110 V – 130 V DC	NZM1-XUHIVL110-130DC 259579		1 off	
		220 V – 250 V DC	NZM1-XUHIVL220-250DC 259581		1 off	
 	LZM2(-4) LZM3(-4)	24 V 50/60 Hz	NZM2/3-XUHIV24AC 259583		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. 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	NZM2/3-XUHIV110-130AC 259589		1 off	
		208 V – 240 V 50/60 Hz	NZM2/3-XUHIV208-240AC 259591		1 off	
		380 V – 440 V 50/60 Hz	NZM2/3-XUHIV380-440AC 259594		1 off	
		480 V – 525 V 50/60 Hz	NZM2/3-XUHIV480-525AC 259598		1 off	
		12 V DC	NZM2/3-XUHIV12DC 259600		1 off	
		24 V DC	NZM2/3-XUHIV24DC 259602		1 off	
		110 V – 130 V DC	NZM2/3-XUHIV110-130DC 259608		1 off	
		220 V – 250 V DC	NZM2/3-XUHIV220-250DC 259610		1 off	



Undervoltage release with screw terminal LZW1, LZW2/3..., LZW4

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.

LZW4(-4)	24 V 50/60 Hz	NZW4-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	NZW4-XUHIV110-130AC 266220	1 off	
	208 V – 240 V 50/60 Hz	NZW4-XUHIV208-240AC 266221	1 off	
	380 V – 440 V 50/60 Hz	NZW4-XUHIV380-440AC 266222	1 off	
	480 V – 525 V 50/60 Hz	NZW4-XUHIV480-525AC 266223	1 off	
	12 V DC	NZW4-XUHIV12DC 266231	1 off	
	24 V DC	NZW4-XUHIV24DC 266232	1 off	
	110 V – 130 V DC	NZW4-XUHIV110-130DC 266235	1 off	
	220 V – 250 V DC	NZW4-XUHIV220-250DC 266236	1 off	

Undervoltage release with screw terminal L2M1, L2M2/3..., L2M4

For use with

Rated control voltage

Part no.

Article no. when ordered separately

Price

see price list

Std. pack

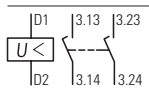
U_s

V

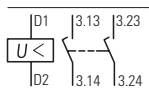
Undervoltage releases

With two separate early-make auxiliary contacts

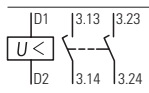
Coil connection wired to clamp terminal, auxiliary switch connections wired with 3 m loose connection cables

	L2M1(-4)	24 V 50/60 Hz	N2M1-XUHIV20KL24AC 284388	1 off
		110 V – 130 V 50/60 Hz	N2M1-XUHIV20KL110-130AC 284389	1 off
		208 V – 240 V 50/60 Hz	N2M1-XUHIV20KL208-240AC 284400	1 off
		24 V DC	N2M1-XUHIV20KL24DC 284387	1 off

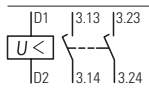
Coil connection with 3 m loose connection cables, auxiliary switch connections wired to clamp terminal

	L2M1(-4)	24 V 50/60 Hz	N2M1-XUHIV20LK24AC 284402	1 off
		110 V – 130 V 50/60 Hz	N2M1-XUHIV20LK110-130AC 284403	1 off
		208 V ... 240 V 50/60 Hz	N2M1-XUHIV20LK208-240AC 284404	1 off
		24 V DC	N2M1-XUHIV20LK24DC 284401	1 off

Coil connection with 3 m loose connection cables, auxiliary switch connections wired to clamp terminal

	L2M2(-4) L2M3(-4)	24 V 50/60 Hz	N2M2/3-XUHIV20LK24AC 285291	1 off
		110 V – 130 V 50/60 Hz	N2M2/3-XUHIV20LK110-130AC 284407	1 off
		208 V – 240 V 50/60 Hz	N2M2/3-XUHIV20LK208-240AC 284408	1 off
		24 V DC	N2M2/3-XUHIV20LK24DC 284405	1 off

Contacts 3.23 and 3.24 with separate 3 m connection cables.

	L2M4(-4)	24 V 50/60 Hz	N2M4-XUHIV2024AC 266244	1 off
		110 V – 130 V 50/60 Hz	N2M4-XUHIV20110-130AC 266247	1 off
		208 V 240 V 50/60 Hz	N2M4-XUHIV20208-240AC 266248	1 off
		380 V – 440 V 50/60 Hz	N2M4-XUHIV20380-440AC 266249	1 off
		24 V DC	N2M4-XUHIV2024DC 266258	1 off

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 N2M...-XR... remote operator.

Undervoltage releases cannot be installed simultaneously with N2M...-XHIV... early-make auxiliary contact or N2M...-XA... shunt release.

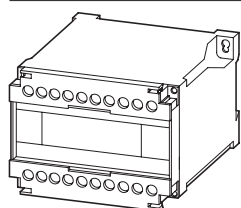
Undervoltage releases, off-delayed LZM1, LZM2/3..., LZM4

For use with

Part no.
Article no. when
ordered separatelyPrice
see price
list

Std. pack

Notes

**Undervoltage releases, off-delayed**

Combination of separate delay unit and special tripping device.

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.

LZM1(-4), 2(-4), 3(-4), 4(-4)

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.50/60 Hz
220 V – 240 V
380 V – 440 V
480 V – 550 VDC/AC
24 V

Special tripping device

For combination with separate delay unit

Without auxiliary contacts

NZM1-X... with 3 m separate connection cables instead of screw terminal, NZM2, 3, 4 with screw terminal

LZM1(-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.

LZM2(-4)

NZM2/3-XUV
259527

1 off

LZM3(-4)

LZM4(-4)

NZM4-XUV
266588

1 off

With 2 early-make auxiliary contacts

NZM1-X... with 3 m separate connection cables instead of screw terminal, NZM2, 3, 4 with screw terminal

LZM1(-4)

NZM1-XUVHIVL
271608

1 off

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

LZM2(-4)

NZM2/3-XUVHIV
259684

1 off

LZM3(-4)

LZM4(-4)

NZM4-XUVHIV
266596

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.
LZM1, 2, 3: Early-make of the auxiliary contacts with on and off switching (manual operation): approx. 20 ms.
LZM4: Early-make of the auxiliary contacts with switch on (manual operation): approx. 90 ms.

With 2 separately operating early-make auxiliary contacts

NZM1-X... with 3 m separate connection cables instead of screw terminal, NZM2(3)(4)-X... with screw terminal, contact 3.23 and 3.24 with 3 m separate connection cables.

LZM1(-4)

NZM1-XUVHIV20L
271609

1 off

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

LZM2(-4)

NZM2/3-XUVHIV20
259688

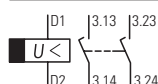
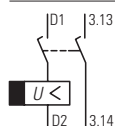
1 off

LZM3(-4)

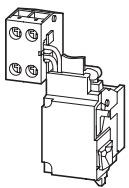
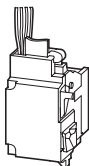
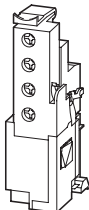
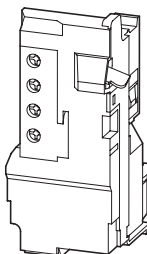
LZM4(-4)

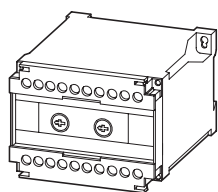
NZM4-XUVHIV20
266604

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.
LZM1, 2, 3: Early-make of the auxiliary contacts with on and off switching (manual operation): approx. 20 ms.
LZM4: Early-make of the auxiliary contacts with switch on (manual operation): approx. 90 ms.

Shunt releases with screw terminal LZW1, LZW2/3, LZW4

	For use with	Rated control voltage	Part no. Article no. when ordered separately	Price see price list	Std. pack	Notes
		U_s V				
Shunt releases						
Without auxiliary contact Switches are tripped by a voltage pulse or by the application of uninterrupted voltage.						
 	LZW1(-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		1 off	
		110 V – 130 V AC/DC	NZM1-XA110-130AC/DC 259724		1 off	
		208 V – 250 V AC/DC	NZM1-XA208-250AC/DC 259726		1 off	
		380 V – 440 V AC/DC	NZM1-XA380-440AC/DC 259728		1 off	
 	LZW1(-4)	12 V AC/DC	NZM1-XAL12AC/DC 259734		1 off	
		24 V AC/DC	NZM1-XAL24AC/DC 259736		1 off	
		110 V – 130 V AC/DC	NZM1-XAL110-130AC/DC 259742		1 off	
		208 V – 250 V AC/DC	NZM1-XAL208-250AC/DC 259744		1 off	
		380 V – 440 V AC/DC	NZM1-XAL380-440AC/DC 259746		1 off	
Without auxiliary contact Switches are tripped by a voltage pulse or by the application of uninterrupted voltage.						
 	LZW2(-4) LZW3(-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		1 off	
		110 V – 130 V AC/DC	NZM2/3-XA110-130AC/DC 259760		1 off	
		208 V – 250 V AC/DC	NZM2/3-XA208-250AC/DC 259763		1 off	
		380 V – 440 V AC/DC	NZM2/3-XA380-440AC/DC 259766		1 off	
 	LZW4(-4)	12 V AC/DC	NZM4-XA12AC/DC 266446		1 off	
		24 V AC/DC	NZM4-XA24AC/DC 266447		1 off	
		110 V – 130 V AC/DC	NZM4-XA110-130AC/DC 266450		1 off	
		208 V – 250 V AC/DC	NZM4-XA208-250AC/DC 266451		1 off	
		380 V – 440 V AC/DC	NZM4-XA380-440AC/DC 266452		1 off	



Shunt releases with screw terminal LZW...-X...

For use with	Part no. Article no. when ordered separately	Price see price list	Std. pack	Notes
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Shunt releases

Capacitor unit 230 V 50/60 Hz
in conjunction with NZM...-XA2082-50AC/DC
shunt release
Enclosure: degree of protection IP20

LZW1(-4) LZW2(-4) LZW3(-4) LZW4(-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.
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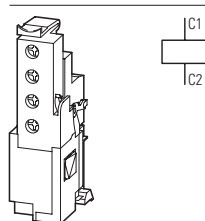
Design note:
Connect a standard auxiliary contact as N/O in series with the shunt release!
Standard auxiliary contact not included as standard.

Shunt releases with screw terminal LZW...-X...

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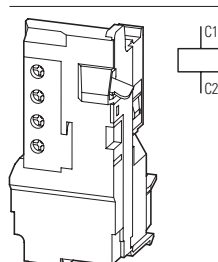
Shunt releases

Without auxiliary contacts
For mesh-network circuit-breakers
For intermittent operation
Maximum on time = 1 s
Operating range 10 – 110 % U_s

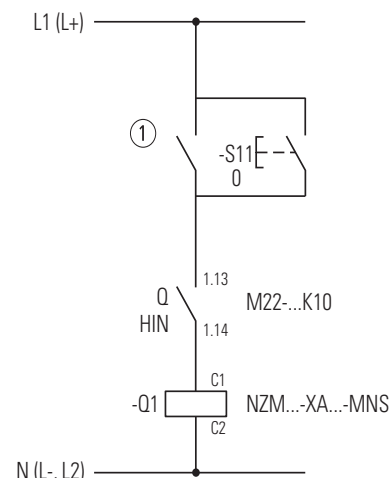


LZW3(-4)	230 V AC	NZM3-XA-230AC-MNS 274097	1 off	Cannot be installed simultaneously with NZM...-XHIV... early-make auxiliary contact or NZM...-XU... undervoltage release.
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Intermittent operation guaranteed by series connection of an M22-(C)K10 make contact. The maximum operating time of the shunt release for mesh network circuit-breaker is 1 s.

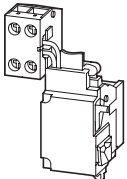
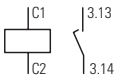
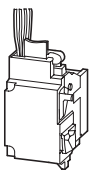
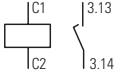
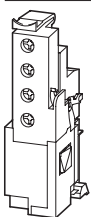
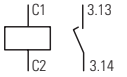
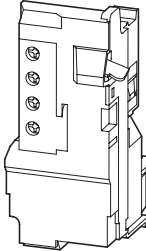
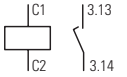


LZW4(-4)	230 V AC	NZM4-XA-230AC-MNS 274138	1 off	
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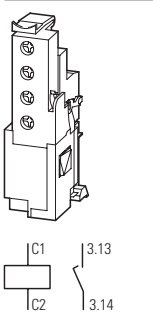
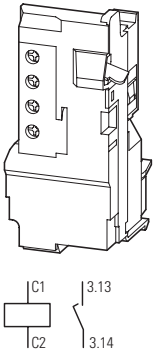


- ① Reverse-power relay contact
- S11 Remote off
- Q Standard auxiliary contact
- Q1 Shunt release

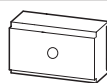
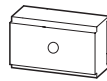
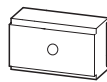
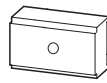
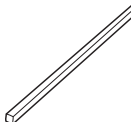
Shunt releases with screw terminal LZW1, LZW2/3, LZW4

	For use with	Rated control voltage	Part no.	Price	Std.	Notes
		U_s	Article no. when ordered separately	see price list	pack	
		V				
Shunt releases						
With early-make auxiliary contact Not in combination with remote operator.						
 	LZM1(-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		1 off	
		110 V – 130 V AC/DC	NZM1-XAHIV110-130AC/DC 259780		1 off	
		208 V – 250 V AC/DC	NZM1-XAHIV208-250AC/DC 259782		1 off	
		380 V – 440 V AC/DC	NZM1-XAHIV380-440AC/DC 259784		1 off	
 	LZM1(-4)	12 V AC/DC	NZM1-XAHIVL12AC/DC 259790		1 off	
		24 V AC/DC	NZM1-XAHIVL24AC/DC 259792		1 off	
		110 V – 130 V AC/DC	NZM1-XAHIVL110-130AC/DC 259798		1 off	
		208 V – 250 V AC/DC	NZM1-XAHIVL208-250AC/DC 259800		1 off	
		380 V – 440 V AC/DC	NZM1-XAHIVL380-440AC/DC 259802		1 off	
With early-make auxiliary contact						
 	LZM2(-4) LZM3(-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		1 off	
		110 V – 130 V AC/DC	NZM2/3-XAHIV110-130AC/DC 259816		1 off	
		208 V – 250 V AC/DC	NZM2/3-XAHIV208-250AC/DC 259818		1 off	
		380 V – 440 V AC/DC	NZM2/3-XAHIV380-440AC/DC 259820		1 off	
 	LZM4(-4)	12 V AC/DC	NZM4-XAHIV12AC/DC 266470		1 off	
		24 V AC/DC	NZM4-XAHIV24AC/DC 266471		1 off	
		110 V – 130 V AC/DC	NZM4-XAHIV110-130AC/DC 266474		1 off	
		208 V – 250 V AC/DC	NZM4-XAHIV208-250AC/DC 266475		1 off	
		380 V – 440 V AC/DC	NZM4-XAHIV380-440AC/DC 266476		1 off	

Shunt releases with screw terminal NZM...-XAHIV-...

	For use with	Rated control voltage U_s	Part no. Article no. when ordered separately	Price see price list	Std. pack	Notes
		V				
Shunt releases For mesh-network circuit-breakers For intermittent operation Maximum on time = 1 s Operating range 10 – 110 % U_s						
	With early-make auxiliary contact	LZM3(-4)	230 V AC	NZM3-XAHIV-230AC-MNS 274141	1 off	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.
	With early-make auxiliary contact	LZM3(-4)	230 V AC	NZM4-XAHIV-230AC-MNS 274143	1 off	LZM3: Early-make of the auxiliary contact with on and off switching (manual operation): approx.20ms. LZM4: Early-make of the auxiliary contact with switch on (manual operation): approx.90ms.

Door coupling rotary handles LZW1, LZW2, LZW3, LZW4

	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					
Standard, black/grey					
 	Lockable on the 0 position on the handle using up to 3 padlocks. With door interlock	LZM1(-4)	NZM1-XTVD 260166	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
		LZM2(-4)	NZM2-XTVD 260168	1 off	
		LZM3(-4)	NZM3-XTVD 260170	1 off	
		LZM4(-4)	NZM4-XTVD 266614	1 off	
 	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	LZM1(-4)	NZM1-XTVDV 260172	1 off	
		LZM2(-4)	NZM2-XTVDV 260174	1 off	
		LZM3(-4)	NZM3-XTVDV 260176	1 off	
		LZM4(-4)	NZM4-XTVDV 266616	1 off	
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	LZM1(-4)	NZM1-XTVDVR 260178	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
		LZM2(-4)	NZM2-XTVDVR 260180	1 off	
		LZM3(-4)	NZM3-XTVDVR 260182	1 off	
		LZM4(-4)	NZM4-XTVDVR 266618	1 off	
 		LZM1(-4)	NZM1-XTVDVR 260178	1 off	
		LZM2(-4)	NZM2-XTVDVR 260180	1 off	
		LZM3(-4)	NZM3-XTVDVR 260182	1 off	
		LZM4(-4)	NZM4-XTVDVR 266618	1 off	
Extension shaft					
	Max. mounting depth: 400 mm	LZM1(-4)	NZM1/2-XV4 261232	1 off	Can be cut to required length
		LZM2(-4)	NZM2/4-XV4 261234	1 off	
		LZM3(-4)	NZM3/4-XV4 261234	1 off	
		LZM4(-4)	NZM4/4-XV4 261234	1 off	
	Max. mounting depth: 600 mm	LZM1(-4)	NZM1/2-XV6 260191	1 off	
		LZM2(-4)	NZM2/4-XV6 260191	1 off	
		LZM3(-4)	NZM3/4-XV6 260193	1 off	
		LZM4(-4)	NZM4/4-XV6 260193	1 off	

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

Part no. Article no.	Price see price list	Std. pack	Notes
NZM1-XTVD-60 271504		1 off	Door interlock
NZM2-XTVD-60 271505		1 off	- 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.
NZM3-XTVD-60 271506		1 off	Door can be opened in OFF position.
NZM4-XTVD-60 271507		1 off	Door can be opened in OFF NZM...-XTVD(V)-60
NZM1-XTVDV-60 271508		1 off	For maximum shaft length 60 mm
NZM2-XTVDV-60 271509		1 off	Without shaft support
NZM3-XTVDV-60 271510		1 off	Cannot be combined with NZM...-XDZ additional handle
NZM4-XTVDV-60 271511		1 off	External warning plate/ designation label can be clipped on

Extremely narrow fittings

Part no. Article no.	Price see price list	Std. pack	Notes
NZM1-XTVD-0 279392		1 off	Door interlock
NZM2-XTVD-0 279393		1 off	- 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.
NZM3-XTVD-0 279394		1 off	Door can be opened in OFF NZM...-XTVD(V)-0
NZM4-XTVD-0 279395		1 off	For extremely narrow fittings
NZM1-XTVDV-0 279396		1 off	With special short extension shaft
NZM2-XTVDV-0 279397		1 off	Cannot be combined with NZM...-XDZ additional handle
NZM3-XTVDV-0 279398		1 off	External warning plate/ designation label can be clipped on
NZM4-XTVDV-0 279399		1 off	

NZM1-XTVDVR-60 271512	1 off	Door interlock
NZM2-XTVDVR-60 271513	1 off	- 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.
NZM3-XTVDVR-60 271514	1 off	Door can be opened in OFF position.
NZM4-XTVDVR-60 271515	1 off	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

Circuit-breakers LZM

Ordering

Rotary handles NZM...-XDV...

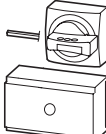
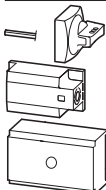
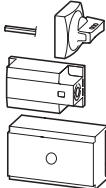
	For use with	Part no. Article no. when ordered separately	Price see price list	Std. pack	Notes
Rotary handle on circuit-breaker					
Complete with rotary drive					
Standard, black/grey					
	Lockable on the 0 position on the switch using up to 3 padlocks.	LZM1(-4)	NZM1-XDV 260125	1 off	NZM1(2)(3)-X...: Can also be combined with insulating surround. MODAN handle position detection by wire release can be retrofitted.
		LZM2(-4)	NZM2-XDV 260127	1 off	
		LZM3(-4)	NZM3-XDV 260129	1 off	
		LZM4(-4)	NZM4-XDV 266608	1 off	
	Lockable on the 0 position on the handle using up to 3 padlocks.	LZM1(-4)	NZM1-XDVG 285247	1 off	Can also be combined with insulating surround.
		LZM2(-4)	NZM2-XDVG 285248	1 off	
Red-yellow for Emergency-Stop					
	Lockable on the 0 position on the switch using up to 3 padlocks.	LZM1(-4)	NZM1-XDVR 260135	1 off	NZM1(2)(3)-X...: Can also be combined with insulating surround. MODAN handle position detection by wire release can be retrofitted.
		LZM2(-4)	NZM2-XDVR 260137	1 off	
		LZM3(-4)	NZM3-XDVR 260140	1 off	
		LZM4(-4)	NZM4-XDVR 266610	1 off	
	Lockable on the 0 position on the handle using up to 3 padlocks.	LZM1(-4)	NZM1-XDVGR 285249	1 off	Can also be combined with insulating surround.
		LZM2(-4)	NZM2-XDVGR 285280	1 off	
Notes Circuit-breaker can also be installed in a lying position 90 ° left/right, stalled in a lying position 90 ° left/right,					

Rotary handles with door interlock 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.	LZM1(-4)	NZM1-XDTV 260131	1 off	Door interlock • 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	
		LZM2(-4)	NZM2-XDTV 260133	1 off		
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	LZM1(-4)	NZM1-XDTV R 260142	1 off		
		LZM2(-4)	NZM2-XDTV R 260144	1 off		

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

Main switch assembly kit NZM...-XHB..., NZM...-XS...

	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 → 23					
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.	LZM1(-4)	NZM1-XHB 266626		1 off
		LZM2(-4)	NZM2-XHB 266627		1 off
		LZM3(-4)	NZM3-XHB 266628		1 off
		LZM4(-4)	NZM4-XHB 271779		1 off
	With red door coupling rotary handle for using switch as Emergency-Stop device according to IEC/EN 602041				
	Lockable on the 0 position on the handle using up to 3 padlocks.	LZM1(-4)	NZM1-XHBR 266632		1 off
	Lockable door as additional feature, locking facility on circuit-breaker in 0 position.	LZM2(-4)	NZM2-XHBR 266633		1 off
		LZM3(-4)	NZM3-XHBR 266634		1 off
		LZM4(-4)	NZM4-XHBR 271842		1 off
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 → 23					
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	LZM1(-4)	NZM1-XS-L 266641	1 off
			LZM2(-4)	NZM2-XS-L 266642	1 off
			LZM3(-4)	NZM3-XS-L 266643	1 off
			LZM4(-4)	NZM4-XS-L 289806	1 off
		For operation on the right	LZM1(-4)	NZM1-XS-R 266644	1 off
			LZM2(-4)	NZM2-XS-R 266645	1 off
			LZM3(-4)	NZM3-XS-R 266646	1 off
LZM4(-4)			NZM4-XS-R 289807	1 off	
	Red-yellow for Emergency-Stop				
	Lockable on the 0 position on the handle using up to 3 padlocks.	For operation on the left	LZM1(-4)	NZM1-XSR-L 266653	1 off
			LZM2(-4)	NZM2-XSR-L 266654	1 off
			LZM3(-4)	NZM3-XSR-L 266655	1 off
			LZM4(-4)	NZM4-XSR-L 289808	1 off
		For operation on the right	LZM1(-4)	NZM1-XSR-R 266656	1 off
			LZM2(-4)	NZM2-XSR-R 266657	1 off
			LZM3(-4)	NZM3-XSR-R 266658	1 off
LZM4(-4)			NZM4-XSR-R 289809	1 off	

Main switch assembly kit NZM...XS(R)M...

Type

For use with

Part no.

Article no. when
ordered
separately

Price

see price
listStd.
pack

Main switch assembly kit for side panel mounting with mounting bracket

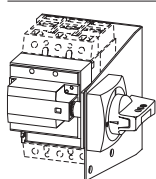
For direct mounting of circuit-breaker and handle in the side wall of the control cabinet

Equipment supplied:

- 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 incoming side, IP2X protection against contact with a finger can be ordered → 23

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

LZM1(-4)

NZM1-XSM-L
266663

1 off

For operation on the
left

LZM2(-4)

NZM2-XSM-L
266664

1 off

For operation on the
right

LZM1(-4)

NZM1-XSM-R
266665

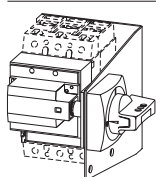
1 off

For operation on the
right

LZM2(-4)

NZM2-XSM-R
266666

1 off



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

LZM1(-4)

NZM1-XSRM-L
266671

1 off

For operation on the
left

LZM2(-4)

NZM2-XSRM-L
266672

1 off

For operation on the
right

LZM1(-4)

NZM1-XSRM-R
266673

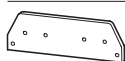
1 off

For operation on the
right

LZM2(-4)

NZM2-XSRM-R
266674

1 off



Add-on plate

For fitting to the mounting bracket when using N conductor or PE conductor terminals K25, K50, K95 or K150.

LZM1(-4)

NZM1/2-XZB

1 off

LZM2(-4)

266676

Additional terminal arrangement for side wall operator with mounting bracket

NZM1-XS(R)M-..., NZM2-XS(R)M-...

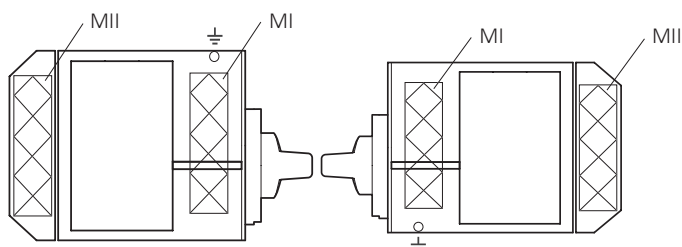
Additional terminals K25, K50, K95, K150 → 66

Actuation:

3 pole

For operation on the right

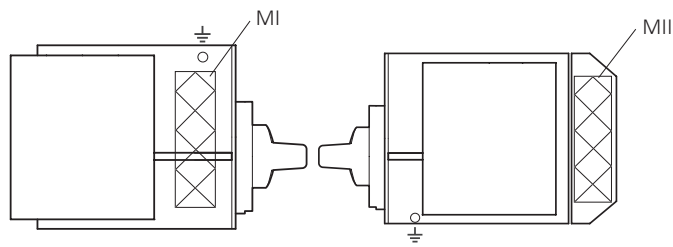
For operation on the left



4 pole

For operation on the right

For operation on the left



Mounting areas

Variation options

Maximum number of additional
terminals

MI

V1

V2

V3

V4

MII

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.

Circuit-breakers LZM

Ordering

Accessories NZM...-XRAV..., ZFS..., BPF...

For use with

Part no.
Article no. when
ordered separately

Price
see price list

Std. pack

Notes

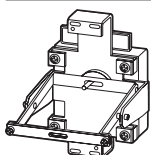
Rear drive

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 → 21

Degree of protection IP66, UL/CSA Type 4X



Standard, black/grey

Lockable on the 0 position on the handle using up to 3 padlocks.

LZM1

NZM1-XRAV
107245

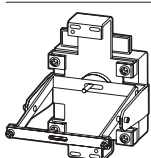
1 off

External warning plate can be clipped on

LZM2

NZM2-XRAV
107247

1 off



Red-yellow for Emergency-Stop

Lockable on the 0 position on the handle using up to 3 padlocks.

LZM1

NZM1-XRAVR
107249

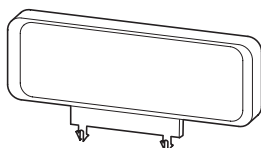
1 off

LZM2

NZM2-XRAVR
107261

1 off

External warning plate/designation label



German/English

LZM1(-4)
LZM2(-4)

ZFS61/62-NZM7
272525

1 off

German

LZM3(-4)
LZM4(-4)

ZFS61-NZM7
051089

1 off

English

ZFS62-NZM7
065957

1 off

French

ZFS63-NZM7
065958

1 off

Blank (for engraving or printing)

ZFS60-NZM7
065896

1 off

Further languages

ZFS*-NZM7
999978

1 off

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



U	X	1	1	1	N	PE
V	Y	1	2	1	2	PE
W	Z	1	3	1	3	PE

LZM1(-4)
LZM2(-4)

BPF-NZM7
217294

10 off

Included as standard in main switch assembly kit

Large



U	X	1	1	1	N	PE
V	Y	1	2	1	2	PE
W	Z	1	3	1	3	PE

LZM3(-4)
LZM4(-4)

BPF-NZM10
231363

10 off

For use with

Part no.
Article no. when
ordered separately

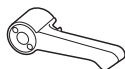
Price
see price list

Std. pack

Notes

Add-on handle

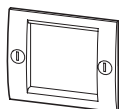
Enables switching when the control panel door is open



LZM1(-4)	NZM1/2-XDZ	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.
LZM2(-4)	266621		
LZM3(-4)	NZM3/4-XDZ	1 off	
LZM4(-4)	266622		

Insulating surrounds

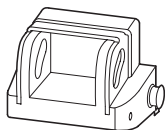
For toggle lever, rotary handle with rotary drive and remote operator.
Degree of protection IP40



LZM1(-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.
LZM2(-4)	NZM2-XBR 260197	1 off	
LZM3(-4)	NZM3-XBR 284645	1 off	
LZM4(-4)	NZM4-XBR 284646	1 off	

Toggle lever locking device

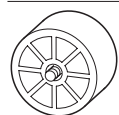
Off position lockable using up to 3 padlocks (hasp thickness 4 – 8 mm)



LZM1(-4)	NZM1-XKAV 260199	1 off	Cannot be combined with insulating surround.
LZM2(-4)	NZM2/3-XKAV	1 off	
LZM3(-4)	260201		

Spacers

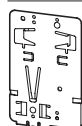
Enables fast and low-priced adjustment of differing frame sizes with/without rotary handle to the same front depth



LZM1(-4) LZM2(-4)	NZM1/2-XAB 260203	1 set	Grid depth 17.5 mm, M4 thread Type contains 4 off spacer Maximum component capacity: LZM1: 4 units per fixing screw, LZM2: 2 units per fixing screw 2 (LZM1) or 4 (LZM2) fixing screws contained per circuit-breaker
LZM3(-4) LZM4(-4)	NZM3-XAB 260211	1 set	Grid depth 17.5 mm, M5 thread One set contains 4 spacers LZM3, LZM4: 1 off per fixing screw 4 fixing screws per switch included

Clip plate

Enables snap-fit of the circuit-breaker to a DIN rail



LZM1(-4)	NZM1-XC35 260213	1 off	For top-hat rail 35 mm
LZM2	NZM2-XC75 260215	1 off	For top-hat rail 75 mm Not suitable for circuit-breakers with remote operator.

Mechanical interlock NZM...XMV(R)(L), NZM-XBZ...

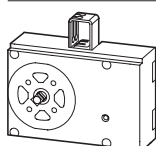
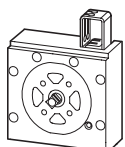
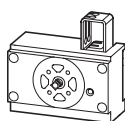
For use with

Part no.
Article no. when
ordered separately

Price
see price
list

Std. pack

Notes



Mechanical interlocking of (door coupling) rotary handles

LZW1(-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. In order to establish a mechanical interlock at least 2 interlock modules are required. Possible combinations and interlock variants → engineering Order Bowden cable separately
LZW2(-4)	NZM2-XMV 281582	1 off	
LZW3(-4)	NZM3-XMV 281583	1 off	
LZW4(-4)	NZM4-XMV 281584	1 off	

Bowden cables

For mechanical interlocking of (door coupling) rotary handles

LZW1(-4)	NZM-XBZ225 281585	1 off
LZW2(-4)	NZM-XBZ600 281586	1 off
LZW3(-4)	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.

LZW2(-4)	NZM2-XMVR 104543	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.
+LZW2(-4)			
LZW2(-4)	NZM2/3-XMVR 104544	1 off	
+LZW3(-4)			
LZW3(-4)	NZM3-XMVR 104545	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.
+LZW3(-4)			
LZW3(-4)	NZM3/4-XMVR 104546	1 off	
+LZW4(-4)			
LZW4(-4)	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.
+LZW4(-4)			
LZW4(-4)	NZM4-XMVR 104548	1 off	
+LZW4(-4)			

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.

LZW2(-4)	NZM2-XMVRL 104548	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.
+LZW2(-4)			
LZW2(-4)	NZM2/3-XMVRL 104549	1 off	
+LZW3(-4)			
LZW3(-4)	NZM3-XMVRL 104550	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.
+LZW3(-4)			
LZW3(-4)	NZM3/4-XMVRL 104551	1 off	
+LZW4(-4)			
LZW4(-4)	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.
+LZW4(-4)			
LZW4(-4)	NZM4-XMVRL 104553	1 off	
+LZW4(-4)			

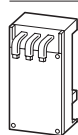
Multi-function device adapter NZM...-XAD...

For use with	Rated current	Part no. Article no. when ordered separately	Price see price list	Std. pack	Notes
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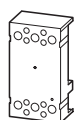
 I_e
A

Component adapter for circuit-breakers and switch-disconnectors for 60 mm busbar system

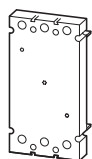
For installation on flat copper busbars 12 ... 30 x 5 ... 10, double T and triple T profile
 Rated operational voltage U_e : 690 V
 • Halogen free
 • Temperature resistant to 120 °C
 • Self-extinguishing to UL 94
 • Approved for feeder branch circuits to UL508A up to 600 V
 • 3 pole



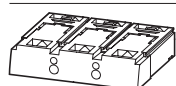
LZM1	160	NZM1-XAD160 104554		1 off	For breakers with box terminal as standard connection Connection to system at top using the supplied connection cable In conjunction with IP2X protection against contact with a finger Enhancement of the protection against direct contact on the switch outgoer side possible
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LZM2	250	NZM2-XAD250 104555		1 off	Connection to the system possible at top or bottom via connection on rear (+)NZM2-XKR4... Mounting using clamp and screw fixing.
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LZM3	550	NZM3-XAD550 104556		1 off	Connection to the system possible at top via connection on rear (+)NZM3-XKR13... Mounting using clamp and screw fixing.
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Multi-function device adapter NZM...-XKR...

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
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 I_e
A

Connection on rear for component adapters

For component adapters for LZM2, LZM3

LZM2	250	+NZM2-XKR40 281664		NZM2-XKR4 281666		1 off
LZM2	250	+NZM2-XKR4U 281665		NZM3-XKR13 281668		1 off
LZM3	550	+NZM3-XKR130 281667				1 off

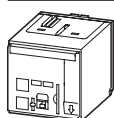
Notes

Part no. and part no. suffix include parts for one switch side at top or bottom (with LZM3 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

Accessories L2M2, L2M3, L2M4

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



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)

L2M2(-4)	110 – 130 V 50/60 Hz	N2M2-XR110-130AC 259830	1 off
	208 – 240 V 50/60 Hz	N2M2-XR208-240AC 259832	1 off
	380 – 440 V 50/60 Hz	N2M2-XR380-440AC ¹⁾ 259834	1 off
	24 – 30 V DC	N2M2-XR24-30DC 259836	1 off
	110 – 130 V DC	N2M2-XR110-130DC 259840	1 off
	220 – 250 V DC	N2M2-XR220-250DC 259842	1 off
L2M3(-4)	110 – 130 V 50/60 Hz	N2M3-XR110-130AC 259848	1 off
	208 – 240 V 50/60 Hz	N2M3-XR208-240AC 259850	1 off
	380 – 440 V 50/60 Hz	N2M3-XR380-440AC ¹⁾ 259852	1 off
	24 – 30 V DC	N2M3-XR24-30DC 259854	1 off
	110 – 130 V DC	N2M3-XR110-130DC 259858	1 off
	220 – 250 V DC	N2M3-XR220-250DC 259860	1 off
L2M4(-4)	110 – 130 V 50/60 Hz	N2M4-XR110-130AC 266684	1 off
	208 – 240 V 50/60 Hz	N2M4-XR208-240AC 266685	1 off
	380 – 440 V 50/60 Hz	N2M4-XR380-440AC ¹⁾ 266686	1 off
	24 – 30 V DC	N2M4-XR24-30DC 266691	1 off
	110 – 130 V DC	N2M4-XR110-130DC 266693	1 off
	220 – 250 V DC	N2M4-XR220-250DC 266694	1 off

Shroud for 4th pole

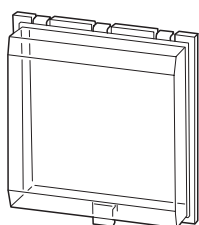
Additional shroud for mounting the N2M2-XR... and N2M3-XR... on a 4 pole switch.

L2M2-4	N2M2-XAVPR 266677	1 off
L2M3-4	N2M3-XAVPR 266678	1 off

Clamp terminal springloaded clamp

Control circuit terminal springloaded terminals

N2M...-XR...	N2M-XRC 266696	1 off
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Protective cover for door cutout

Transparent protective shroud to increase the degree of protection to IP54

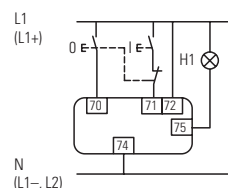
—	RTR-N2M10 034825	1 off
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Notes

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



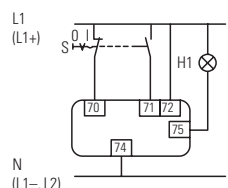
Terminal 70/71:

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



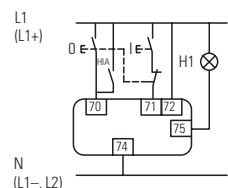
Terminal 75:

Operational readiness signal when the cover is closed, and not locked.

AC-15: 400 V; 2 A

DC-13: 220 V; 0.2 A

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



Switching cycle:

NZM2-XR



NZM3-XR



NZM4-XR



The time interval between OFF and ON is 3 seconds.

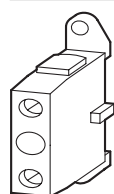
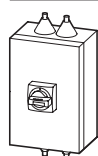
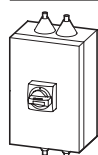
On commands received during the time interval are ignored within the first 3 seconds after switch off.

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

Circuit-breakers LZM

Ordering

Insulated enclosures NZM...-XCI...



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	NZM1	NZM1-XCI23-TVD 271522	1 off
≅ 125 A	NZM1(-4)	NZM1-XCI43-TVD 271523	1 off
≅ 160 A	NZM1(-4)	NZM1-XCI43/2-TVD 104645	1 off
≅ 200 A	NZM2(-4)	NZM2-XCI43-TVD 271524	1 off
≅ 250 A	NZM2(-4)	NZM2-XCI45-TVD 280418	1 off
≅ 400 A	NZM3(-4)	NZM3-XCI48-TVD 271525	1 off

Red-yellow for Emergency-Stop

Lockable on the handle and on the
switch using up to 3 padlocks each.
Lockable in 0 position on handle.
Cover interlock as additional feature,
locking facility on circuit-breaker in
0 position.

≅ 63 A	NZM1	NZM1-XCI23-TVDVR 271527	1 off
≅ 125 A	NZM1(-4)	NZM1-XCI43-TVDVR 271528	1 off
≅ 160 A	NZM1(-4)	NZM1-XCI43/2-TVDVR 104646	1 off
≅ 200 A	NZM2(-4)	NZM2-XCI43-TVDVR 271529	1 off
≅ 250 A	NZM2(-4)	NZM2-XCI45-TVDVR 279356	1 off
≅ 400 A	NZM3(-4)	NZM3-XCI48-TVDVR 271530	1 off

Additional insulated terminals

Rated
uninterrupted
current

I_u

A

Terminal capacities

mm²

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	10 off
100	Flexible, 1 × (10 – 35), stranded, 1 × (16 – 50)	K50/1 098573	10 off
160	Stranded, 1 × (16 – 95)	K95/1N/BR 012336	1 off
250	Stranded, 1 × (35 – 150), 2 × (16 – 70)	K150/1/BR 014709	1 off
400	Stranded, 1 × (50 – 240), 2 × (25 – 120)	K240/1/BR 017082	1 off
630	Stranded, 1 × (240 – 300), 2 × (50 – 240)	K2X240/1/BR 019455	1 off

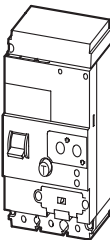
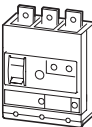
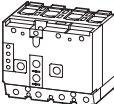
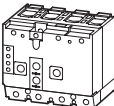
Insulated enclosure
description

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

CI23-150	K10/1, K25/1	Suitable for installation of circuit-breakers and switch-disconnectorsEnclosure 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.
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	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.
CI45-200	K10/1, K25/1, K50/1, K95/1N/BR, K150/1/BR, K240/1/BR	CI23 enclosure with flanges CI43, CI45 and CI48 feature gland plates.
CI48-250	K95/1N/BR, K150/1/BR, K240/1/BR, K2X240/1/BR	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	

Residual-current release frequency response NZM...XFI...

	For use with	Part no. Order number for separate orders	Price see price list	Std. pack	Notes	
Earth-fault release						
Suitable for use in three- and single-phase systems						
	Pulse current sensitive according to core-balance principle					
	For 3- and 4 pole LZM1(-4) circuit-breakers 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	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 LZM1.
		NZM1-4	4 pole	NZM1-4-XFI30R 104606	1 off	
	Rated fault current $I_{\Delta n} = 0.3 \text{ A}$	NZM1	3 pole	NZM1-XFI300R 104604	1 off	
		NZM1-4	4 pole	NZM1-4-XFI300R 104607	1 off	
	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	3 pole	NZM1-XFIR 104605	1 off	
NZM1-4		4 pole	NZM1-4-XFIR 104608	1 off		
	Bottom mounting up to 100 A					
	Rated fault current $I_{\Delta n} = 0.03 \text{ A}$	NZM1	3 pole	NZM1-XFI30U ¹⁾ 104609	1 off	
		NZM1-4	4 pole	NZM1-4-XFI30U 104612	1 off	
	Rated fault current $I_{\Delta n} = 0.3 \text{ A}$	NZM1	3 pole	NZM1-XFI300U 104610	1 off	
		NZM1-4	4 pole	NZM1-4-XFI300U 104613	1 off	
	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	3 pole	NZM1-XFIU 104611	1 off	
NZM1-4		4 pole	NZM1-4-XFIU 104614	1 off		
	Pulse current sensitive according to core-balance principle					
	For 4 pole circuit-breaker LZM2-4 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	4 pole	NZM2-4-XFI30 292343	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 LZM2.
	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	4 pole	NZM2-4-XFI 292344	1 off	
		Core-balance principle with AC/DC current sensitivity (in range 0 – 100 kHz)				
	For 4 pole LZM2-4 circuit-breakers 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	4 pole	NZM2-4-XFIA30 292345	1 off	IEC/EN 60947-2 Observe response threshold dependence on frequency! See "Frequency response" characteristic curve 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 LZM2.
	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	4 pole	NZM2-4-XFIA 292346	1 off	

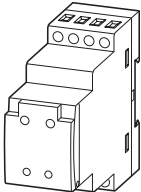
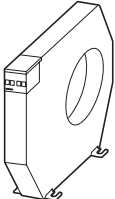
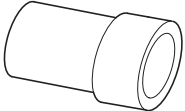
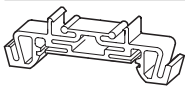
Notes

¹⁾ Suitable for use in three-phase systems

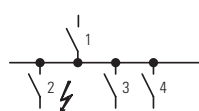
Residual-current release frequency response NZM3, NZM4

	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 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	LZM3	+NZM3-XT 260756		1 off	Only suitable for use in conjunction with circuit-breakers having electronic releases.
	LZM3-4	+NZM3-4-XT 260757		1 off	
	LZM4	+NZM4-XT 266721		1 off	
	LZM4-4	+NZM4-4-XT 266722		1 off	

Residual-current release frequency response PFR-...

	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				
	Rated fault current $I_{\Delta N} = 0.03$ A	PFR-003 285555		1 off	
	Rated fault current $I_{\Delta N} = 0.3$ A	PFR-03 285556		1 off	
	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		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
	Ring-type transformer Rated operational voltage: 690 V (50/60 Hz)				
	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		1 off	
	Internal diameter: 35 mm	PFR-W-35 285600		1 off	incl. screw fixing
	Internal diameter: 70 mm	PFR-W-70 285601		1 off	Alternative: fixing clip for DIN mounting rail
	Internal diameter: 105 mm	PFR-W-105 285602		1 off	Design note: The current transformer diameter must be selected 1.5 times larger than the envelope diameter of the passed through conductor.
	Internal diameter: 140 mm	PFR-W-140 285603		1 off	
	Internal diameter: 210 mm	PFR-W-210 285604		1 off	
	Magnetic shielding				
	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		1 off	
	PFR-W-105	PFR-WMA-105 286003		1 off	
	PFR-W-140	PFR-WMA-140 286004		1 off	
	PFR-W-210	PFR-WMA-210 286005		1 off	
	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

Selectivity: incoming circuit-breaker, outgoing circuit-breaker LZM, FAZ-B(C), PKZ



Incoming
circuit-breaker

Outgoing
circuit-breaker

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)

LZM...1-A...

LZM...2-A...

		LZM...1-A...								LZM...2-A...				
		25(36)(50)(70)								25(36)(50)(70)				
		I_{cu} [kA]	20...40	50	63	80	100	125	160	20...40	50	63	80	100
		I_n [A]												
		I_n [A]	$I_{cu(415V)}$ [kA]	Selectivity threshold I_s [kA] for selectivity between S2 and S1, overload and short-circuit release set to max. value										
Outgoing circuit-breaker (S2) FAZ-B(C)	0.5	15	T	T	T	T	T	T	T	T	T	T	T	T
	1	15	T	T	T	T	T	T	T	T	T	T	T	T
	2	15	2	T	T	T	T	T	T	3	T	T	T	T
	3	15	1.2	2	3	3	10	T	T	1.5	1.5	3	5	T
	4	15	1.2	2	3	3	8	T	T	1.2	1.5	3	4	T
	6	15	1.2	2	2.5	3	5	10	10	1.2	1.5	2.5	3	T
	10	15	1.2	1.5	2	2	4	10	10	1	1.5	2.5	3	10
	13	15	1	1.5	2	2	4	10	10	1	1.2	2	3	10
	16	15	1	1.2	1.5	2	3	8	8	1	1.2	1.5	2.5	10
	20	15	0.8	1.2	1.5	1.5	3	8	8	1	1.2	1.5	2.5	10
	25	15	0.7	1.2	1.5	1.5	3	7	7	0.8	1	1.5	2	10
	32	15	—	1.2	1	1.5	2	6	6	—	1	1.5	2	8
	40	15	—	—	1	1.5	2	5	5	—	—	1.2	1.5	7
	50	15	—	—	—	1.2	1.5	4	4	—	—	—	1.5	6
PKZMO-...	63	15	—	—	—	—	1.5	3	3	—	—	—	—	6
	0.16	100	T	T	T	T	T	T	T	T	T	T	T	T
	0.25	100	T	T	T	T	T	T	T	T	T	T	T	T
	0.4	100	T	T	T	T	T	T	T	T	T	T	T	T
	0.63	100	T	T	T	T	T	T	T	T	T	T	T	T
	1	100	T	T	T	T	T	T	T	T	T	T	T	T
	1.6	100	T	T	T	T	T	T	T	T	T	T	T	T
	2.5	100	T	T	T	T	T	T	T	T	T	T	T	T
	4	100	T	T	T	T	T	T	T	T	T	T	T	T
	6.3	100	4	5	5	T	T	T	T	2	3	4	5	T
	10	100	3	4	5	6	25	T	T	1.5	2.5	4	4	T
	12	50	3	4	5	6	25	T	T	1.5	2.5	4	4	T
	16	50	1.5	1.5	2	3	5	7	T	1	1.6	2	2.5	T
	20	50	0.8	1.5	1.5	2	3	5	T	0.8	1.2	1.5	2	T
PKZ2/ZM-...	25	50	—	1	1.5	1.5	2.5	4	T	—	1	1.5	2	10
	32	50	—	—	1	1	2	3.5	T	—	—	1	1.5	8
	0.6	100	T	T	T	T	T	T	T	T	T	T	T	T
	1.0	100	T	T	T	T	T	T	T	T	T	T	T	T
	1.6	100	T	T	T	T	T	T	T	T	T	T	T	T
	2.4	100	1.2	2	2.5	10	T	T	T	1.2	2	2.5	10	T
	4	100	1	1.5	2	2.5	2.5	4	10	1	1.5	2	2.5	2.5
	6	100	0.6	0.8	1	1.2	2	3	8	0.6	0.8	1	1.2	2
	10	100	0.5	0.7	0.8	1	1.2	2	4	0.5	0.7	0.8	1	1.2
	16	100	0.5	0.6	0.7	0.8	1.2	1.5	3	0.5	0.6	0.7	0.8	1.2
PKZM4	25	30	—	0.6	0.7	0.7	1.2	1.5	2	—	0.6	0.7	0.7	1.2
	32	30	—	—	0.6	0.7	1.2	1.5	2	—	—	0.6	0.7	1.2
	40	30	—	—	0.6	0.7	1	1.5	2	—	—	0.6	0.7	1
	16	100	0.5	0.8	0.8	0.8	2	5	5	0.5	0.8	0.8	0.8	2
	25	100	—	0.7	0.8	0.8	1.5	5	5	—	0.7	0.8	0.8	1.5
	32	50	—	—	0.8	0.8	1.5	4	4	—	—	0.8	0.8	1.5
	40	50	—	—	—	0.8	1.5	3	3	—	—	—	0.8	1.5
	50	50	—	—	—	—	1	2.5	2.5	—	—	—	—	1
	58	50	—	—	—	—	—	2.5	2.5	—	—	—	—	—
	63	50	—	—	—	—	—	2	2	—	—	—	—	—

Notes T: full selectivity

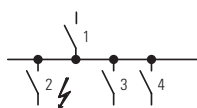
Incoming circuit-breaker (S1)

L2M...2-A...					L2M...3-AE...		L2M...3-VE...		L2M...4-AE...				L2M...4-VE...			
25(36)(50)(70)					50(70)		50(70)		50(70)				50(70)			
125	160	200	250	300	400	630	400	630	800	1000	1250	1600	800	1000	1250	1600

Selectivity threshold I_s [kA] for selectivity between S2 and S1, overload and short-circuit release set to max. value

T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
10	10	10	10	10	T	T	T	T	T	T	T	T	T	T	T	T
10	10	10	10	10	T	T	T	T	T	T	T	T	T	T	T	T
10	10	10	10	10	T	T	T	T	T	T	T	T	T	T	T	T
10	10	10	10	10	T	T	T	T	T	T	T	T	T	T	T	T
10	10	10	10	10	T	T	T	T	T	T	T	T	T	T	T	T
8	8	8	10	10	T	T	T	T	T	T	T	T	T	T	T	T
7	7	7	10	10	T	T	T	T	T	T	T	T	T	T	T	T
6	6	6	10	10	T	T	T	T	T	T	T	T	T	T	T	T
6	6	6	10	10	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
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10	10	10	T	T	T	T	T	T	T	T	T	T	T	T	T	T
8	8	8	10	10	T	T	T	T	T	T	T	T	T	T	T	T
4	4	4	5	5	13	T	13	T	T	T	T	T	T	T	T	T
3	3	3	4	4	7	T	7	T	T	T	T	T	T	T	T	T
2	2	2	3	3	5	20	5	20	T	T	T	T	T	T	T	T
2	2	2	3	3	3.5	15	3.5	15	T	T	T	T	T	T	T	T
2	2	2	2	2	3.5	15	3.5	15	T	T	T	T	T	T	T	T
5	5	5	5	5	16	45	16	45	T	T	T	T	T	T	T	T
5	5	5	5	5	10	25	10	25	42	T	T	T	42	T	T	T
4	4	4	4	4	8	18	8	18	30	45	T	T	30	45	T	T
3	3	3	3	3	8	18	8	18	30	45	T	T	30	45	T	T
2.5	2.5	2.5	2.5	2.5	8	18	8	18	30	45	T	T	30	45	T	T
2.5	2.5	2.5	2.5	2.5	6.5	15	6.5	15	25	40	T	T	25	40	T	T
2	2	2	2	2	6.5	15	6.5	15	25	40	T	T	25	40	T	T

Selectivity: incoming circuit-breaker, outgoing circuit-breaker LZM



Incoming
circuit-breaker

Outgoing
circuit-breaker

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)

LZM...1-A...

LZM...2-A...

		25(36)(50)(70)								25(36)(50)(70)				
		I_{cu} [kA]									I_{cu} [kA]			
		I_n [A]	20...40	50	63	80	100	125	160	20...40	50	63	80	100
Outgoing circuit-breaker (S2)	I_n [A]	$I_{cu}(415V)$ [kA]	Prospective short-circuit current (kA). Set the overload and short-circuit release of the incoming circuit-breaker to the max. value.											
LZM...1-A...	20...40	25...100	—	—	0.5	0.7	0.8	1.5	1.5	—	—	0.6	0.8	1.5
	50	25...100	—	—	—	0.6	0.8	1.5	1.5	—	—	—	0.8	1.5
	63	25...100	—	—	—	—	0.8	1.5	1.5	—	—	—	—	1.5
	80	25...100	—	—	—	—	—	1.5	1.5	—	—	—	—	—
	100	25...100	—	—	—	—	—	—	1.5	—	—	—	—	—
	125	25...100	—	—	—	—	—	—	—	—	—	—	—	—
	160	25...100	—	—	—	—	—	—	—	—	—	—	—	—
LZM...2-A...	20...40	25...150	—	—	0.5	0.6	0.8	1	1	—	—	0.5	0.6	0.8
	50	25...150	—	—	—	0.6	0.8	1	1	—	—	—	0.6	0.8
	63	25...150	—	—	—	—	0.8	1	1	—	—	—	—	0.8
	80	25...150	—	—	—	—	—	1	1	—	—	—	—	—
	100	25...150	—	—	—	—	—	—	1	—	—	—	—	—
	125	25...150	—	—	—	—	—	—	—	—	—	—	—	—
	160	25...150	—	—	—	—	—	—	—	—	—	—	—	—
LZM...2-VE...	250	25...150	—	—	—	—	—	—	—	—	—	—	—	—
	100	50...150	—	—	—	—	—	—	—	—	—	—	—	—
	160	50...150	—	—	—	—	—	—	—	—	—	—	—	—
LZM...3-AE...	250	50...150	—	—	—	—	—	—	—	—	—	—	—	—
	400	50...150	—	—	—	—	—	—	—	—	—	—	—	—
	630	50...150	—	—	—	—	—	—	—	—	—	—	—	—
LZM...3-VE...	250	50...150	—	—	—	—	—	—	—	—	—	—	—	—
	400	50...150	—	—	—	—	—	—	—	—	—	—	—	—
	630	50...150	—	—	—	—	—	—	—	—	—	—	—	—
LZM...4-AE...	630	50...100	—	—	—	—	—	—	—	—	—	—	—	—
	800	50...100	—	—	—	—	—	—	—	—	—	—	—	—
	1000	50...100	—	—	—	—	—	—	—	—	—	—	—	—
	1250	50...100	—	—	—	—	—	—	—	—	—	—	—	—
	1600	50...100	—	—	—	—	—	—	—	—	—	—	—	—
LZM...4-VE...	630	50...100	—	—	—	—	—	—	—	—	—	—	—	—
	800	50...100	—	—	—	—	—	—	—	—	—	—	—	—
	1000	50...100	—	—	—	—	—	—	—	—	—	—	—	—
	1250	50...100	—	—	—	—	—	—	—	—	—	—	—	—
	1600	50...100	—	—	—	—	—	—	—	—	—	—	—	—

Notes T: total selectivity

Incoming circuit-breaker (S1)

LZW...2-A...					LZW...3-AE...		LZW...3-VE...		LZW...4-AE...				LZW...4-VE...			
25(36)(50)(70)					50(70)		50(70)		50(70)				50(70)			
125	160	200	250	300	400	630	400	630	800	1000	1250	1600	800	1000	1250	1600

Prospective short-circuit current (kA). Set the overload and short-circuit release of the incoming circuit-breaker to the max. value.

1.5	1.5	2	3	3	20	20	25	25	T	T	T	T	T	T	T	T
1.5	1.5	2	3	3	20	20	25	25	T	T	T	T	T	T	T	T
1.5	1.5	2	3	3	15	15	20	20	T	T	T	T	T	T	T	T
1.5	1.5	2	3	3	15	15	20	20	T	T	T	T	T	T	T	T
—	1.5	2	3	3	15	15	20	20	T	T	T	T	T	T	T	T
—	—	2	3	3	15	15	20	20	T	T	T	T	T	T	T	T
—	—	2	3	3	15	15	20	20	T	T	T	T	T	T	T	T
1	1.2	1.6	2	2	15	15	20	20	T	T	T	T	T	T	T	T
1	1.2	1.6	2	2	15	15	20	20	T	T	T	T	T	T	T	T
1	1.2	1.6	2	2	15	15	20	20	T	T	T	T	T	T	T	T
1	1.2	1.6	2	2	15	15	20	20	T	T	T	T	T	T	T	T
—	1.2	1.6	2	2	15	15	20	20	T	T	T	T	T	T	T	T
—	—	1.6	2	2	15	15	20	20	T	T	T	T	T	T	T	T
—	—	—	2	2	10	10	15	15	T	T	T	T	T	T	T	T
—	—	—	—	—	10	10	15	15	T	T	T	T	T	T	T	T
—	—	—	—	—	10	10	15	15	T	T	T	T	T	T	T	T
—	1.2	1.6	2	2	7	10	8	11	20	50	T	T	20	50	T	T
—	—	—	—	—	7	10	8	11	20	50	T	T	20	50	T	T
—	—	—	—	—	7	10	8	11	20	50	T	T	20	50	T	T
—	—	—	—	—	5	7.5	10	12	T/80	T/80	T/80	T/80	T/80	T/80	T/80	T/80
—	—	—	—	—	—	7.5	—	12	T/80	T/80	T/80	T/80	T/80	T/80	T/80	T/80
—	—	—	—	—	—	—	—	—	T/80	T/80	T/80	T/80	T/80	T/80	T/80	T/80
—	—	—	—	—	3.5	4	10	12	T/80	T/80	T/80	T/80	T/80	T/80	T/80	T/80
—	—	—	—	—	—	4	—	12	T/80	T/80	T/80	T/80	T/80	T/80	T/80	T/80
—	—	—	—	—	—	—	—	—	T/80	T/80	T/80	T/80	T/80	T/80	T/80	T/80
—	—	—	—	—	—	—	—	—	10	15	20	20	10	15	20	20
—	—	—	—	—	—	—	—	—	—	—	20	20	—	—	20	20
—	—	—	—	—	—	—	—	—	—	—	20	20	—	—	20	20
—	—	—	—	—	—	—	—	—	—	—	—	20	—	—	—	20
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	10	15	20	20	10	15	20	20
—	—	—	—	—	—	—	—	—	—	—	20	20	—	—	20	20
—	—	—	—	—	—	—	—	—	—	—	20	20	—	—	20	20
—	—	—	—	—	—	—	—	—	—	—	—	20	—	—	—	20
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

MCB, back-up protection LZM1, LZM2, LZM3

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 LZM circuit-breakers with settable, current-dependent, delayed overload release.

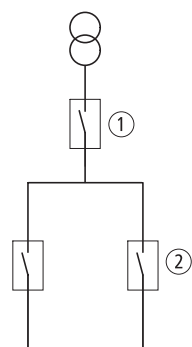
Short-circuit protection is provided by adjustable instantaneous releases, which open the main contacts in less than 25ms. The short-circuit total opening time restricts the temperature rise of the cable to a minimum.

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

	Min. protected cross-section mm ² copper
LZM...1(-4)-...20	6
LZM...1(-4)-...25 ... 160	10
LZM...2(-4)-...20 ... 300	10
LZM...3(-4)-...250 ... 630	16
LZM...4(-4)-...630 ... 1600	95

Back-up protection

between LZM(N)(S) incoming circuit-breaker and LZMB(C)(N)(S) outgoing circuit-breaker



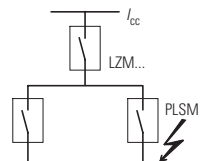
			Incoming circuit-breaker ①									
			LZM1				LZM2				LZM3	
Outgoing circuit-breaker ②			up to 160 A				up to 300 A				up to 630 A	
			$I_{cu}(415\text{ V})$	I_n	25 kA	36 kA	50 kA	70 kA	25 kA	36 kA	50 kA	70 kA
LZMB1	25 kA	up to 160 A	25	36	50	70	25	36	50	70	50	70
LZMC1	36 kA	up to 160 A	—	36	50	70	—	36	50	70	50	70
LZMN1	50 kA	up to 160 A	—	—	50	70	—	—	50	70	50	70
LZMS1	70 kA	up to 160 A	—	—	—	70	—	—	—	70	—	70
LZMB2	25 kA	up to 300 A	25	36	50	70	25	36	50	70	50	70
LZMC2	36 kA	up to 300 A	—	36	50	70	—	36	50	70	50	70
LZMN2	50 kA	up to 300 A	—	—	50	70	—	—	50	70	50	70
LZMS2	70 kA	up to 300 A	—	—	—	—	—	—	—	70	—	70
LZMN3	50 kA	up to 630 A	—	—	—	—	—	—	—	—	50	70
LZMS3	70 kA	up to 630 A	—	—	—	—	—	—	—	—	—	70

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

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

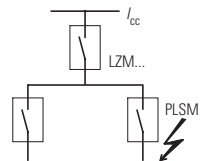
The selectivity limit is determined by the response current of the non-delayed short-circuit release in the upstream incoming circuit-breaker. In many applications this is sufficient.

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



Outgoing circuit-breaker	Outgoing circuit-breaker LZM(B)(C)2-A...	LZMC(N)(S)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)...(/...)		
0,5 – 16	25 kA	30 kA
20 – 40	20 kA	20 kA
50, 63	15 kA	15 kA

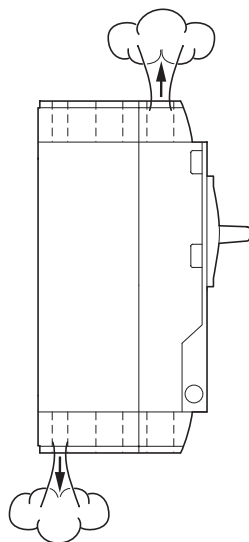
between LZM...2-A... incoming circuit-breaker and FAZ-B(C)/PLSM-B(C)... outgoing circuit-breaker



Outgoing circuit-breaker	Incoming circuit-breaker LZMB(C)2-A...	LZMN(S)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)...(/...)		
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 LZM1, LZM2, LZM3, LZM4

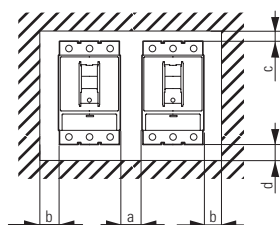
Direction of blow-out



	Top, front	Bottom, rear
LZM1	X	—
LZM2¹⁾	X	X
LZM3	X	X
LZM4	X	—

¹⁾ LZM2B(C) – A ... as LZM1

Minimum clearances



between two adjacently mounted switches

Minimum clearance a in mm

	LZM1	LZM2	LZM3	LZM4
LZM1	0	5	5	15
LZM2¹⁾	5	5	5	15
LZM3	5	5	5	15
LZM4	15	15	15	15

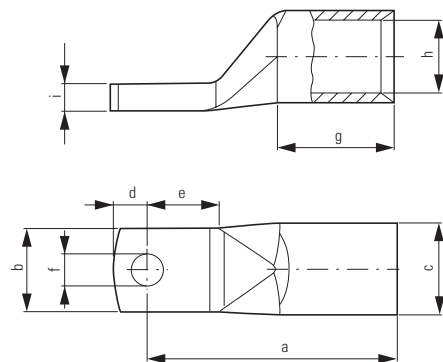
between switch and other parts

Minimum clearances in mm

	b ≤ 690 V	1000 V	c ≤ 690 V	1000 V	d ≤ 690 V	1000 V
LZM1	0	—	60	—	0	—
LZM2¹⁾	5	5	35	35	35	35
LZM3	5	5	60	60	60	60
LZM4	15	15	100	200	0	0

¹⁾ LZM2B(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
mm²

Terminal bolt
Ø

Dimensions in mm

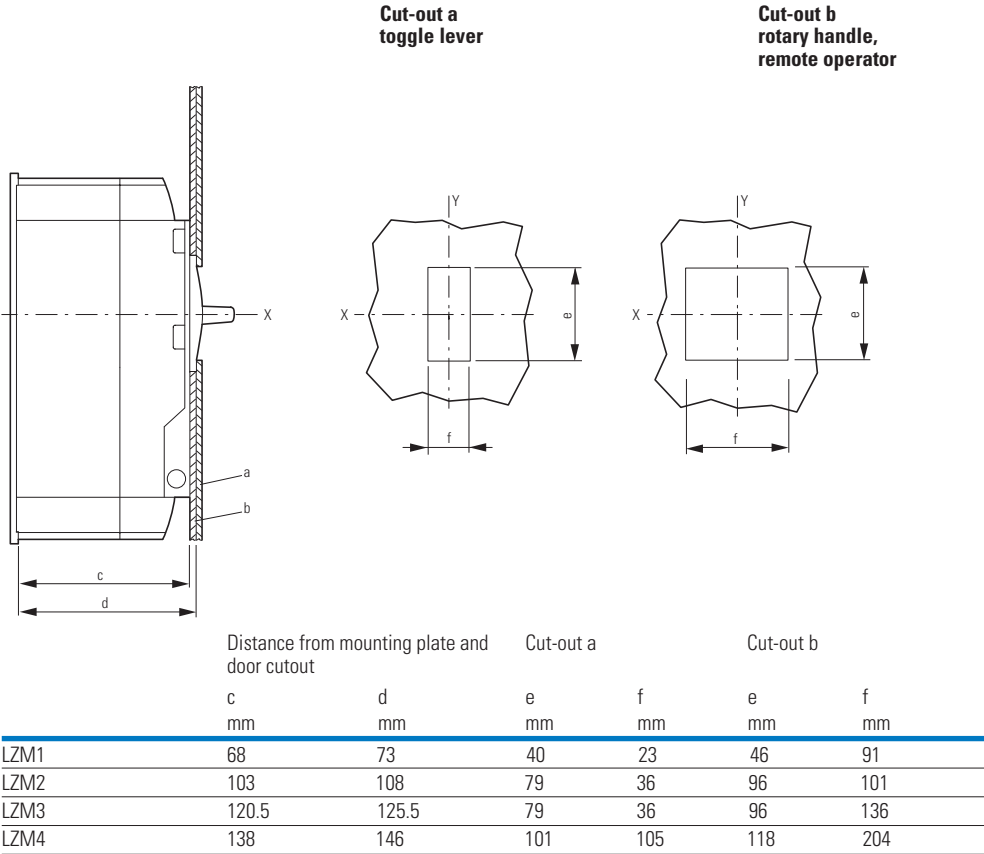
				a	b	c	d	e	f	g	h	i
KS95-NZM7	LZM2	95	M8	53±2	23±0.5	18±0.2	10±1	19	8,5	25	13,5	4,4
KS120-NZM7	LZM2	120	M8	56±2	23±0.5	19.5±0.2	10±1	19	8,5	26	15	4,4
KS150-NZM7	LZM2	150	M8	61±2	23±0.5	21±0.2	10±1	19	8,5	30	16,5	4,4
NZM2-XKS185	LZM2	185	M8	65±1.5	22±1	24±0.3	9 ⁺¹ _{-0.5}	19 ^{+2.5} _{-0.5}	8.5 ^{+0.05} _{-0.1}	30±2	19±0.4	7
NZM3-XKS185	LZM3, LZM4	185	M10	65	24,5	24	11,5	18	10,5	30	19	7.0±0.8
NZM3-XKS240	LZM3, LZM4	240	M10	72	31	26	11,5	19	10,5	35	21	5.0±0.8

Circuit-breakers LZM

Engineering

Auxiliary switches, trip-indicating auxiliary contacts LZM1, LZM2, LZM3, LZM4

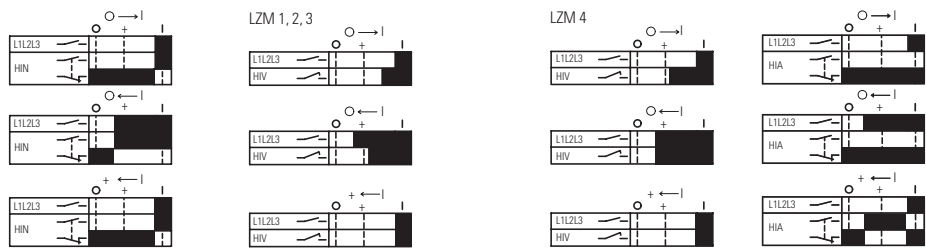
Front cut-out



Standard auxiliary contact (HIN)

Early-make auxiliary contact (HIV)

Trip-indicating auxiliary contact (HIA)



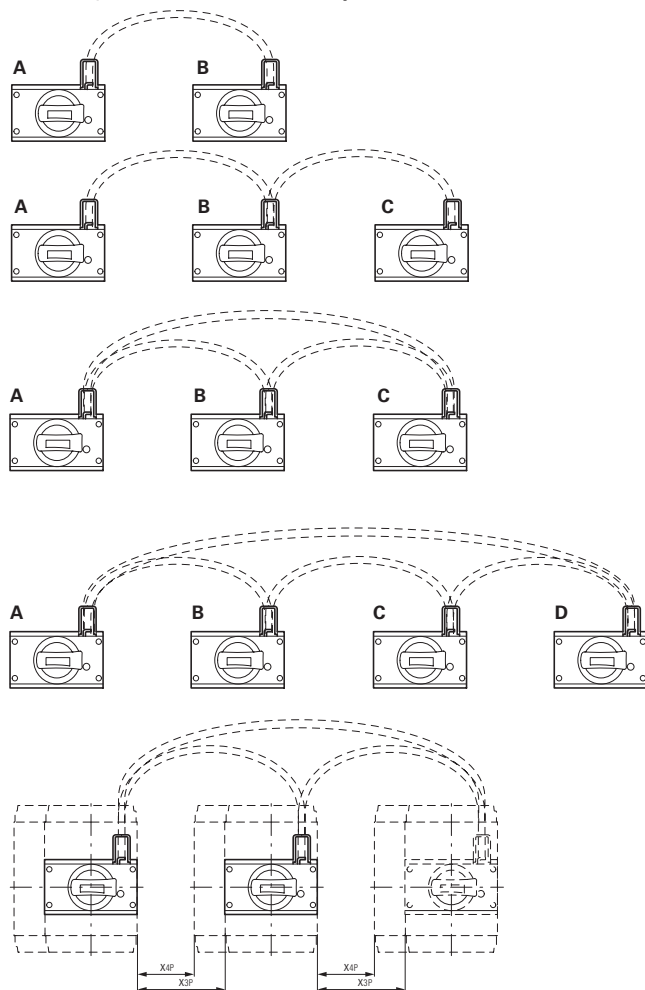
- 0 → I Switching on
- 0 ← I Switching off
- + ← I Trip

- Contact closed
- Contact open

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

Mechanical interlock for (door-coupling) rotary handles LZW, NZM...-XBZ-...

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

max. switch clearance		LZM1		LZM2		right switch LZM3		LZM4	
		X _{3P}	X _{4P}	X _{3P}	X _{4P}	X _{3P}	X _{4P}	X _{3P}	X _{4P}
left switch		mm	mm	mm	mm	mm	mm	mm	mm
LZM1	3/4 pole	135	105	120	85	135	90	125	80
LZM2	3/4 pole	135	105	120	85	135	90	125	80
LZM3	3/4 pole	90	75	75	35	85	40	80	45
LZM4	3/4 pole	50	35	40	15	25	—	15	—

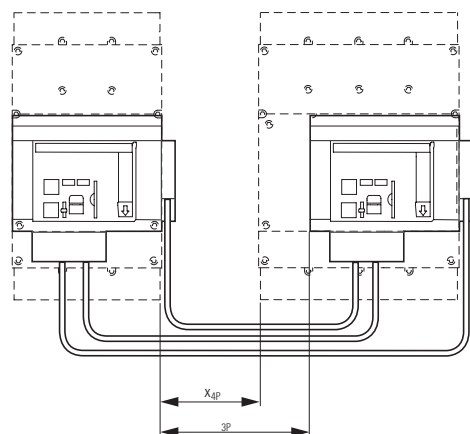
NZM-XBZ600

max. switch clearance		LZM1		LZM2		right switch LZM3		LZM4	
		X _{3P}	X _{4P}	X _{3P}	X _{4P}	X _{3P}	X _{4P}	X _{3P}	X _{4P}
left switch		mm	mm	mm	mm	mm	mm	mm	mm
LZM1	3/4 pole	510	480	495	460	510	465	475	405
LZM2	3/4 pole	510	480	495	460	510	465	475	405
LZM3	3/4 pole	460	430	450	410	460	415	460	390
LZM4	3/4 pole	400	370	380	340	400	375	390	320

NZM-XBZ1000

max. switch clearance		LZM1		LZM2		right switch LZM3		LZM4	
		X _{3P}	X _{4P}	X _{3P}	X _{4P}	X _{3P}	X _{4P}	X _{3P}	X _{4P}
left switch		mm	mm	mm	mm	mm	mm	mm	mm
LZM1	3/4 pole	910	880	895	860	910	865	865	795
LZM2	3/4 pole	910	880	895	860	910	865	865	795
LZM3	3/4 pole	820	790	850	810	860	815	860	790
LZM4	3/4 pole	750	720	730	700	800	775	790	720

Mechanical interlock for remote operator, residual-current relay NZM...-XMVR(L)



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

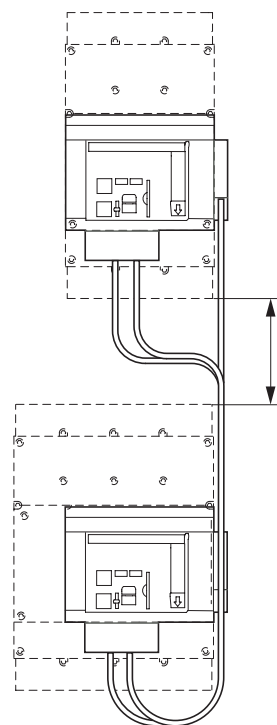
X_{4p} = max. switch clearance 4 pole

XMVR mechanical interlock (Mounting adjacent)

NZM...-XMVR

Max. switch clearance

		L2M2		right switch L2M3		L2M4	
		X_{3p} mm	X_{4p} mm	X_{3p} mm	X_{4p} mm	X_{3p} mm	X_{4p} mm
left switch							
L2M2	3/4 pole	130	95	95	50	—	—
L2M3	3/4 pole	—	—	135	90	155	85
L2M4	3/4 pole	—	—	—	—	120	50



XMVRL mechanical interlock Mounting in adjacent enclosures

NZM...-XMVRL

Max. switch clearance

		L2M2		right switch L2M3		L2M4	
		X_{3p} mm	X_{4p} mm	X_{3p} mm	X_{4p} mm	X_{3p} mm	X_{4p} mm
left switch							
L2M2	3/4 pole	350	315	420	385	—	—
L2M3	3/4 pole	—	—	400	365	460	390
L2M4	3/4 pole	—	—	—	—	420	350

XMVRL mechanical interlock (Mounting one above the other)

NZM...-XMVRL

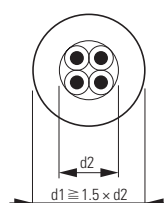
Max. switch clearance

		Switch top		
		L2M2	L2M3	L2M4
	3/4 pole			
	Y	Y	Y	Y
Switch bottom				
		mm	mm	mm
L2M2	3/4 pole	220	225	—
L2M3	3/4 pole	—	220	230
L2M4	3/4 pole	—	—	230

Y = max. switch clearance

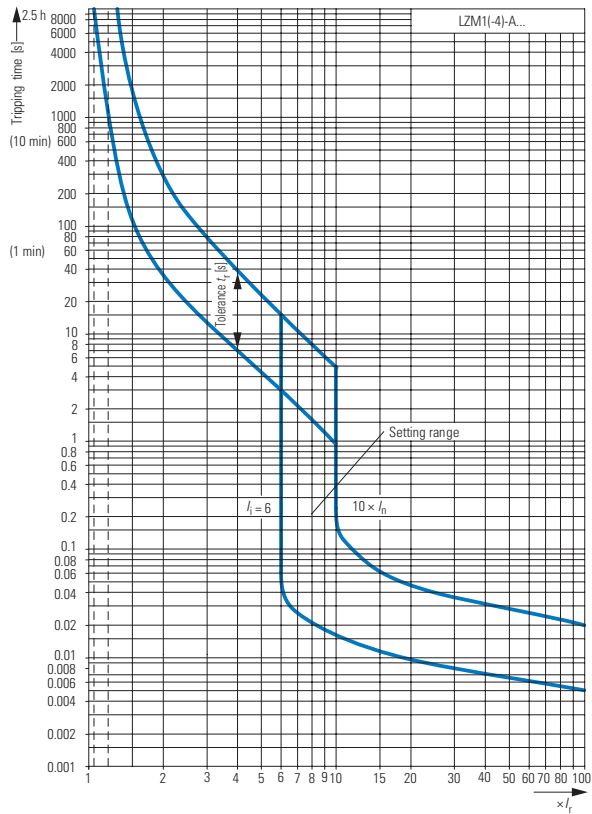
Ring-type transformer

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

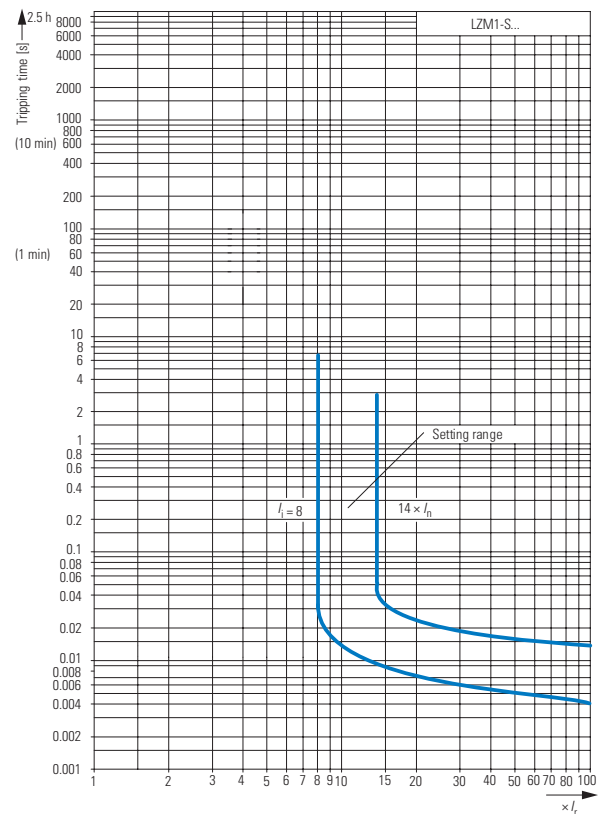


Sizes 1, 2: tripping characteristics LZM1, LZM2

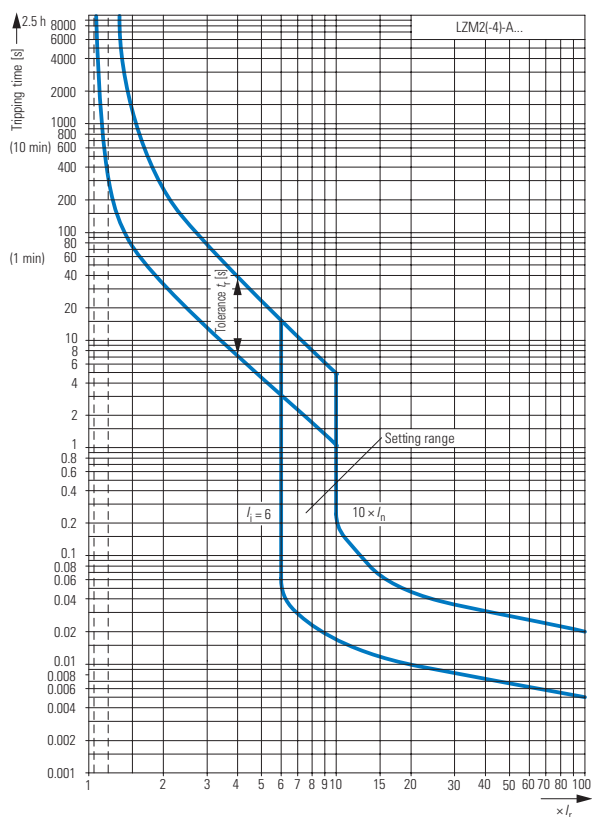
System and line protection with LZM1



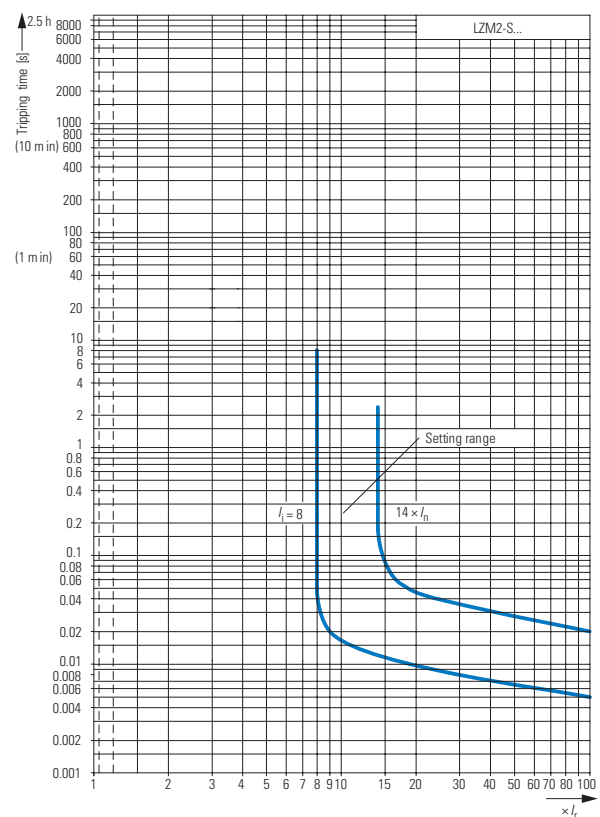
Motor protection with LZM1



System and line protection with LZM2

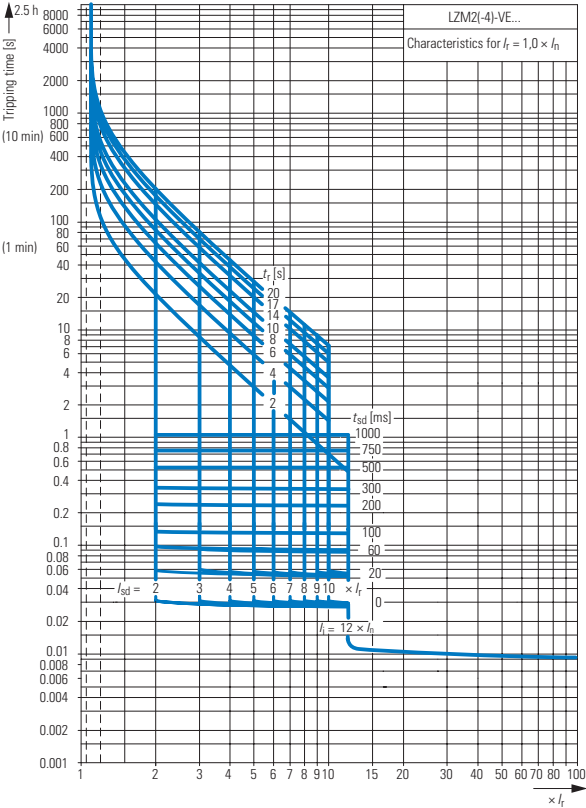


Motor protection with LZM2

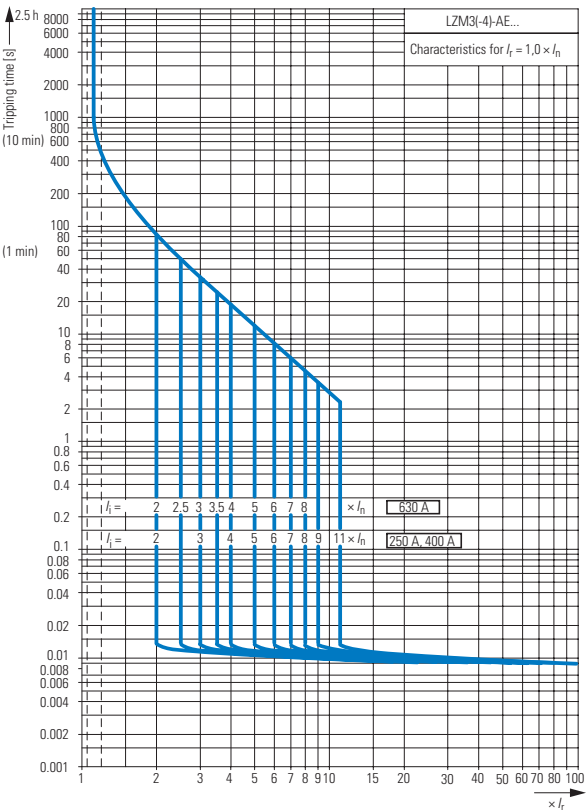


Sizes 2, 3: tripping characteristics LZM2, LZM3

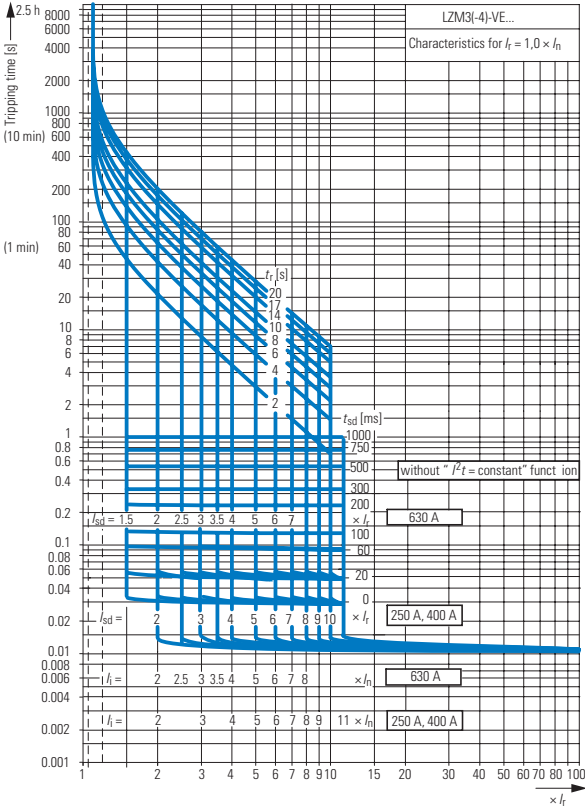
Systems, cable, selectivity and generator protection with LZM2



System and line protection with LZM3

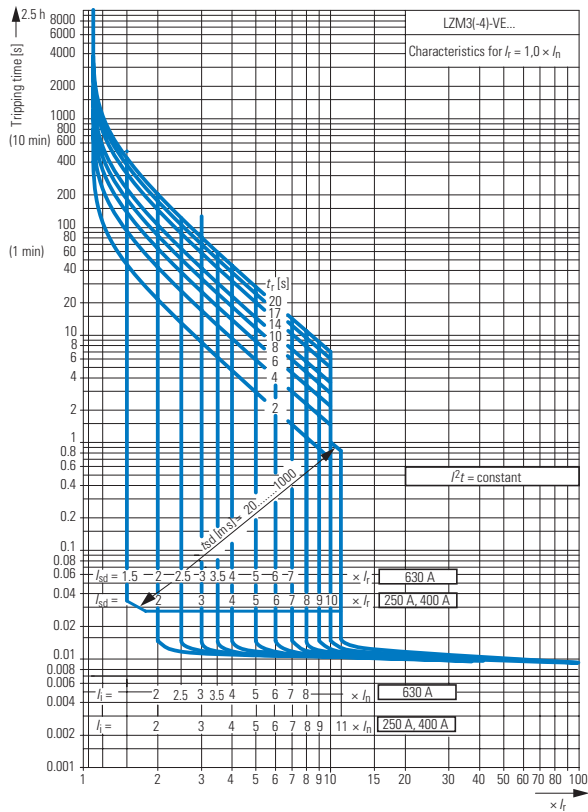


Systems, cable, selectivity and generator protection with LZM3

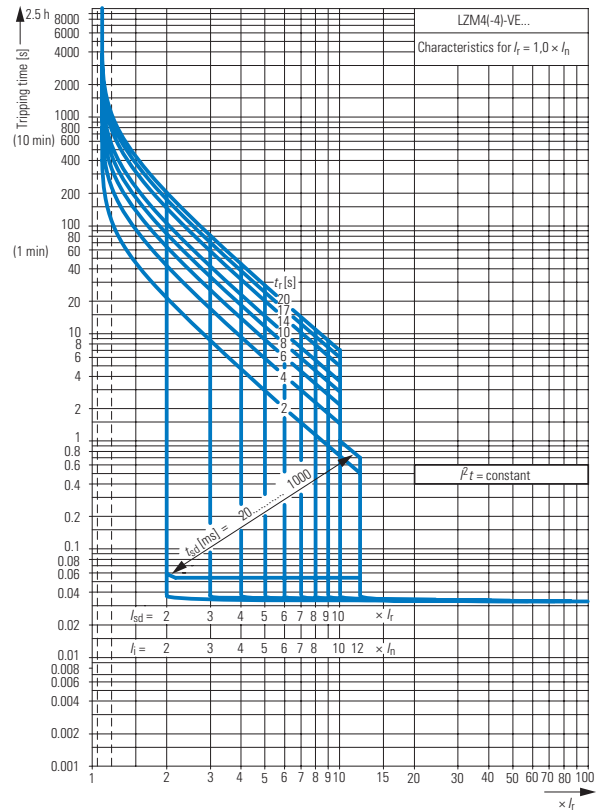


Sizes 3, 4: tripping characteristics LZM3, LZM4

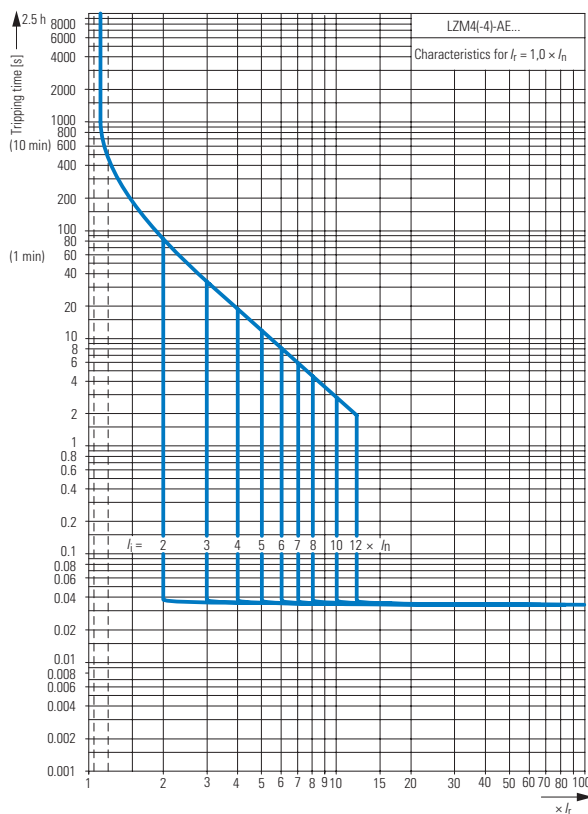
Systems, cable, selectivity and generator protection with LZM3



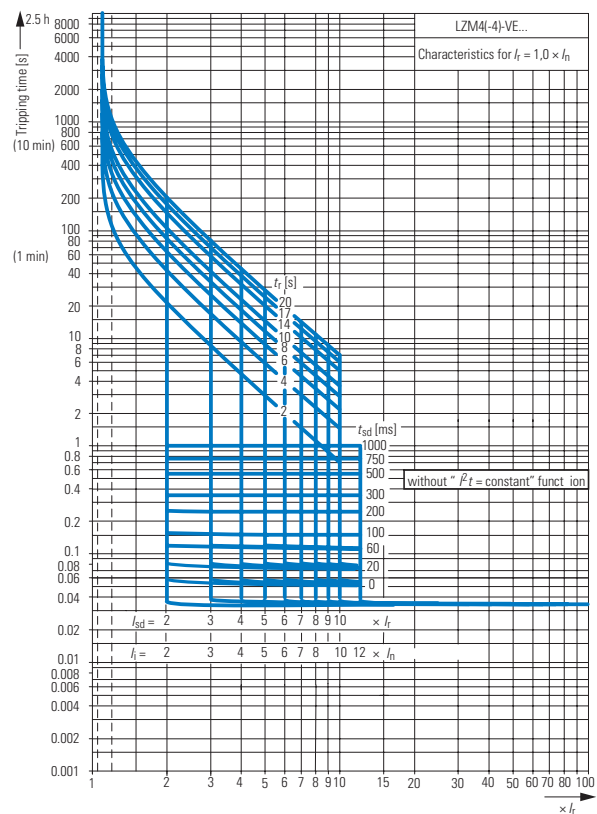
Systems, cable, selectivity and generator protection with NZM4



System and line protection with LZM4

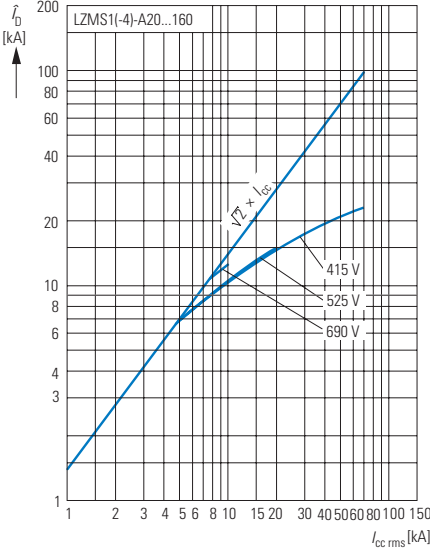
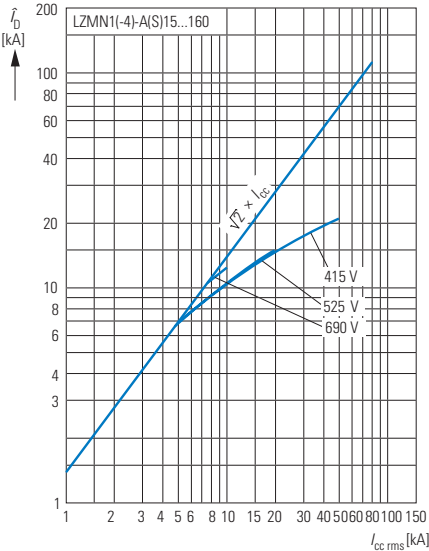
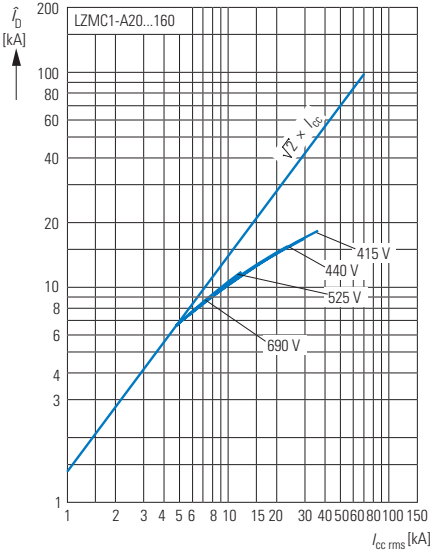
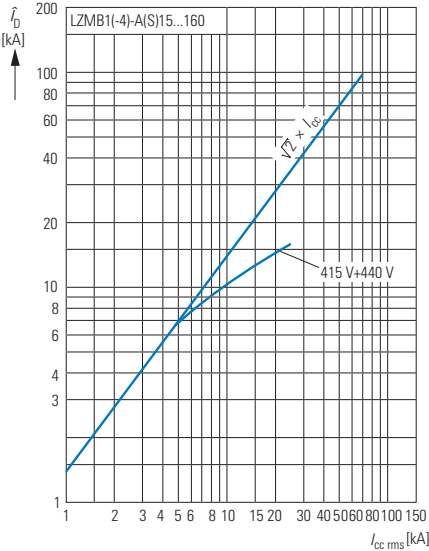


Systems, cable, selectivity and generator protection with LZM4



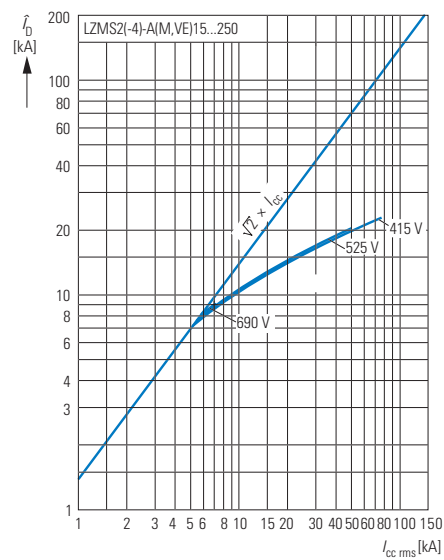
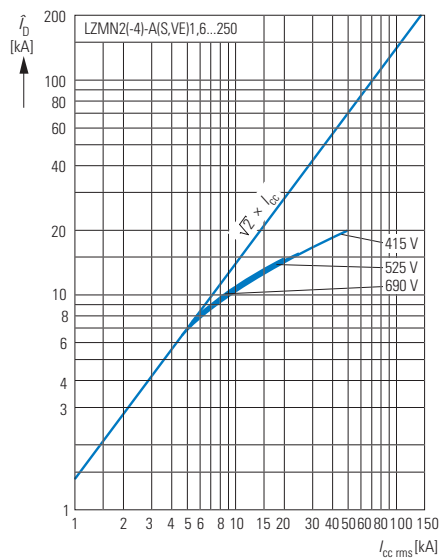
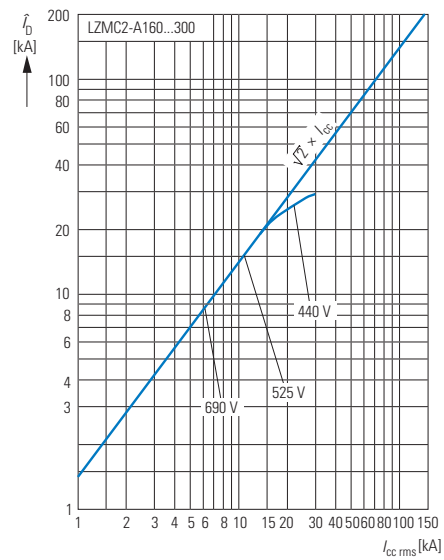
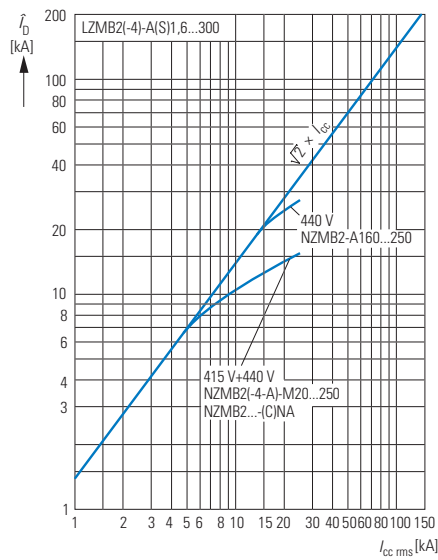
Frame size 1: let-through characteristics LZM1

Let-through current $\hat{I}_D$



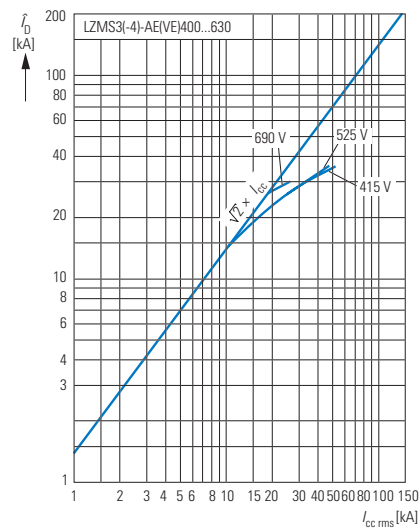
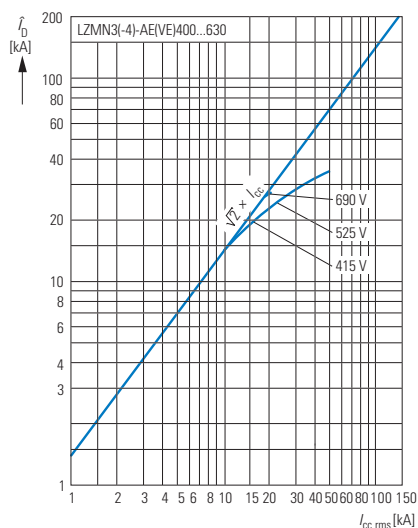
Frame size 2: let-through characteristics LZW2

Let-through current $\hat{I}_D$

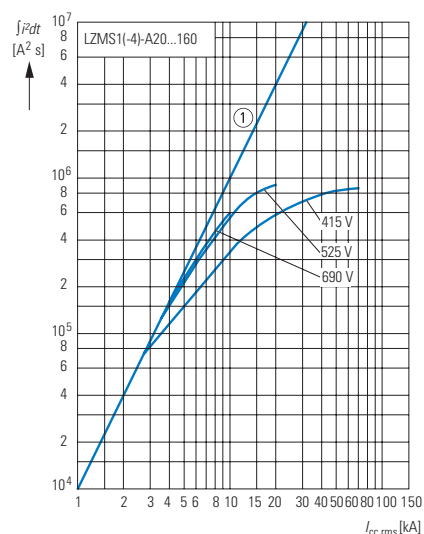
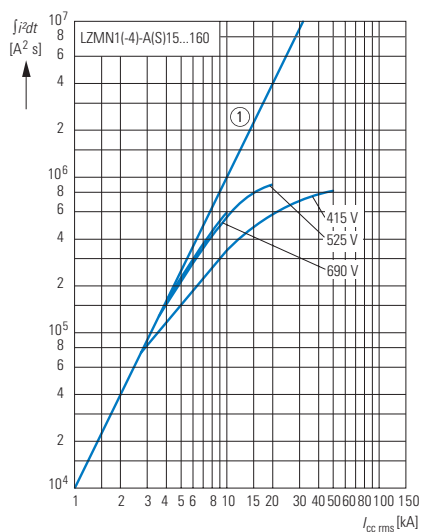
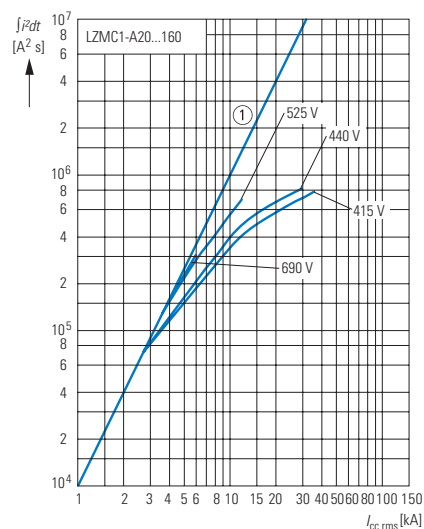
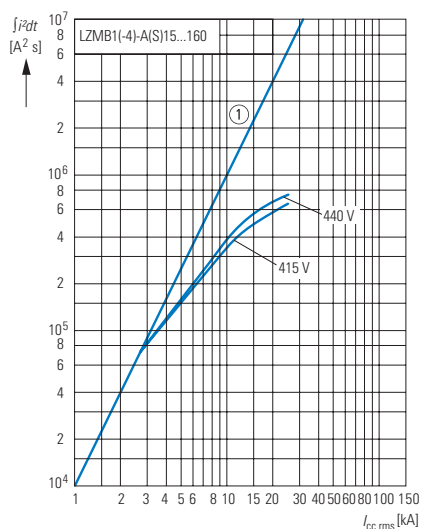


Sizes 1, 3: let-through characteristics LZM1, LZM3

Let-through current $\hat{I}_D$



Let-through energy $\int \hat{i}^2 dt$

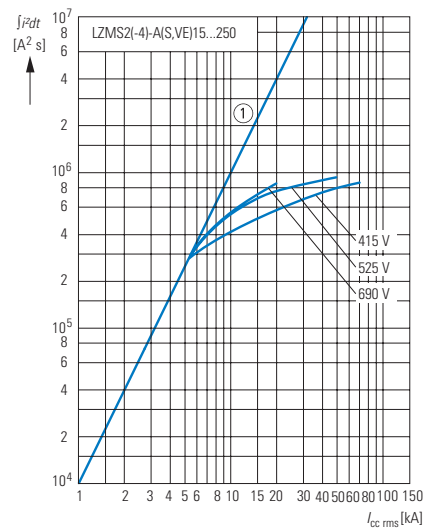
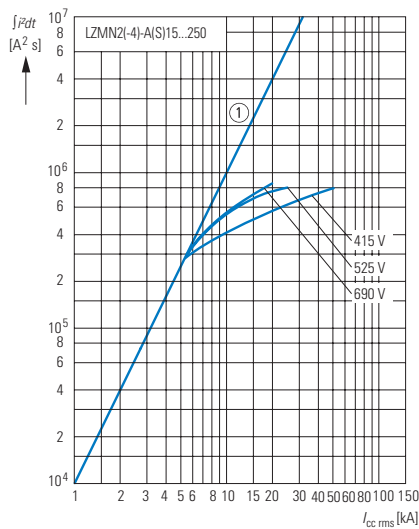
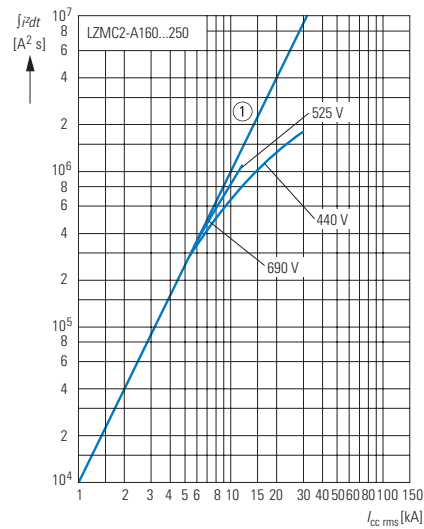
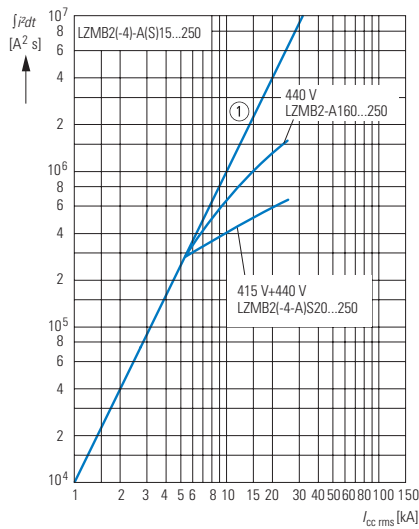


① 1 half-cycle

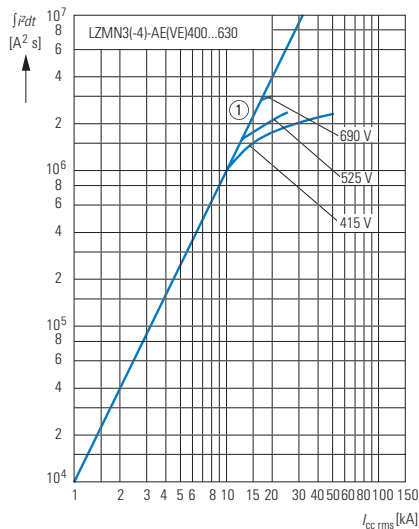
① 1 half-cycle

Sizes 2, 3: let-through characteristics LZM2, LZM3

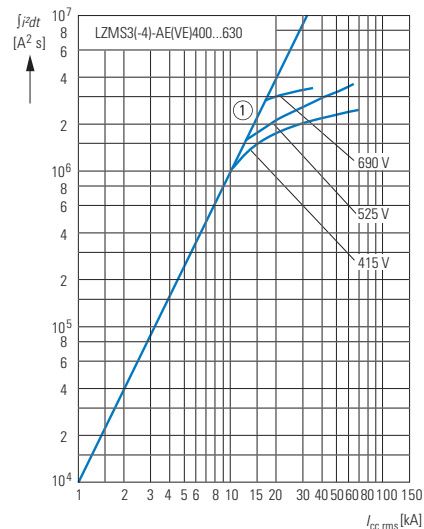
Let-through energy I^2t



① 1 half-cycle



① 1 half-cycle



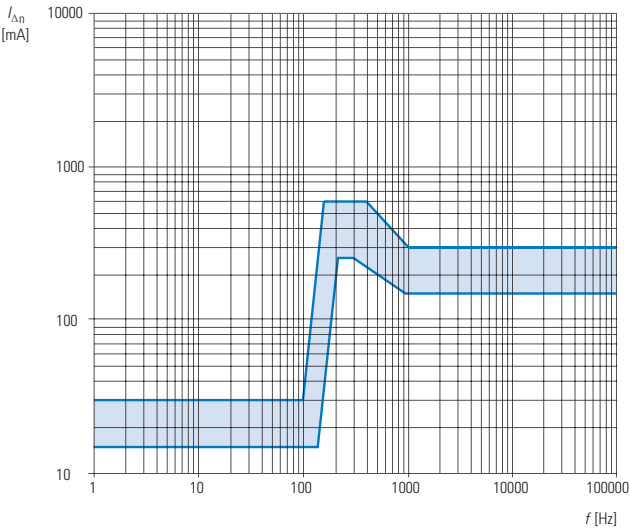
① 1 half-cycle

Frame size 2: residual-current release frequency response NZM2-4-XFIA

Frequency response

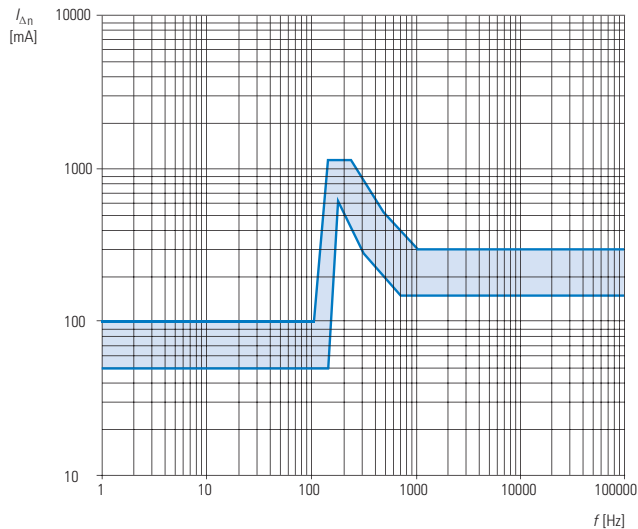
NZM2-4-XFIA30

30 mA



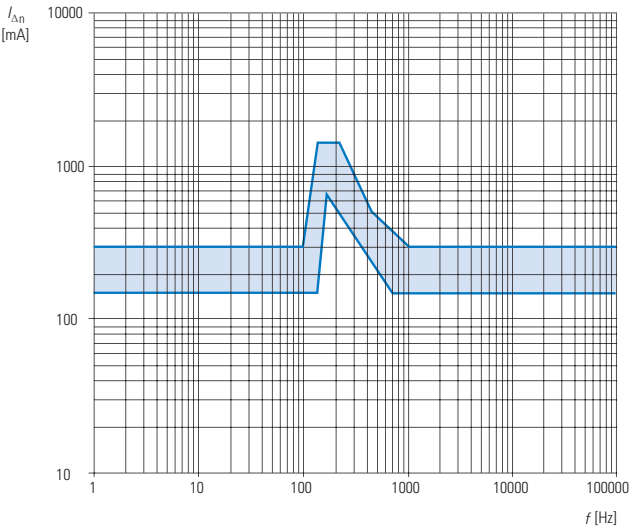
NZM2-4-XFIA

100 mA

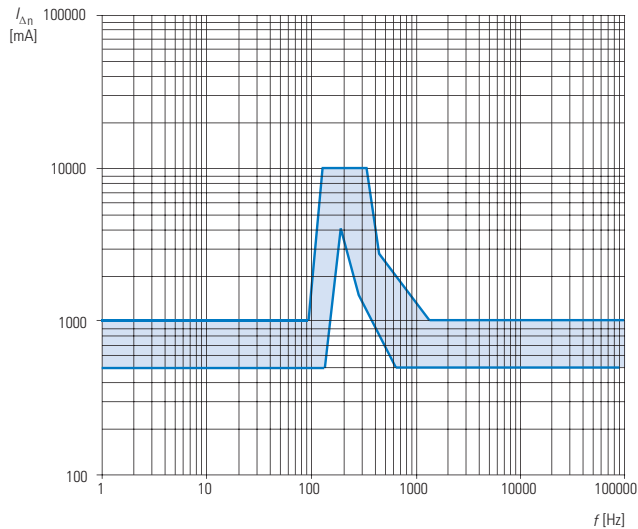


NZM2-4-XFIA

300 mA



1000 mA



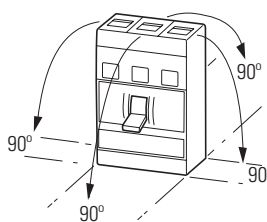
Circuit-breakers LZM

Technical data

Circuit-breakers LZM...1, LZM...2, LZM...3, LZM...4

**Rated uninterrupted current
max. 160 A**

LZMB1 LZMC1 LZMN1 LZMS1

General						
Standards		IEC/EN 60947, CCC				
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				
		 With residual-current release LZM1: Vertical and 90° in all directions				
Direction of incoming supply		As required				
Degree of protection						
Device	In the operating controls area: IP20 (basic degree of protection)					
Enclosures	With insulating surround: IP40, with door coupling rotary handle: IP66					
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	
Auxiliary contacts	V	6000	6000	6000	6000	
Rated operational voltage	U_e	V AC	690	690	690	690
Overvoltage category/pollution degree			III/3	III/3	III/3	III/3
Rated insulation voltage	U_i	V	690	690	690	690
For use in IT electrical power networks		V	440	690	690	690

**Rated uninterrupted current
max. 250 A**

LZMB2

LZMC2

LZMN2

LZMS2

**Rated uninterrupted current
max. 630 A**

LZMC3

LZMN3

LZMS3

**Rated uninterrupted current
max. 1600 A**

LZMN4

LZMS4

IEC/EN 60947, CCC

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

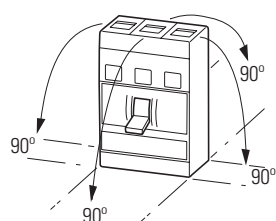
-25...+70

20 (half-sinusoidal shock 20 ms) NZM4: (half-sinusoidal shock 11 ms)

500

300

Vertical and 90° in all directions



With plug-in adapter LZM2:
vertical, 90° right/left

with residual current release, LZM2: vertical and 90°
to all directions

With withdrawable unit, LZM3: vertical, 90°
left, LZM4: vertical, with remote operator:
LZM2, LZM3, LZM4: vertical and 90° to all
directions

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
6000	6000	6000	6000	6000	6000	6000	6000	6000
440	690	690	690	690	690	690	690	690
III/3	III/3	III/3	III/3	III/3	III/3	III/3	III/3	III/3
690	690	1000	690	690	1000	1000	1000	1000
440	690	690	690	690	690	690	525	525

Circuit-breakers LZM

Technical data

Circuit-breakers LZM...1, LZM...2, LZM...3, LZM...4

					Rated uninterrupted current max. 160 A			
					LZMB1	LZMC1	LZMN1	LZMS1
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	
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	
Maximum low-voltage h.b.c. fuse ⁹⁾			A gG/gL	LZM.1-...20...100: 200 LZM.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 curr	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
Lifespan, mechanical			Operations	20000	20000	20000	20000	
Maximum operating frequency								
Max. operating frequency			Ops/h	120	120	120	120	
Lifespan, electrical								
	AC-1	400/415 V 50/60 Hz	Operations	10000 ⁸⁾	10000	10000	10000	
		690 V 50/60 Hz	Operations	—	7500	7500	7500	
	AC-3 ⁴⁾	400/415 V 50/60 Hz	Operations	—	—	7500	7500	
		690 V 50/60 Hz	Operations	—	—	5000	5000	
Current heat loss per pole at I_b ⁶⁾			W	16.7	16.7	16.7	16.7	
Total opening delay at short-circuit			ms	< 10	< 10	< 10	< 10	

Notes

²⁾ For AC-3 rated operational current with LZM4 the following applies: 400 V: max. 650 kW; 690 V: max. 600 kW

⁴⁾ For 3-pole system protection circuit-breaker the AC-3 specification is not applicable

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

Rated uninterrupted current max. 300 A				Rated uninterrupted current max. 630 A			Rated uninterrupted current max. 1600 A	
LZMB2	LZMC2	LZMN2	LZMS2	LZMC3	LZMN3	LZMS3	LZMN4	LZMS4
63	121	187	220	121	187	220	105	275
53	76	105	154	76	105	154	105	187
53	63	74	143	63	74	143	74	187
—	24	53	76	24	53	76	53	143
—	9	40	53	14	40	53	40	105
30	55	85	100	55	85	100	50	125
25	36	50	70	36	50	70	50	85
25	30	35	65	30	35	65	35	85
—	12	25	35	12	25	35	25	65
—	8	20	20	8	20	25	20	50
30	55	85	100	55	85	100	37	63
25	36	50	70	36	50	70	37	43
18.5	22.5	35	65	22.5	35	65	26	43
—	6	25	36	9	13	18	19	49
—	4	5	5	4	5	6	15	37
355	355	355	355	LZMN3-...400: 400 LZMN3-...630: 630			LZMN4-...800...1250: 2 × 630 LZMN4-...1600: 2 × 800	
A	A	A	A	A	A	A	B	B
—	—	1.9	1.9	3.3	3.3	3.3	19.2	19.2
—	—	1.9	1.9	3.3	3.3	3.3	19.2	19.2
250	250	250	250	500	630	630	2000	2000
250	250	250	250	500	630	630	2000	2000
250	250	250	250	500	630	630	1600 ²⁾	1600 ²⁾
250	250	250	250	500	630	630	1600 ²⁾	1600 ²⁾
20000	20000	20000	20000	15000	15000	15000	10000	10000
120	120	120	120	60	60	60	60	60
10000 ⁸⁾	10000	10000	10000	5000	5000	5000	3000	3000
—	7500	7500	7500	3000	3000	3000	2000	2000
6500 ⁴⁾	—	6500	6500	2000	2000	2000	2000	2000
—	5000	5000	5000	2000	2000	2000	1000	1000
19	19	19	19	31	40	40	97	97
< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 25 ≙ 415 V; < 35 > 415 V	< 25 ≙ 415 V; < 35 > 415 V

Circuit-breakers LZM

Technical data

Temperature influence

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)						
LZM...1(-4)-A15...80	TM	1.14	1.07	1	0.93	0.86	0.83	0.79
LZM...1(-4)-A90...125	TM	1.14	1.07	1	0.93	0.86	0.83	0.79
LZM...1(-4)-A160	TM	1.08	1.04	1	0.96	0.92	0.90	0.88
LZM...2(-4)-A15...200	TM	1.04	1.02	1	0.98	0.96	0.95	0.94
LZM...2(-4)-A250	TM	1.04	1.02	1	0.98	0.96	0.95	0.94
LZM...2(-4)-A20...200 +XSV	TM with XSV	1.04	1.02	1	0.98	0.96	0.95	0.94
LZM...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)						
LZM...1-S40...80	TM	1	0.98	0.95	0.93	0.90	0.89	0.88
LZM...1-S100	TM	1	0.98	0.95	0.93	0.90	0.89	0.88
LZM...2-S20...200	TM	1	0.98	0.96	0.94	0.92	0.91	0.90
LZM...2-S20...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 LZM1-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 LZM1-A100 trips as if it were set to 86 A.

Temperature influence

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)						
LZM...1(-4)-A15...80	TM	1	1	1	1	1	1	1
LZM...1(-4)-A90...125	TM	1	1	1	1	0.86	0.83	0.8
LZM...1(-4)-A160	TM	1	1	1	0.95	0.9	0.85	0.8
LZM...2(-4)-A15...200	TM	1	1	1	1	1	1	1
LZM...2(-4)-A250	TM	1	1	1	1	0.9	0.85	0.8
LZM...2(-4)-A20...200 +XSV	TM with XSV	1	1	1	1	1	1	1
LZM...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)						
LZM...1-S40...80	TM	1	1	1	1	1	1	1
LZM...1-S100	TM	1	1	1	1	0.86	0.83	0.8
LZM...2-S20...200	TM	1	1	1	1	1	1	1
LZM...2-S20...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 LZM2-A250 should be operated at an ambient temperature of 65 °C.
 How high is the permissible rated operational current I_b ?
 At 65 °C the derating coefficient is 0.85, this means $I_b = 250 \text{ A} \times 0.85 = 212.5 \text{ A}$.
 The LZM2-A250 may be operated at an ambient temperature of 65 °C with a maximum $I_b = 212.5 \text{ A}$.

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

Temperature influence

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								
LZM...3(-4)-AE400...500	E	1	1	1	1	1	1	1
LZM...3(-4)-AE550...630	E	1	1	1	1	0.9	0.85	0.8
LZM...3(-4)-AE400 + XAV	E with XAV	1	1	1	1	1	1	1
LZM...3(-4)-AE630 + XAV	E with XAV	0.96	0.92	0.87	0.83	0.78	0.75	0.73
LZM...4(-4)-AE600...1250	E	1	1	1	1	1	1	1
LZM...4(-4)-AE1600	E	1	1	1	1	0.87	0.85	0.82
LZM...4(-4)-AE800...1250 + XAV	E with XAV	1	1	1	1	1	1	1
LZM...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								
LZM...3(-4)-VE400...500	E	1	1	1	1	1	1	1
LZM...3(-4)-VE550...630	E	1	1	1	1	0.9	0.85	0.8
LZM...3(-4)-VE400 + XAV	E with XAV	1	1	1	1	1	1	1
LZM...3(-4)-VE630 + XAV	E with XAV	0.96	0.92	0.87	0.83	0.78	0.75	0.73
LZM...4(-4)-VE600...1250	E	1	1	1	1	1	1	1
LZM...4(-4)-VE1600	E	1	1	1	1	0.87	0.85	0.82
LZM...4(-4)-VE630...1250 + XAV	E with XAV	1	1	1	1	1	1	1
LZM...4(-4)-VE1600 + XAV	E with 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 LZM3-VE630 should be operated at an ambient temperature of 65 °C.

How high is the permissible rated operational current I_o ?

At 65 °C the derating coefficient is 0.85, this means $I_o = 630 \text{ A} \times 0.85 = 535.5 \text{ A}$.

The LZM3-VE630 may be operated at an ambient temperature of 65 °C with a maximum $I_o = 535.5 \text{ A}$.

Circuit-breakers LZM

Technical data

Effective power loss LZM1, LZM2

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

I_n [A]	Fixed mounting				Fixed mounting			
	LZM1-		S...		LZM2-		S...	
	A...				A...			
	P	R	P	R	P	R	P	R
	[W]	[μOhm]	[W]	[μOhm]	[W]	[μOhm]	[W]	[μOhm]
1.2	—	—	—	—	—	—	—	—
1.6	—	—	—	—	—	—	—	—
2	—	—	—	—	—	—	—	—
2.4	—	—	—	—	—	—	—	—
3	—	—	—	—	—	—	—	—
5	—	—	—	—	—	—	—	—
8	—	—	—	—	—	—	—	—
12	—	—	—	—	—	—	—	—
15	—	—	—	—	—	—	—	—
18	—	—	—	—	—	—	—	—
20	9.8	8180	—	—	5.1	4250	5.1	4250
25	8.8	4680	—	—	8	4250	8	4250
26	—	—	—	—	—	—	—	—
30	—	—	—	—	—	—	—	—
32	9.1	3030	—	—	10	3140	10	3140
33	—	—	—	—	—	—	—	—
35	—	—	—	—	—	—	—	—
40	11	2220	13.5	2810	13	2800	13	2800
45	—	—	—	—	—	—	—	—
50	13.5	1760	15	1880	18	2270	18	2270
60	—	—	—	—	—	—	—	—
63	14	1190	16.7	1250	20	1700	20	1700
70	—	—	—	—	—	—	—	—
80	15.5	850	21.1	1085	22	1070	22	1070
90	—	—	—	—	—	—	—	—
100	24	730	25	795	28	855	28	855
110	—	—	—	—	—	—	—	—
125	38	570	—	—	29	589	29	589
150	—	—	—	—	—	—	—	—
160	50	460	—	—	40	427	40	427
175	—	—	—	—	—	—	—	—
200	—	—	—	—	48	332	48	332
225	—	—	—	—	—	—	—	—
250	—	—	—	—	57	310	—	—

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: $P = 3 \times R \times I^2$

Effective power loss LZM1, LZM2

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

Fixed mounting	Supplementary	Fixed mounting	Supplementary	Fixed mounting	Supplementary
LZM2-	Plug-in units	LZM3	Withdrawable units	LZM4	Withdrawable units
R	R	R	R	R	R
[μOhm]	[μOhm]	[μOhm]	[μOhm]	[μOhm]	[μOhm]
275	100	100	70	37	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: $P = 3 \times R \times I^2$

Circuit-breakers LZM

Technical data

Terminal capacities LZM

				LZM1 160 A	/n ¹⁾ A	LZM2 250 A	/n ¹⁾ A
Terminal capacities							
Standard equipment				Box terminal		Screw terminal	
Accessories				Screw connection Tunnel terminal Connection on rear		Box terminal Tunnel terminal Connection on rear	
Rated power of coil							
Box terminal	Solid		mm ²	1 × (10 – 16) 2 × (6 – 16)	160	1 × (4 – 16) 2 × (4 – 16)	250
	Stranded		mm ²	1 × (25 – 70) 2 × 25	160	1 × (25 – 185) 2 × (25 – 70)	250
Tunnel terminal	Solid		mm ²	1 × 16	160	1 × 16	250
	Stranded	Single hole	mm ²	1 × (25 – 95)	160	1 × (25 – 185)	250
		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) 2 × (6 – 16)	160	1 × (4 – 16) 2 × (4 – 16)	250
	Stranded		mm ²	1 × (25 – 70) ³⁾ 2 × 25	160	1 × (25 – 185) 2 × (25 – 70)	250
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				
Al conductors, Al cable							
Tunnel terminal	Solid		mm ²	1 × 16	160	1 × 16	250
	Stranded	Single hole	mm ²	1 × (25 – 95)	160	1 × (25 – 185) ²⁾	250
		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) 2 × (10 – 16)	160	1 × (10 – 16) 2 × (10 – 16)	250
	Stranded		mm ²	1 × (25 – 35) 2 × (25 – 35)	160	1 × (25 – 50) 2 × (25 – 50)	250
Module plate	Single hole	min.	mm ²	–	–	–	–
	Single hole	max.	mm ²	–	–	–	–
Module plate	Double hole		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
		max.	mm	9 × 9 × 0.8	160	10 × 16 × 0.8	250
Flat conductor terminal		min.	mm				
		max.	mm				
Module plate	Single hole		mm	–	–	–	–
Bolt terminal and rear-side connection							
Flat copper strip, with holes		min.	mm			2 × 16 × 0.8	250
Flat copper strip, with holes		max.	mm			10 × 16 × 0.8	250
Connection width extension			mm ²	–	–	–	–
Copper busbar (width × thickness)							
Bolt terminal and rear-side connection							
Screw connection				M6		M8	
Direct on the switch		min.	mm	12 × 5	160	16 × 5	250
		max.	mm	16 × 5	160	20 × 5	250
Module plate	Single hole	min.	mm	–	–	–	–
		max.	mm	–	–	–	–
Module plate	Double hole		mm	–	–	–	–
Connection width extension		min.	mm	–	–	–	–
		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.

LZW3 630 A	/n ¹⁾ A	LZW4 1600 A	/n ¹⁾ A
Screw terminal		Screw terminal	
Box terminal		Tunnel terminal	
Tunnel terminal		Connection on rear	
Connection on rear		Strip terminal	
2 × 16	500		
1 × (35 – 240)	500		
2 × (25 – 120)			
1 × (25 – 185)	350		
1 × (50 – 240)	630	–	–
2 × (50 – 240)	2 × 185		
–	–	4 × (50 – 240)	1400
1 × 16	630		
2 × 16	2 × 185		
1 × (25 – 240)	630	1 × (120 ... 16)	1250
2 × (25 – 240)	2 × 185	4 × (50 ... 185)	
–	–	1 × (120 – 300)	1000
–	–	2 × (95 – 300)	
–	–	2 × (95 – 185)	1400
–	–	4 × (35 – 185)	
2 × 300	630	4 × 300	1600
	2 × 185	6 × (95 – 240)	4 × 240
1 × 16	350	–	–
1 × (25 – 185) ²⁾	350	–	–
1 × (50 – 240)	630	–	–
2 × (50 – 240)			
–	–	4 × (50 – 240)	1400
1 × 16	400	–	–
2 × (10 – 16)			
1 × (25 – 120)	400	–	–
2 × (25 – 120)			
–	–	1 × (185 – 240)	pleaes inquire
–	–	2 × (70 – 185)	pleaes inquire
–	–	4 × 50	–
		2 × 240	pleaes inquire
		6 × (70 – 240)	
6 × 16 × 0.8	630	–	–
10 × 24 × 1.0	630	–	–
+ 5 × 24 × 1.0			
(2 ×) 8 × 24 × 1.0		6 × 16 × 0.8	1100
		(2 ×) 10 × 32 × 1.0	
–	–	(2 ×) 10 × 50 × 1.0	1250
			(2 ×) 10 × 40 × 1.0
6 × 16 × 0.8	630	(2 ×) 10 × 50 × 1.0	1600
10 × 32 × 1.0	630	(2 ×) 10 × 50 × 1.0	1600
+ 5 × 32 × 1.0			
(2 ×) 10 × 50 × 1.0	630	(2 ×) 10 × 80 × 1.0	1600
			2 × (10 × 50 × 1.0)
M10		M10	
20 × 5	630	25 × 5	1600
30 × 10	630	2 × (50 × 10)	2000
+ 30 × 5		2 × (80 × 10)	
–	–	25 × 5	1250
–	–	2 × (50 × 10)	2 × (40 × 10)
–	–	2 × (50 × 10)	1500
–	630	60 × 10	1600
2 × (10 × 50)	10 × 40	2 × (80 × 10)	2 × (50 × 10)

Circuit-breakers LZM

Technical data

Auxiliary contacts M22-K..., XHI(V)

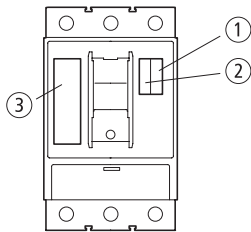
			at AC = 50/60 Hz	M22-K...	NZM-XHIV	NZM-XHI
Auxiliary contacts						
Rated operational voltage						
AC		U_e	V AC	500	500	500
DC		U_e	V DC	220	220	220
Conventional thermal current						
		$I_{th} = I_e$	A	4	4	4
Rated operational current						
AC-15	115 V	I_e	A	4	4	4
	230 V	I_e	A	4	4	4
	400 V	I_e	A	2	2	2
	500 V	I_e	A	1	1	1
DC-13	24 V	I_e	A	3	3	3
	42 V	I_e	A	1.7	1.5	—
	60 V	I_e	A	1.2	0.8	1.2
	110 V	I_e	A	0.8	0.5	0.5
	220 V	I_e	A	0.3	0.2	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		LZM1: approx. 20 LZM2: approx. 20 LZM3: approx. 20 LZM4: approx. 90 With LZM4/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)

Equipping with auxiliary contacts, time differences LZW...

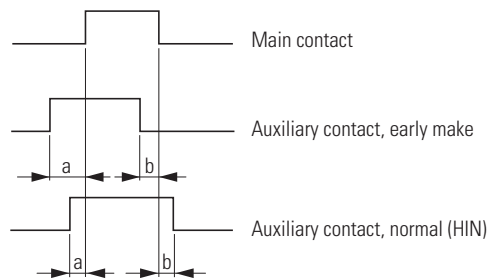
Maximum equipment and position of the internal accessories

	③ -XHIV(2S) or -XA or -XU	② HIA	① HIN	Contacts per slot with HIA and HIN
LZM1	1	1	1	1 N/O
LZM2	1	1	2	1 N/C
LZM3	1	1	3	2 N/O
LZM4	1	2	3	2 N/C

N/O = normally open contact
N/C = normally closed contact



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
LZM1	20 ²⁾	0	2.5	—	—	—	20 ²⁾	0	2.5	—	—	—
LZM2	20 ²⁾	3.5	6.5	Not permissible	2.5	4.5	20 ²⁾	3	4.5	Not permissible	3	4
LZM3	20 ²⁾	4	8	Not permissible	2	4	20 ²⁾	3.5	8	Not permissible	3	6.5
LZM4	90 ²⁾	7	11	Not permissible	on request	on request	0 ¹⁾²⁾	12	15	Not permissible	on request	on request

Notes
¹⁾ With LZM4/N(S)4 the HIV does
²⁾ Minimum value, as it is dependent on the switching speed

Circuit-breakers L2M

Technical data

Undervoltage releases NZM...-XU

			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)

Undervoltage releases, off-delayed UVU-NZM

			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 $\geq$ 35V		s	To 8
Terminal capacities			
Solid or flexible conductor with ferrule		mm ²	1 × (0.5 – 2.5) 2 × (0.5 – 1.5)

Shunt releases NZM...-XA...

			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)

Capacitor units NZM-XCM

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)	

Remote operator NZM...-XR...

		NZM2-XR...		NZM3-XR...	NZM4-XR...
Remote operator					
Rated control voltage					
AC		U_s V AC	110...440	110...440	110...440
DC		U_s V DC	24...250	24...250	24...250
Operating range					
AC		U_s	0.85...1.1	0.85...1.1	0.85...1.1
DC		U_s	0.85...1.1	0.85...1.1	0.85...1.1
Motor rating					
AC	110 ... 130 V AC	VA	350	350	350
	208 ... 240 V AC	VA	350	350	350
	380 ... 440 V AC	VA	350	350	350
DC	24 ... 30 V DC	W	250	250	250
	110 ... 130 V DC	W	250	250	250
	220 ... 250 V DC	W	250	250	250
Rated power of coil					
AC	110 ... 130 V AC	VA	270	270	270
	208 ... 240 V AC	VA	270	270	270
	380 V ... 440 V AC	VA	270	270	270
DC	24 ... 30 V DC	W	210	210	210
	100 ... 130 V DC	W	210	210	210
	220 ... 250 V DC	W	210	210	210
Total make time		ms	60	80	100
Total opening delay		ms	300	1000	3000
Minimum signal duration					
with switch on		ms	30	30	30
with switch off		ms	150	250	500
Lifespan, mechanical		Operations	20000	15000	10000
Maximum operating frequency		Ops./h	120	60	20
Terminal capacities					
Solid or flexible conductor with ferrule		mm ²	0.75 ... 2.5	0.75 ... 2.5	0.75 ... 2.5
		AWG	18 ... 14	18 ... 14	18 ... 14

Residual-current relay PFR-...

			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 _{Δn}	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 _{Δn} 1 = 50% – 75% I _{Δn} 2 = 75% – 100% I _{Δn}
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		

Circuit-breakers LZM

Technical data

Residual-current releases NZM...-XFI...

			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			In three- and single-phase systems			In single-phase
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 shock resistance (IEC 60068-2-27)			20 (half-sinusoidal shock 20 ms)			
Lifespan, mechanical (50 % with fault current)	Operations		20000	20000	20000	20000
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			LZM1 from above	LZM1 from above	LZM1 from above	LZM1 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	mm²		such as LZM1 standard terminal			
flexible with ferrules	mm²		such as LZM1 standard terminal			

NZM1(-4)-XFI300U	NZM1(-4)-XFIU	+NZM2-4-XFI30	+NZM2-4-XFI	+NZM2-4-XFIA30	+NZM2-4-XFIA
IEC/EN 60947-2	IEC/EN 60947-2	IEC/EN 60947-2	IEC/EN 60947-2	IEC/EN 60947-2	IEC/EN 60947-2
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)
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)
In single-phase		In three- and single-phase systems			
200...415 (3~)	200...415 (3~)	280...690	280...690	50...400 (3~)	50...400 (3~)
50/60	50/60	50/60	50/60	50/60	50/60
3/4	3/4	4	4	4 pole	4 pole
15...100	15...100	15...250	15...250	15...250	15...250
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
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
= I_{CU}	= I_{CU}	= I_{CU}	= I_{CU}	= I_{CU}	= I_{CU}
$\geq 0.3 \times I_{\Delta n}$	$\geq 0.3 \times I_{\Delta n}$	–	–	–	–
20 (half-sinusoidal shock 20 ms)					
20000	20000	≥ 2000	≥ 2000	≥ 2000	≥ 2000
45	45	96	96	96	96
Bottom	Bottom	Bottom	Bottom	Bottom	Bottom
Vertical and 90° in all directions					
LZM1 from above	LZM1 from above	As required	As required	Bottom	Bottom
IP20 in the operating component area					
–5...+40	–5...+40	–25...+70	–25...+70	–25...+70	–25...+70
	yes, setting buttons			yes, setting buttons	yes, setting buttons
such as LZM1 standard terminal		with LZM2 standard connection			
such as LZM1 standard terminal		with LZM2 standard connection			

Circuit-breakers LZM

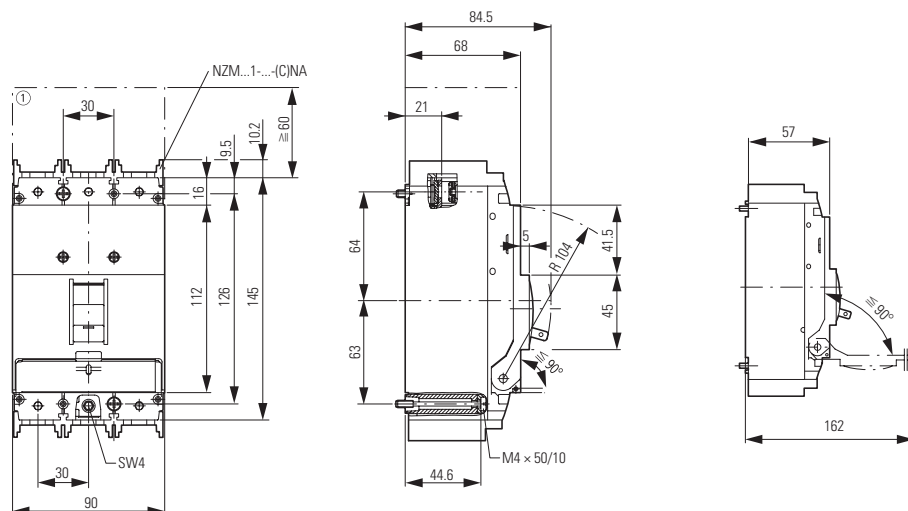
Dimensions

Size 1: basic units LZM1

Circuit-breaker

3 pole

LZMB1
LZMC1
LZMN1
LZMS1

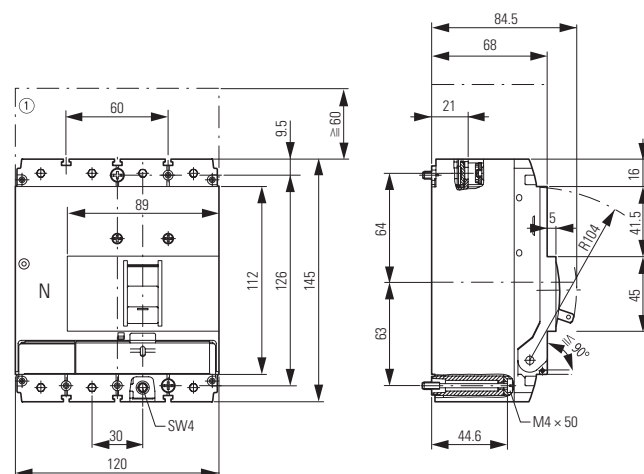


① Blow out area, minimum clearance to other parts ≥ 60 mm

Circuit-breaker

4 pole

LZMB1-4
LZMC1-4
LZMN1-4
LZMH1-4



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

Covers

NZM1(-4)-XKSA

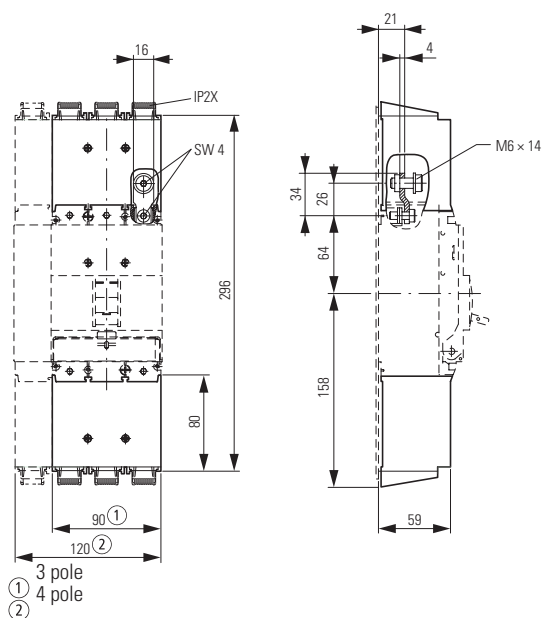
Screw connection

NZM1(-4)-XKS

IP2X protection against contact with a finger for shroud

NZM1(-4)-XIPA

Screw connection

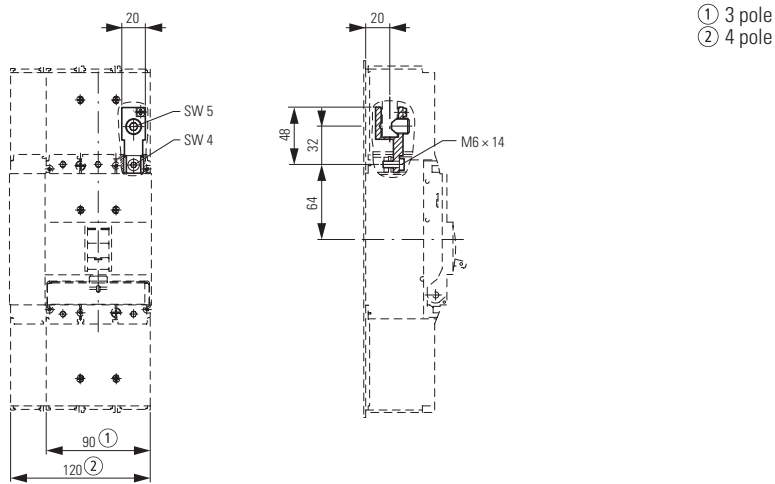


① 3 pole
② 4 pole

Size 1: accessories NZM1...-XK..., NZM1...XIPK, NZM-XSTK

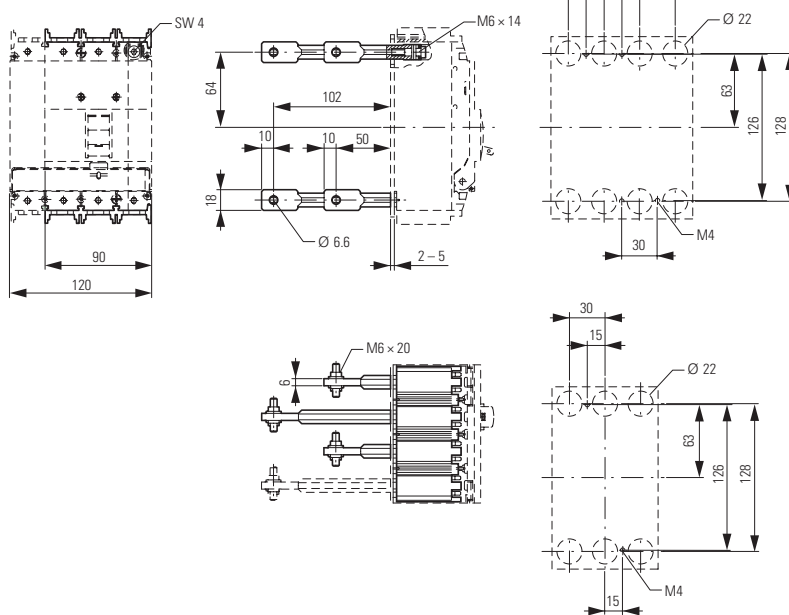
Tunnel terminal

NZM1(-4)-XKA



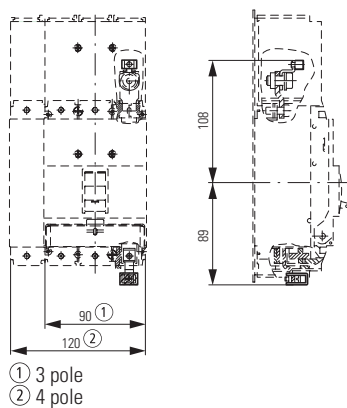
Connection on rear

NZM1(4)-XKR



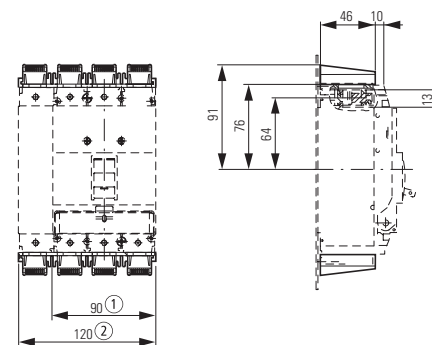
Control circuit terminal

NZM1-XIPK, NZM-XSTK



IP2X protection against contact with a finger

NZM1(-4)-XIPK



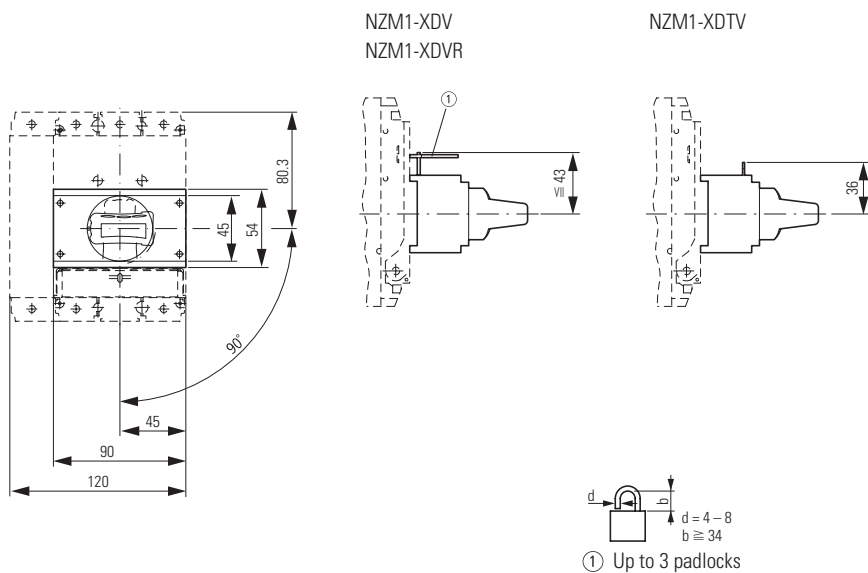
Circuit-breakers LZM

Dimensions

Size 1: accessories NZM1-XDV..., NZM1-XTVD...

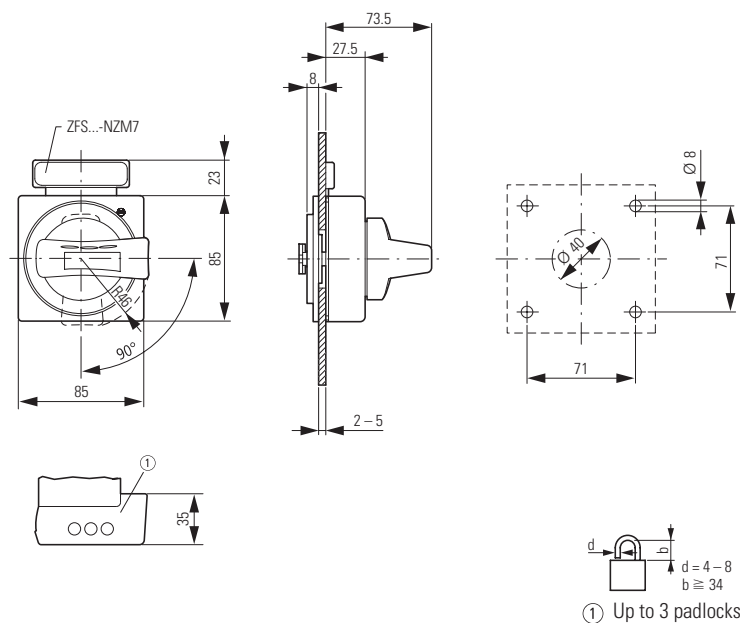
Rotary drive

Rotary handle on circuit-breaker



Door coupling rotary handle

NZM1-XTVD(V)(R)

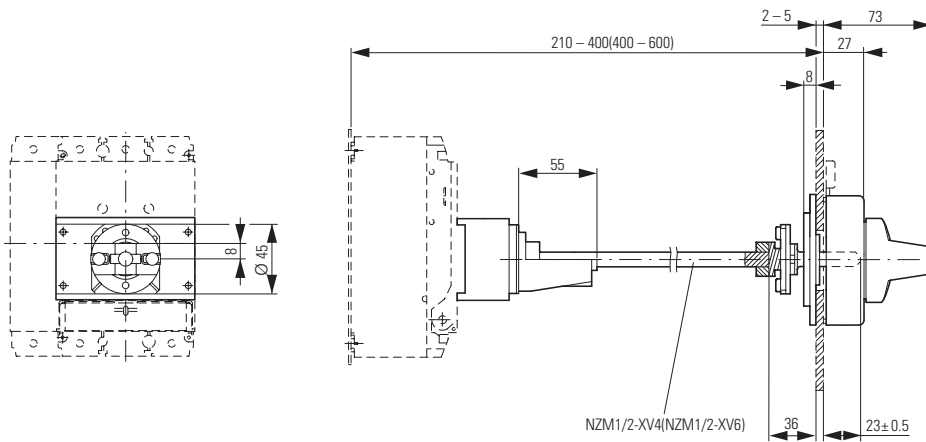


Size 1: accessories NZM1-XTVD...

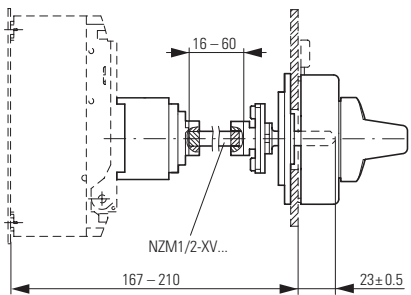
Door coupling rotary handle with extension shaft

NZM1-XTVD(V)(R)

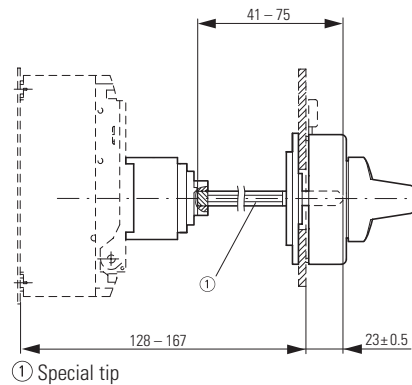
NZM1/2-XV4(6)



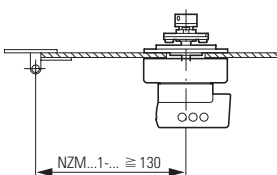
NZM1-XTVD(V)(R)-60



NZM1-XTVD(V)(R)-0



Minimum door coupling rotary handle clearance from door pivot point



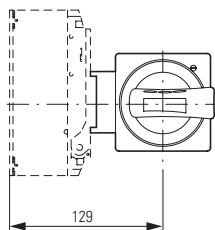
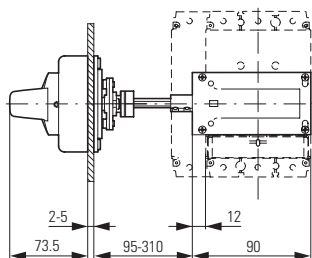
Circuit-breakers LZM

Dimensions

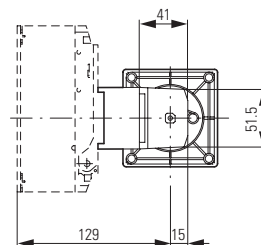
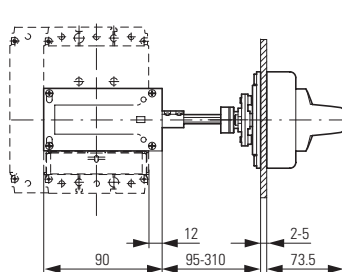
Size 1: accessories NZM1-XS, NZM1...HIV

Main switch assembly kit for side panel mounting

NZM1-XS(R)-L

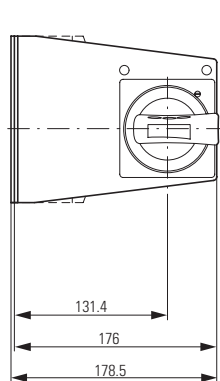
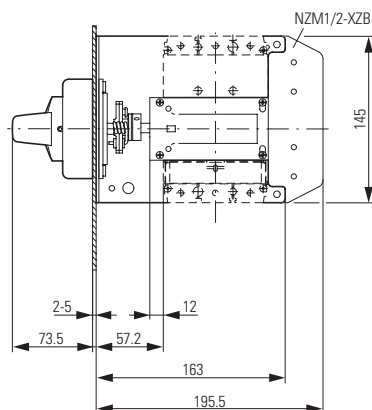


NZM1-XS(R)-R

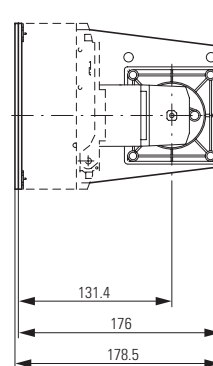
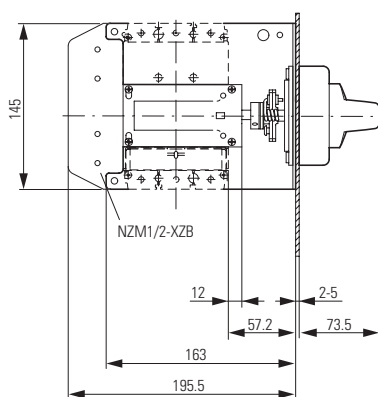


Main switch assembly kit for side panel mounting with mounting bracket

NZM1-XS(R)M-L



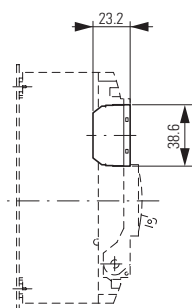
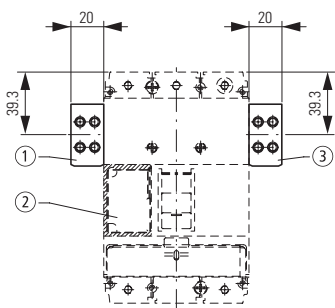
NZM1-XS(R)M-R



Undervoltage release

Shunt release

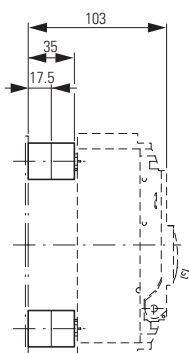
Early-make auxiliary contacts



- 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

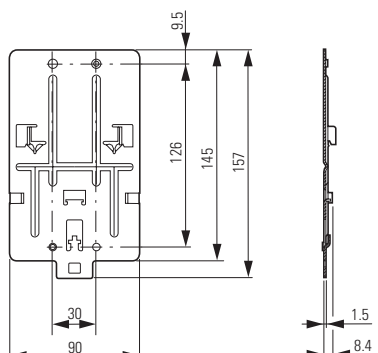
Spacers

NZM1/2-XAB



Clip plate

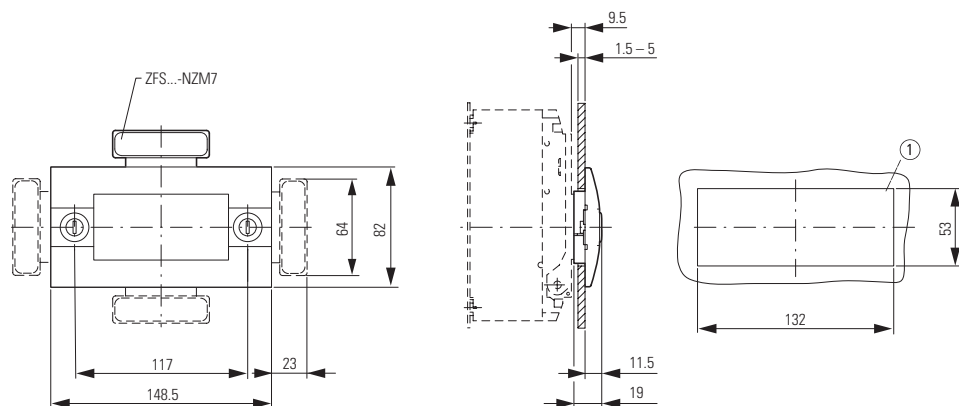
NZM1-XC35



Size 1: accessories NZM...-X...

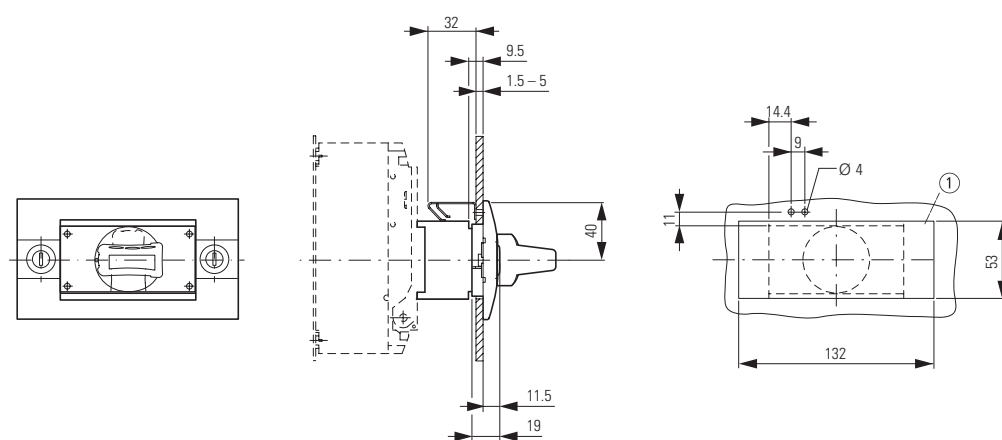
Insulating surrounds

NZM1-XBR



Rotary handle on switch with door interlock

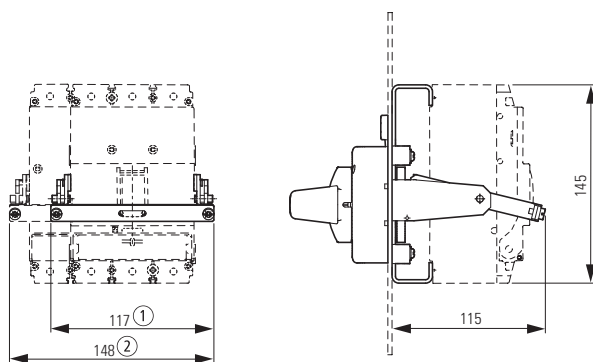
NZM1-XDTV(R)



Rear drive

NZM1-XRAV(R)

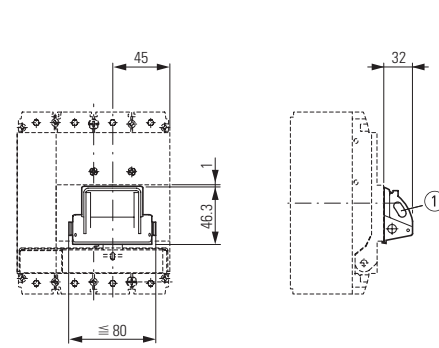
NZM1-4-XRAV(R)



- ① NZM1-XRAV(R)
- ② NZM1-4-XRAV(R)

Toggle lever locking device

NZM-XKAV



- ① Up to 3 padlocks

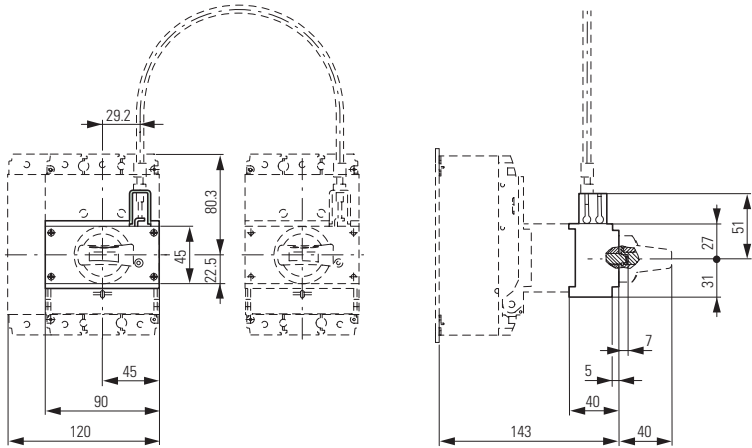
Circuit-breakers LZM

Dimensions

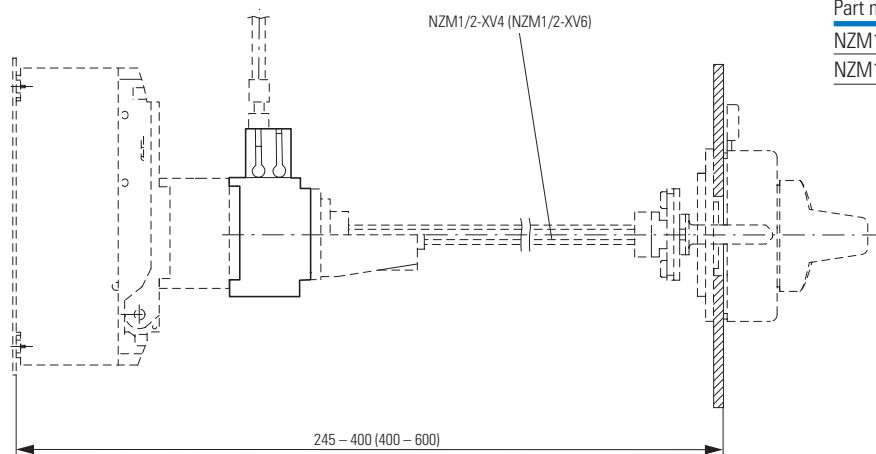
Size 1: accessories NZM1-XMV, NZM1-XTV...

Mechanical interlock

NZM1-XMV + NZM1-XDV(R)

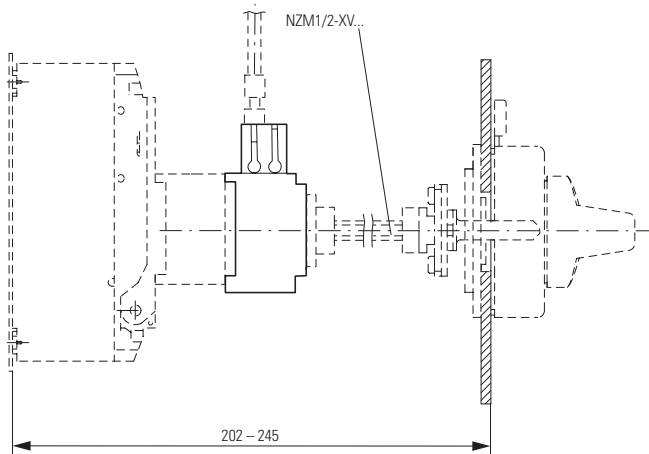


NZM1-XMV + NZM1-XTVD(V)(R)

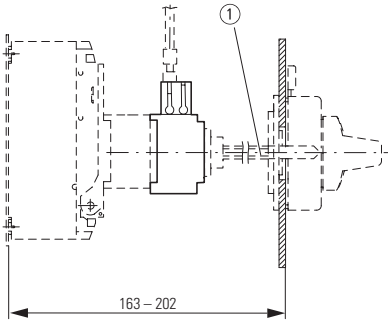


Part no.	x
NZM1/2-XV4	245 – 400
NZM1/2-XV6	400 – 600

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



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

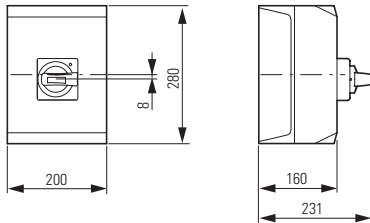


① Special tip

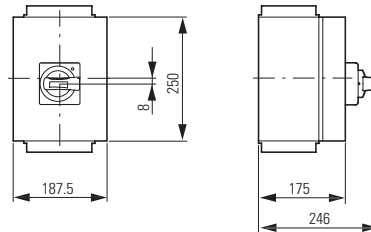
Size 1: accessories NZM1-XCI..., NZM1-XAD

Insulated enclosures

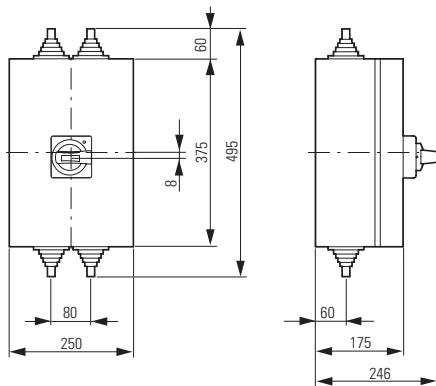
NZM1-XCIK5-T...



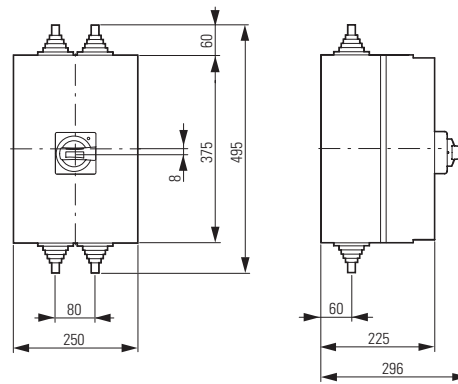
NZM1-XCI23-T...



NZM1-XCI43-T...

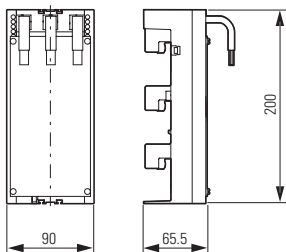


NZM1-XCI43/2-T...



Component adapter

NZM1-XAD160



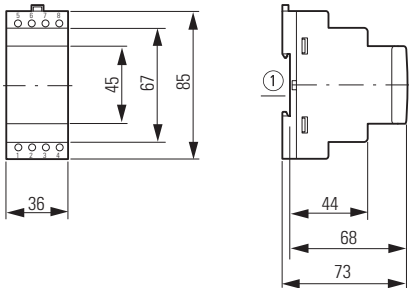
Circuit-breakers LZM

Dimensions

Size 1: accessories NZM1...-XFI..., PFR-...

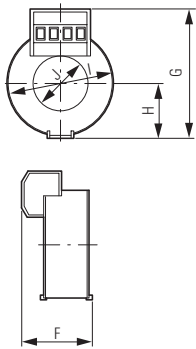
Residual-current relay

PFR-003
PFR-03
PFR-5

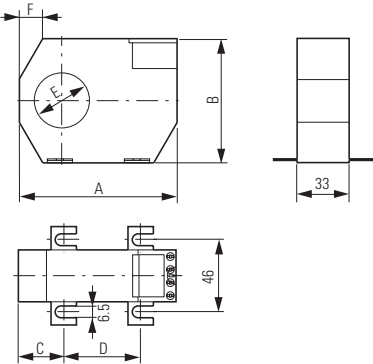


Current transformer

PFR-W-20...30



PFR-W-35...210

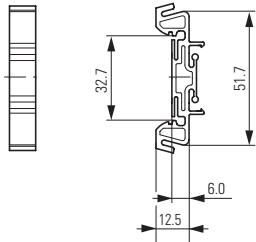


Part no.	A	B	C	D	E	F
PFR-W-35	100	79	26	48.5	35	35
PFR-W-70	130	110	32	66	70	52
PFR-W-105	170	146	38	94	105	72
PFR-W-140	220	196	48.5	123	140	97
PFR-W-210	299	284	69	161	210	141

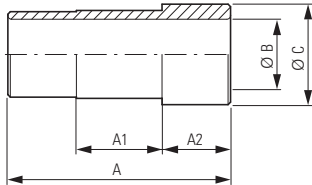
Part no.	F	G	H	I	J
PFR-W-20	32	60	24	46	21
PFR-W-30	32	70	30	59	30

Fixing clip

PFR-WC



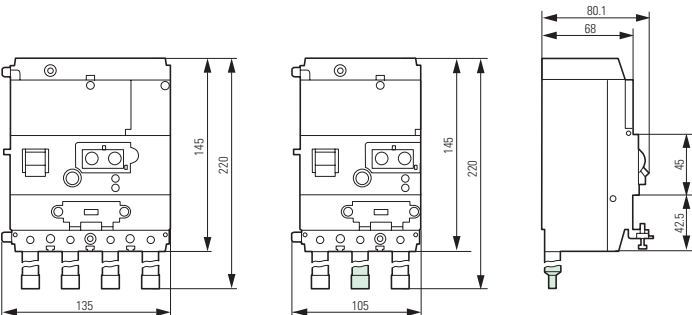
PFR-WMA



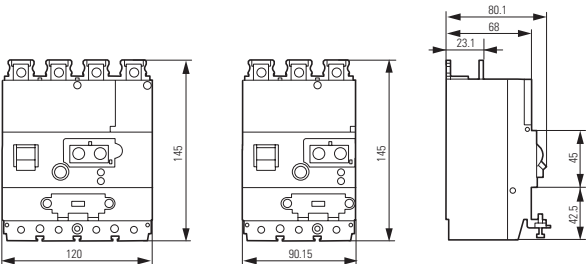
Part no.	A	ØB	ØC	A1	A2
PFR-WMA-35	91	28	40	35	28
PFR-WMA-70	105	62	75	35	35
PFR-WMA-105	153	98	110	35	60
PFR-WMA-140	153	133	145	35	60
PFR-WMA-210	153	203	215	35	60

Residual-current release

NZM1(-4)-XFI...R



NZM1(-4)-XFI...U



Circuit-breakers LZM

Dimensions

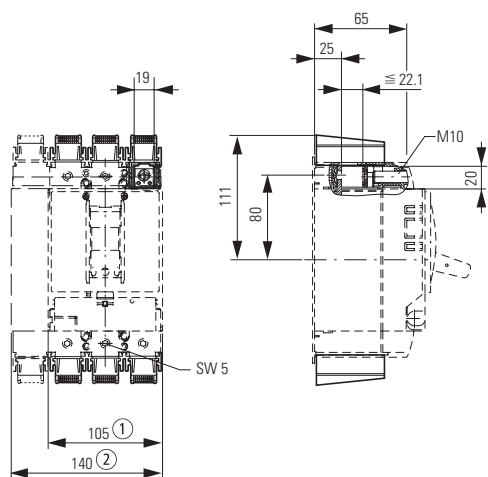
Size 2: accessories NZM2...-XK..., NZM2...-XIP..., NZM2-XST...

Box terminal

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

IP2X protection against contact with a finger

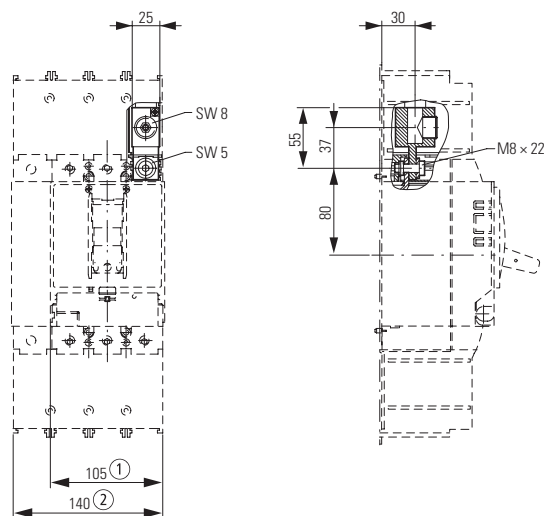
NZM2(-4)-XIPK



- ① 3 pole
- ② 4 pole

Tunnel terminal

NZM2(-4)-XKA



Covers

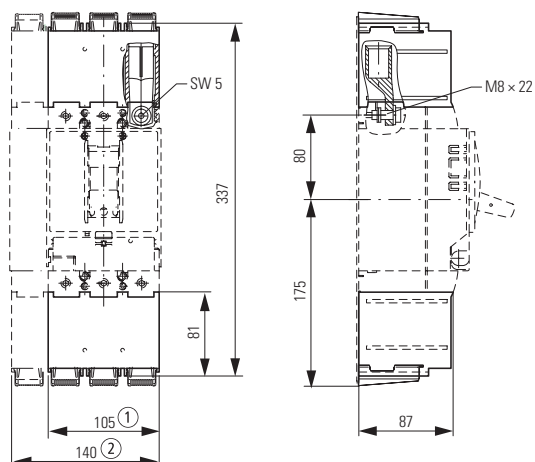
NZM2(-4)-XKSA

Cable lug

NZM2-XKS185

IP2X protection against contact with a finger for shroud

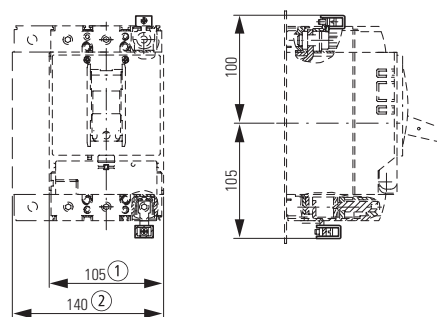
NZM2(-4)-XIPA



Control circuit terminal

NZM2-XSTS

NZM-XSTK

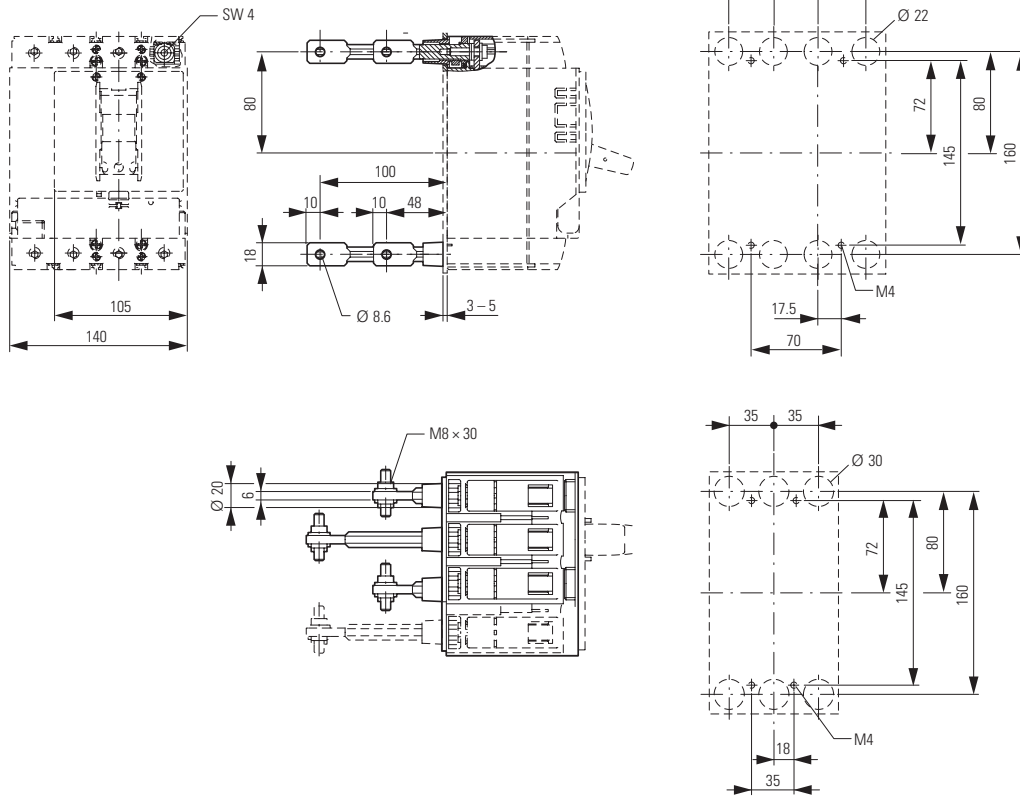


- ① 3 pole
- ② 4 pole

Size 2: accessories NZM2...-XKR..., NZM2-XDV..., NZM2-XDTV...

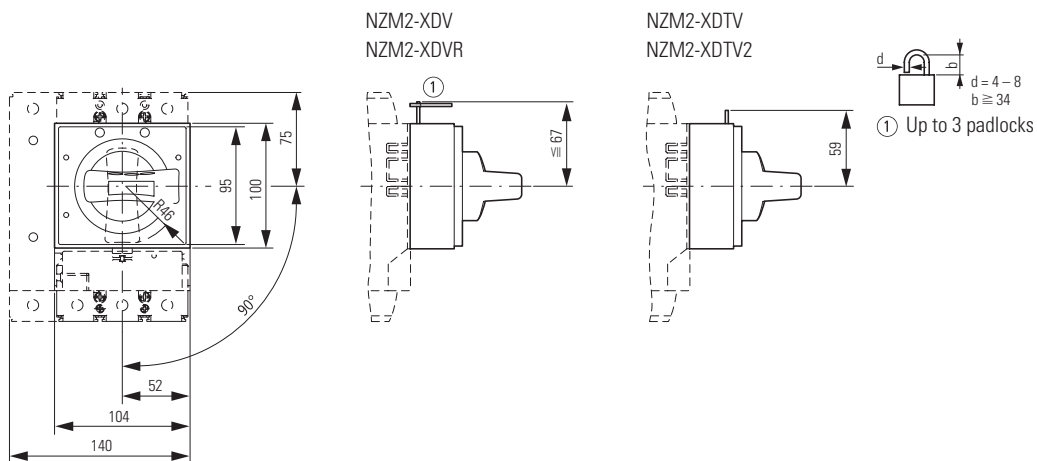
Connection on rear

(+)NZM2(-4)-XKR(O)(U)



Rotary drive

Rotary handle on circuit-breaker



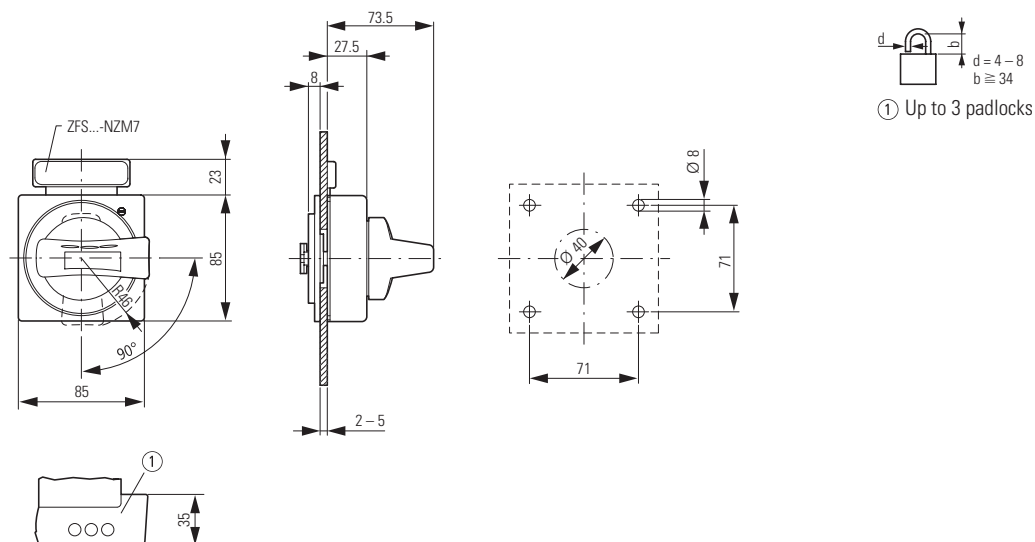
Circuit-breakers LZM

Dimensions

Size 2: accessories NZM2-XTV..., NZM1/2-XV4(6)

Door coupling rotary handle

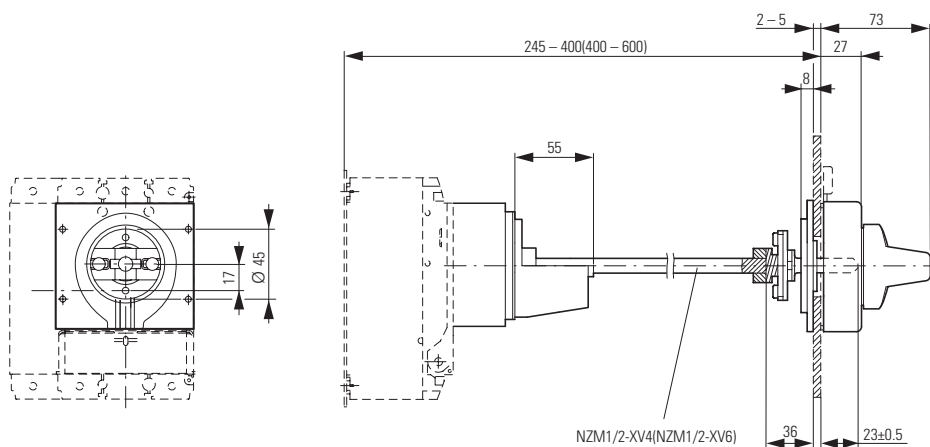
NZM2-XTVD(V)(R)...



Door coupling rotary handle with extension shaft

NZM2-XTVD(V)(R)

NZM1/2-XV4(6)



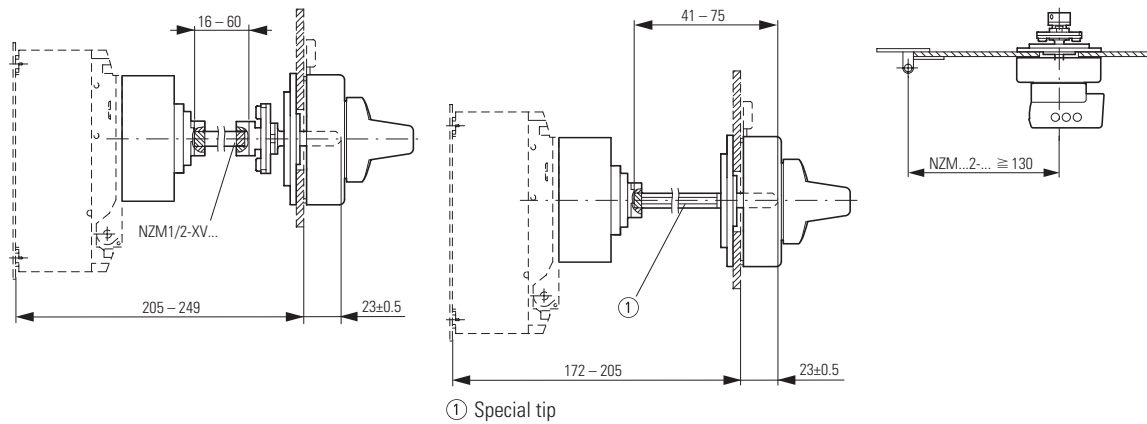
Size 2: accessories NZM2-XTVD..., NZM2-XS...

Door coupling rotary handle with extension shaft

NZM2-XTVD(V)(R)-60

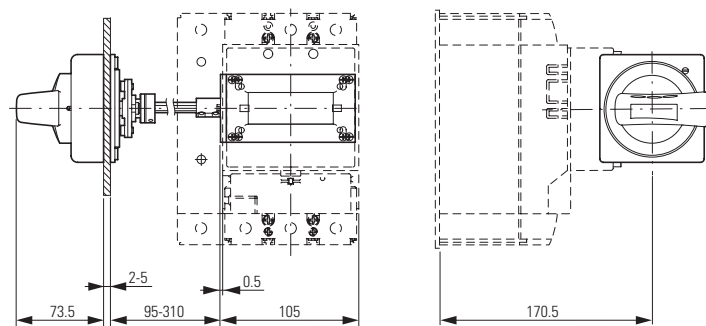
NZM2-XTVD(V)(R)-0

Minimum door coupling rotary handle clearance from door pivot point

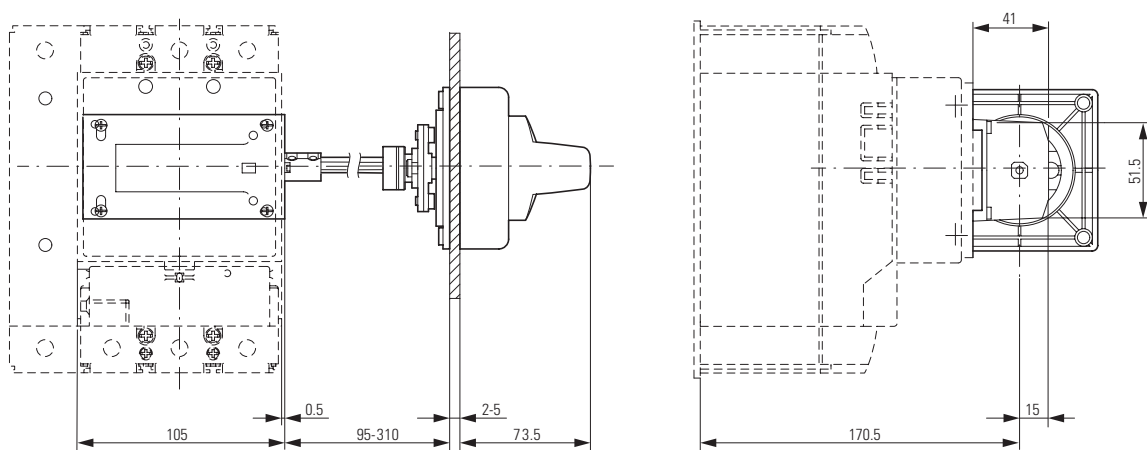


Main switch assembly kit for side panel mounting

NZM2-XS(R)-L



NZM2-XS(R)-R



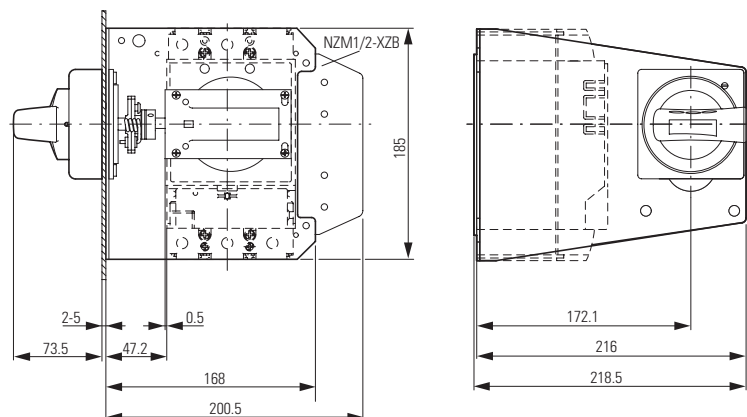
Circuit-breakers LZM

Dimensions

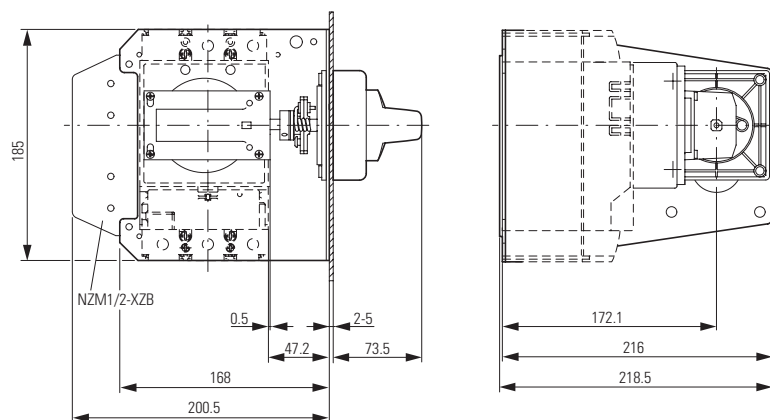
Size 2: accessories NZM2-XS..., NZM2...-XRAV...

Main switch assembly kit for side panel mounting with mounting bracket

NZM2-XS(R)M-L

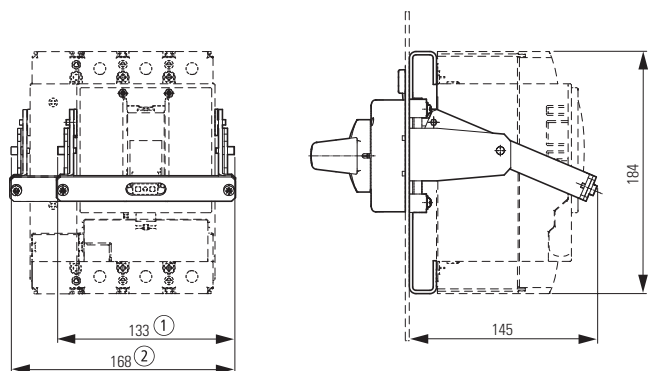


NZM2-XS(R)M-R



Rear drive

NZM2-XRAV

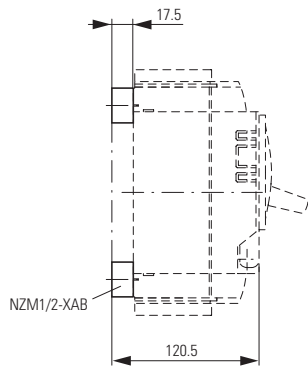


- ① NZM2-XRAV(R)
- ② NZM2-4-XRAV(R)

Size 2: accessories NZM...-XAB, NZM2-XBR, NZM2-XDTV...

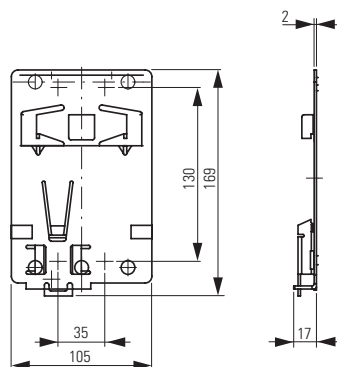
Spacers

NZM1/2-XAB



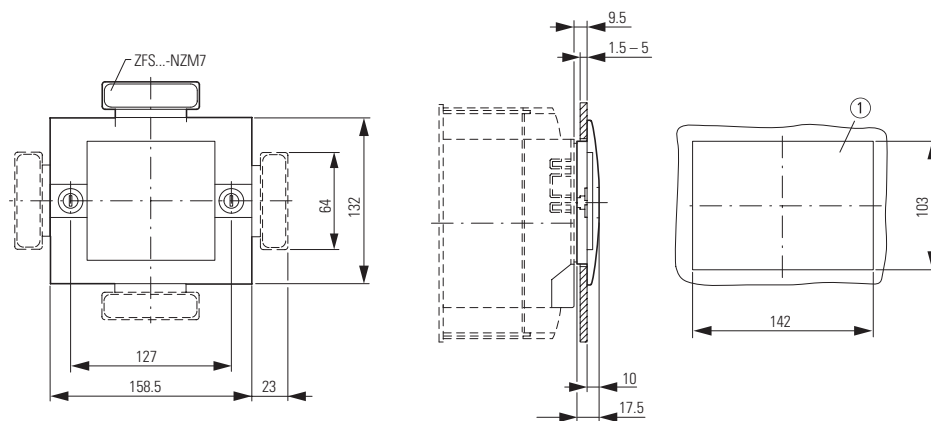
Clip plate

NZM2-XC75



Insulating surrounds

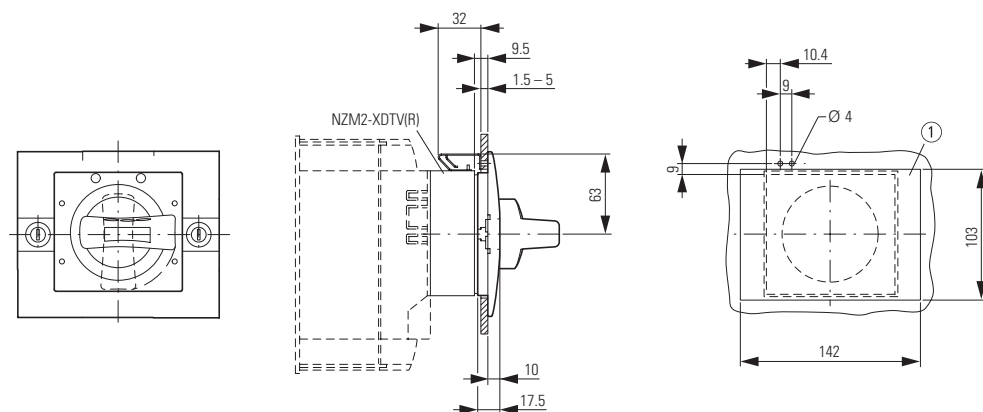
NZM2-XBR



① Mounting aperture

Rotary handle on switch with door interlock

NZM2-XDTV(R)



① Mounting aperture

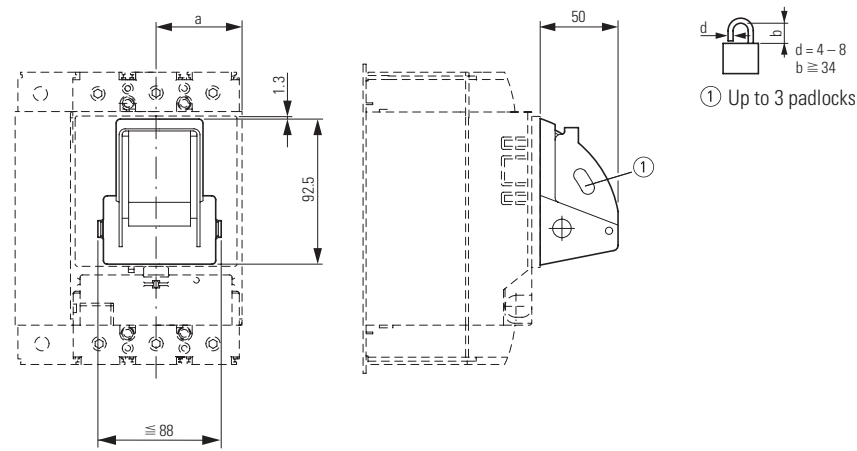
Circuit-breakers LZM

Dimensions

Size 2: accessories NZM2...-XKAV

Toggle lever locking device

NZM2/3-XKAV

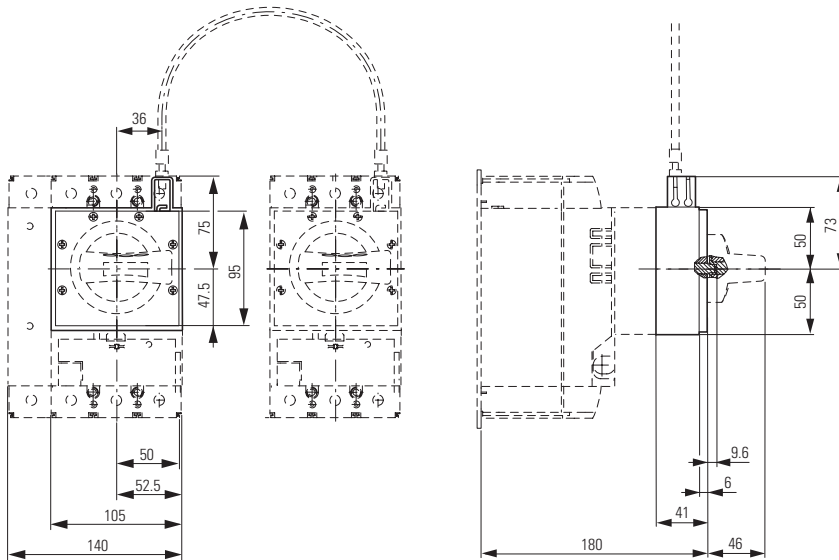


Part no.	a
LZM2	52.5
LZM3	70

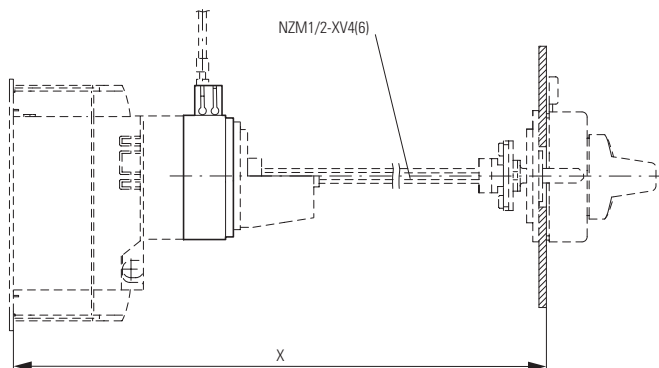
Size 2: accessories NZM2-XMV, NZM2-XTVD..., NZM2-XD

Mechanical interlock

NZM2-XMV + NZM2-XD

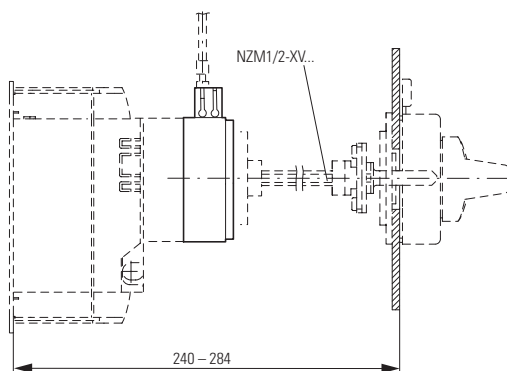


NZM2-XMV + NZM2-XTVD(V)(R)

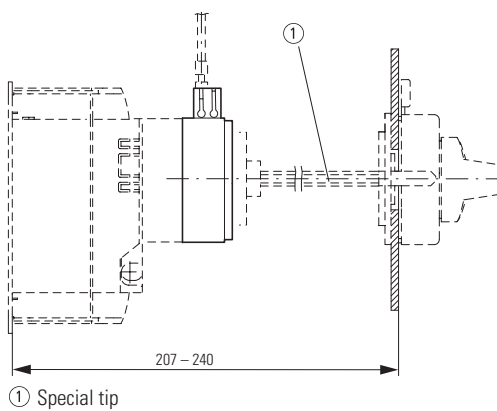


Mechanical interlock

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



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



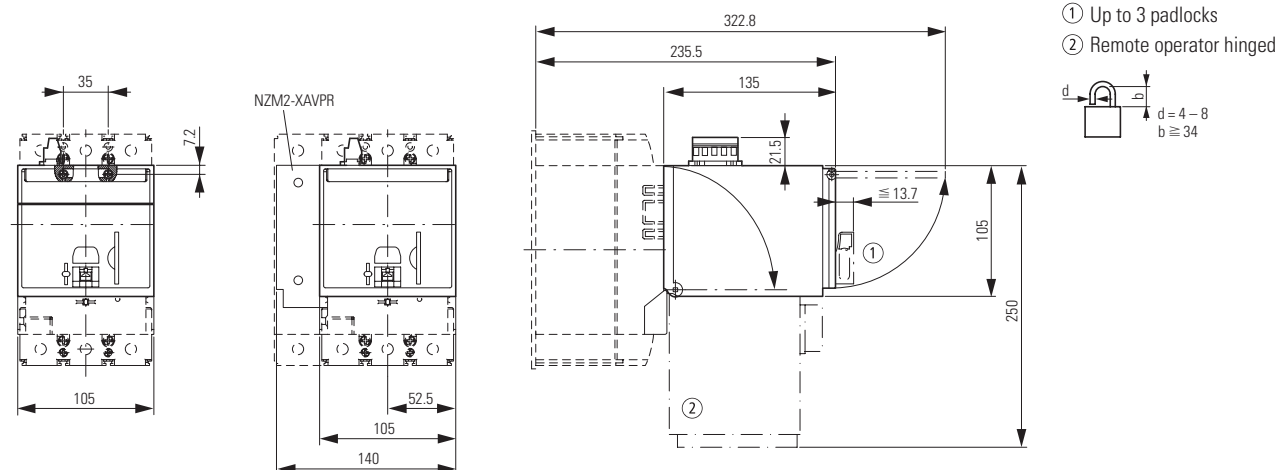
Circuit-breakers LZM

Dimensions

Size 2: accessories NZM2-XR...

Remote operator

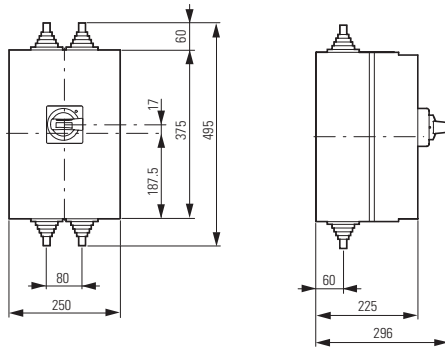
NZM2-XR...



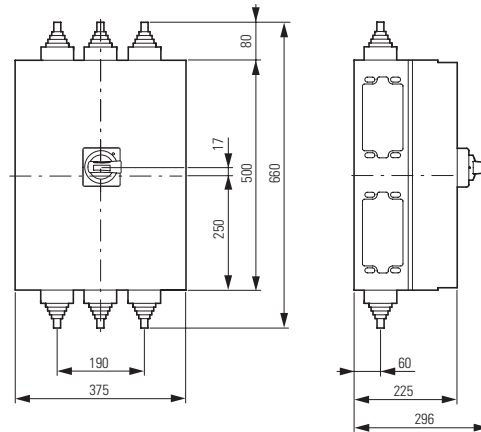
Size 2: accessories NZM2-XCI..., NZM2-XAD, NZM2...-XSV

Insulated enclosures

NZM2-XCI43-T...

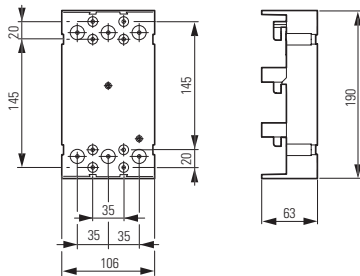


NZM2-XCI45-T...



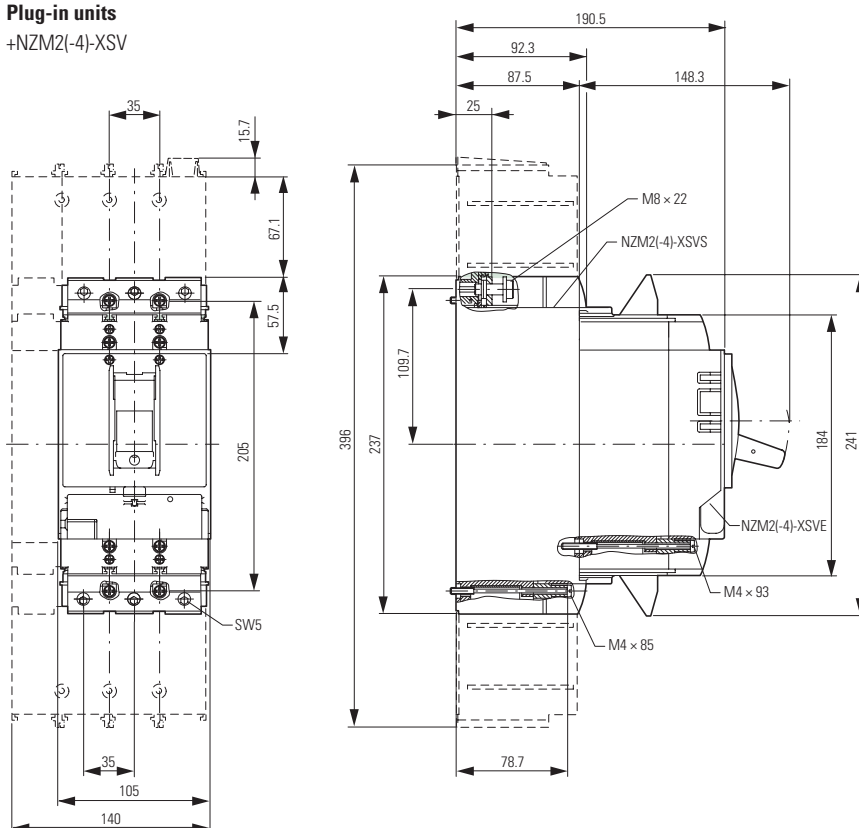
Component adapter

NZM2-XAD250



Plug-in units

+NZM2(-4)-XSV



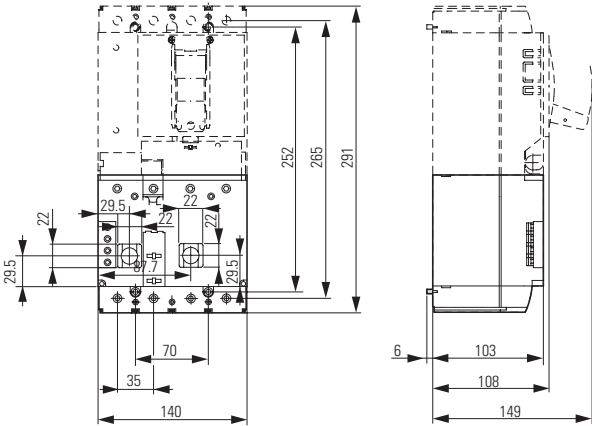
Circuit-breakers L2M

Dimensions

Size 2: accessories NZM2(-4)-XFI, NZM-XDMI..., UVU-NZM

Residual-current release

NZM2(-4)-XFI...

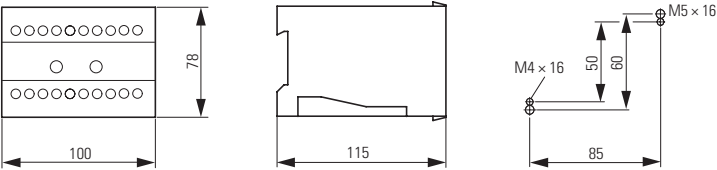


Undervoltage releases, off-delayed

UVU-NZM

Capacitor unit

NZM-XCM



Size 3: Basic units L2M3

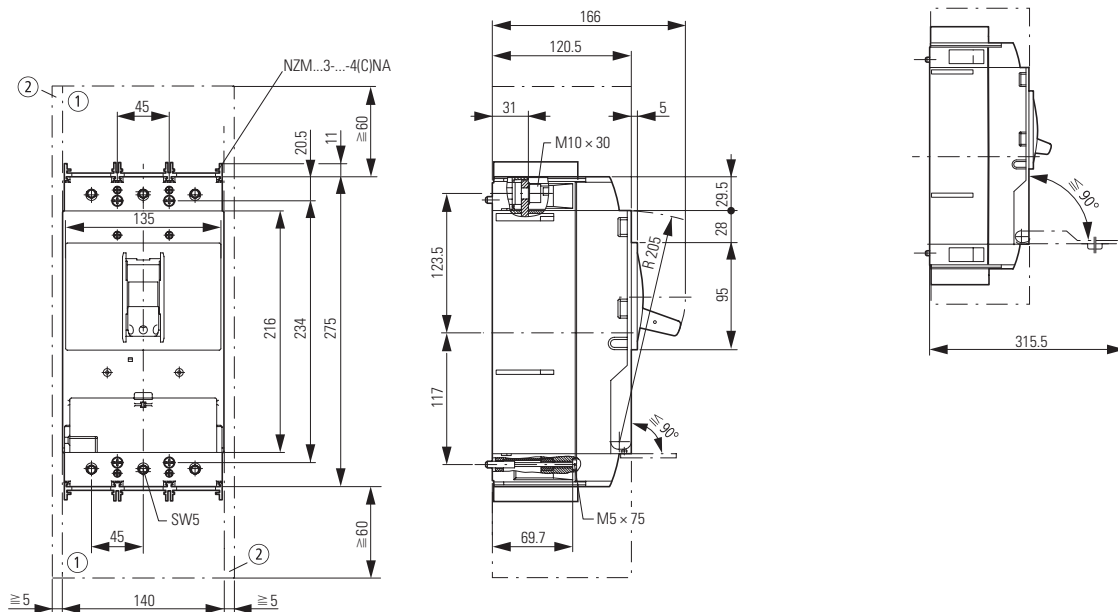
Circuit-breaker

3 pole

L2MC3

L2MN3

L2MS3



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

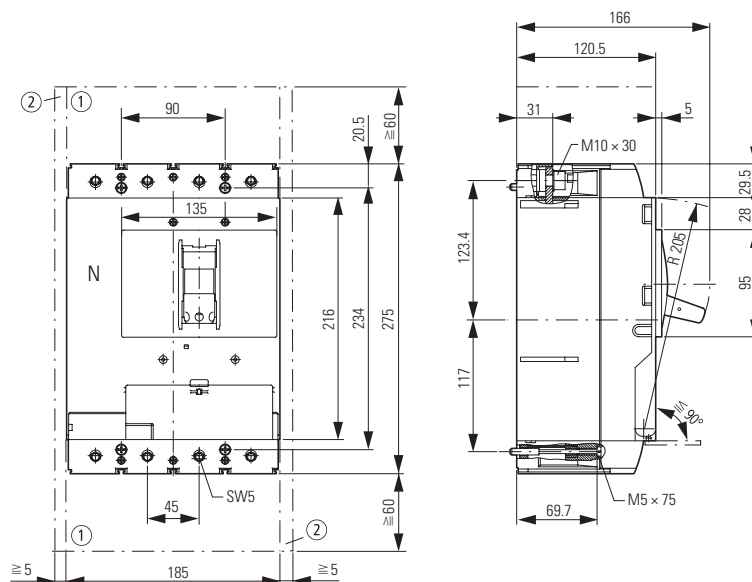
Circuit-breaker

4 pole

L2MC3-4

L2MN3-4

L2MS3-4



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

Circuit-breakers LZM

Dimensions

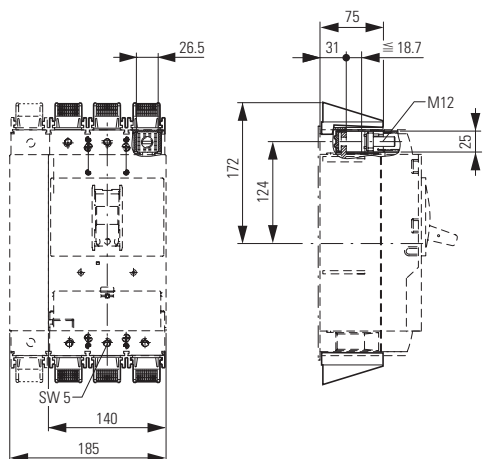
Size 3: accessories NZM3...-XK, NZM3...-XIP..., NZM3-XST...

Box terminal

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

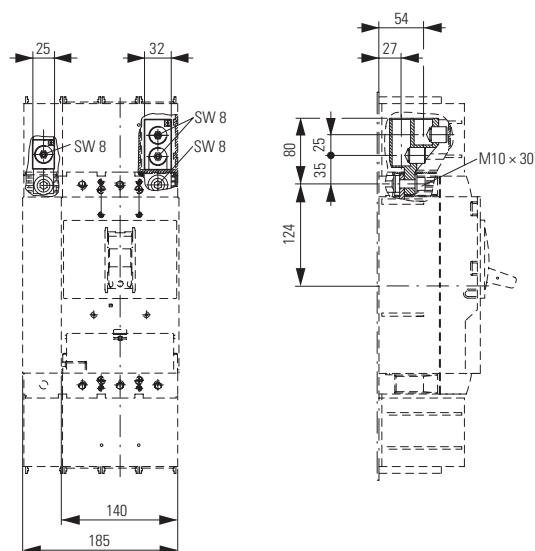
IP2X protection against contact with a finger

NZM3(-4)-XIPK



Tunnel terminal

NZM3(-4)-XKA1(2)



Covers

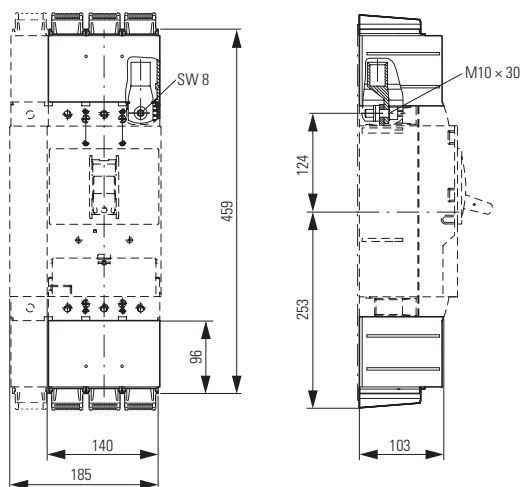
NZM3(-4)-XKSA

Cable lug

NZM3-XKS185

IP2X protection against contact with a finger

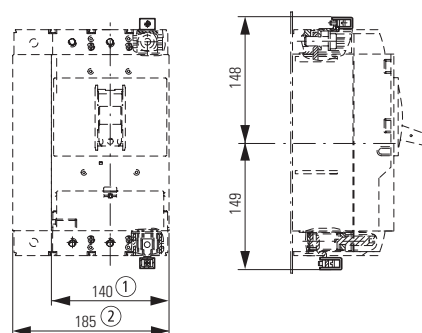
NZM3(-4)-XIPA



Control circuit terminal

NZM3/4-XSTS

NZM-XSTK



- ① 3 pole
- ② 4 pole

Size 3: accessories NZM3...XK...

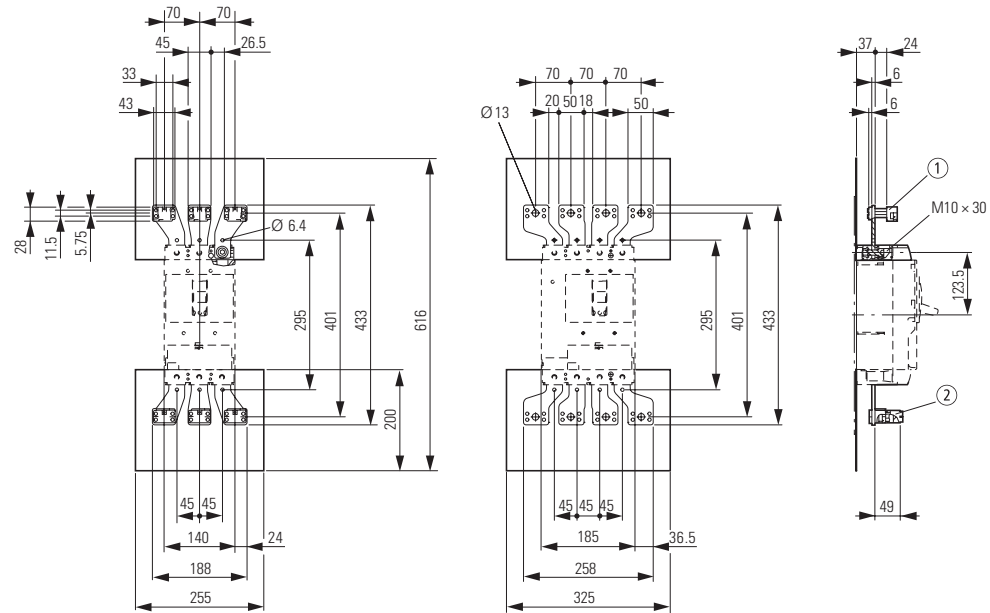
Connection width extension

NZM3(-4)-XKV70

Terminals

NZM3(-4)-XK22X21

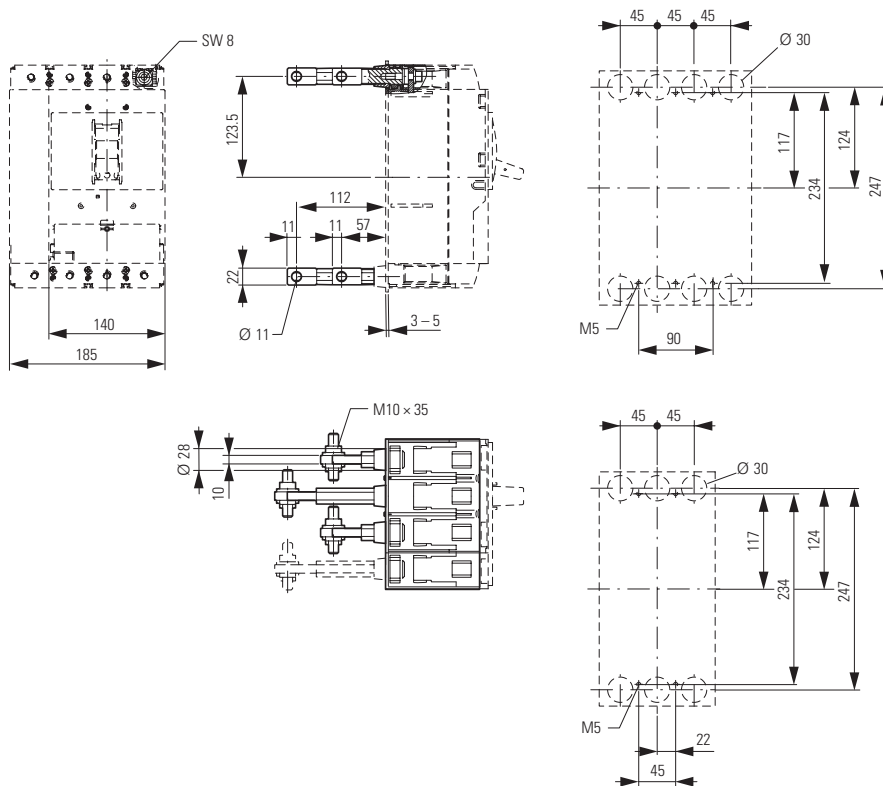
NZM3(-4)-XK300



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

Connection on rear

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



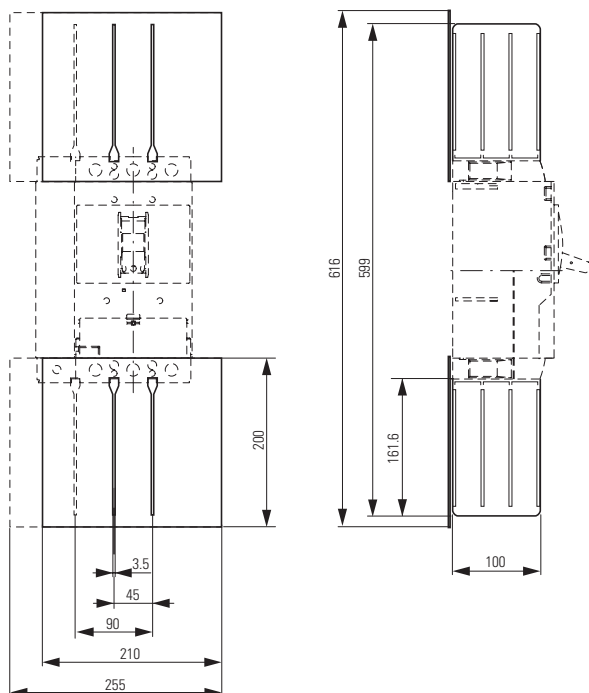
Circuit-breakers LZM

Dimensions

Size 3: accessories NZM3...-XKP, NZM3-XAB, NZM3-XBR

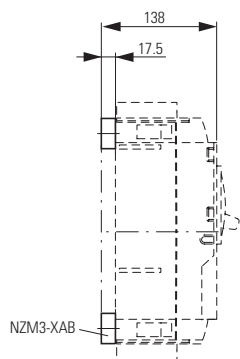
Phase isolators

NZM3-4-XKP



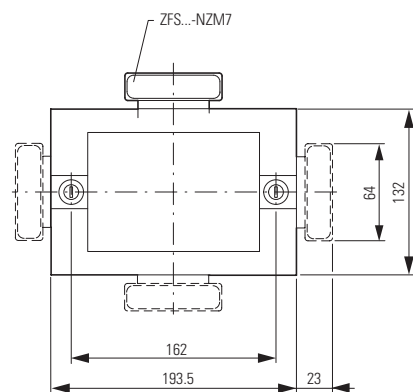
Spacers

NZM3-XAB

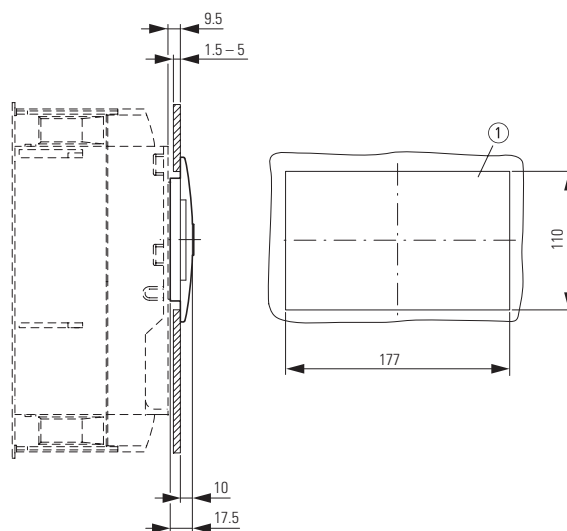


Insulating surrounds

NZM3-XBR



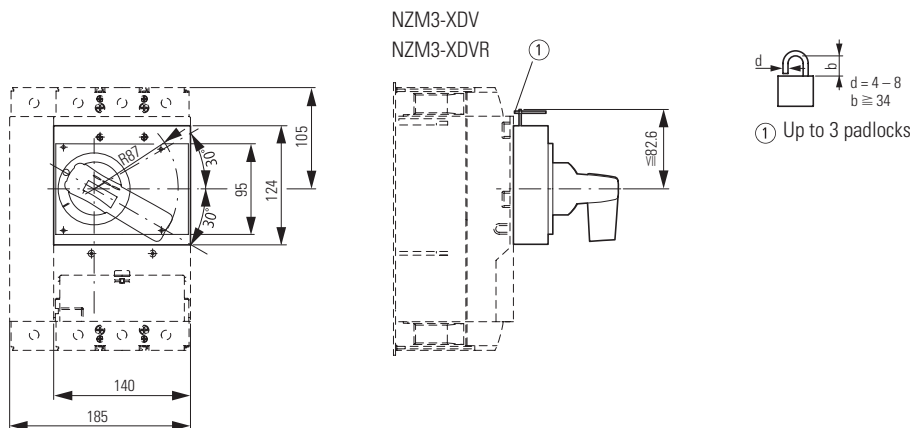
① Mounting aperture



Size 3: accessories NZM3-XDV..., NZM3-XTVD...

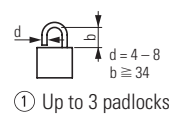
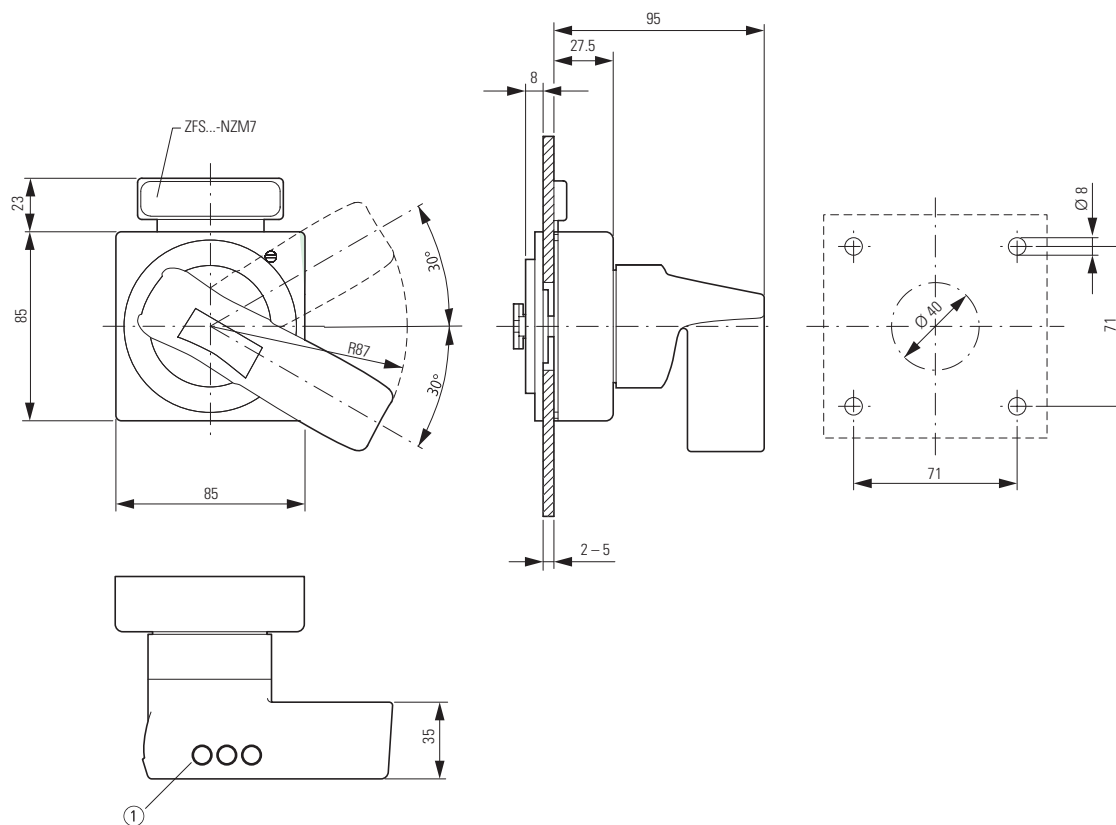
Rotary drive

Rotary handle on circuit-breaker



Door coupling rotary handle

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



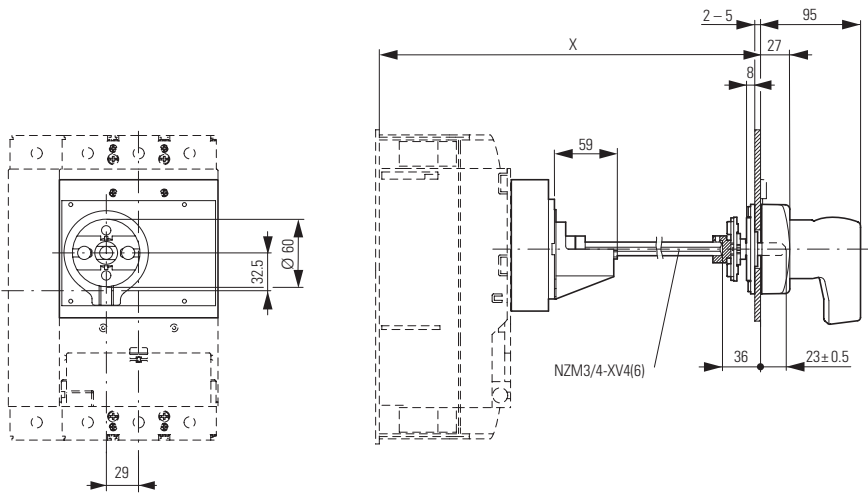
Circuit-breakers L2M

Dimensions

Size 3: accessories NZM3-XTVD...

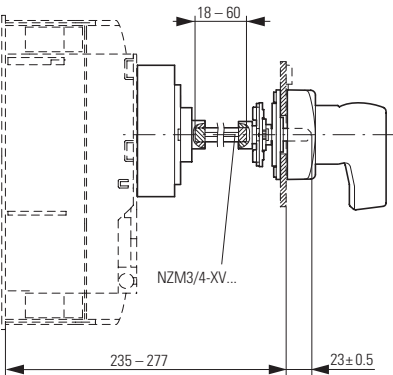
Door coupling rotary handle with extension shaft

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

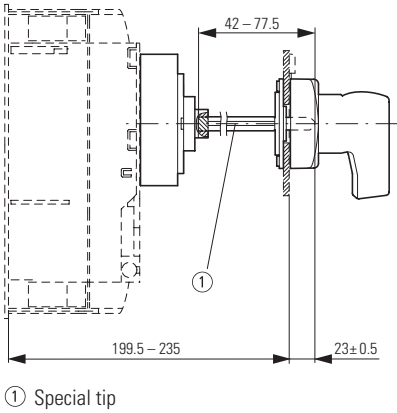


Part no.	x
NZM3/4-XV4	270 – 400
NZM3/4-XV6	400 – 600

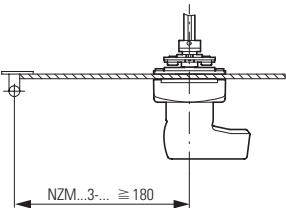
NZM3-XTVD(V)(R)-60



NZM3-XTVD(V)(R)-0



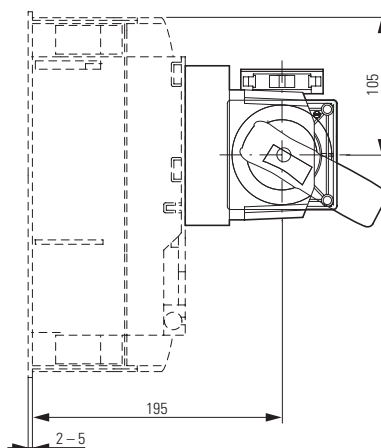
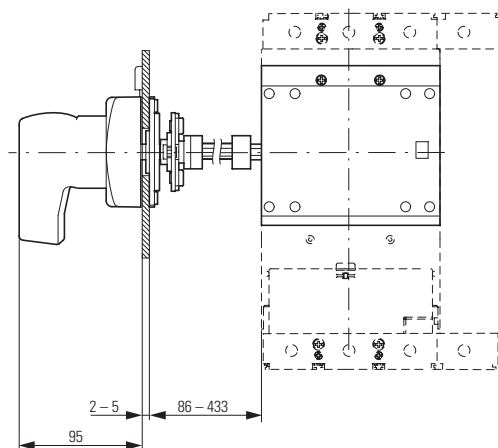
Minimum door coupling rotary handle clearance from door pivot point



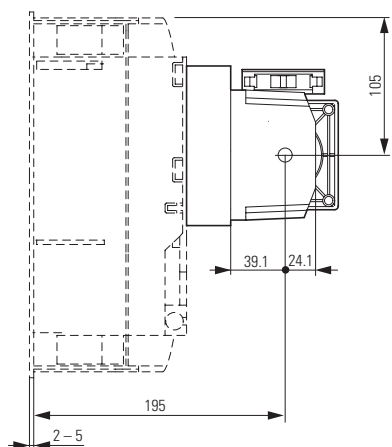
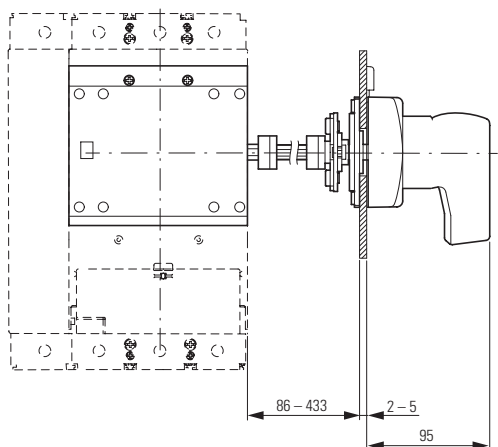
Size 3: accessories NZM3-XS...

Main switch assembly kit for side panel mounting

NZM3-XS(R)-L



NZM3-XS(R)-R



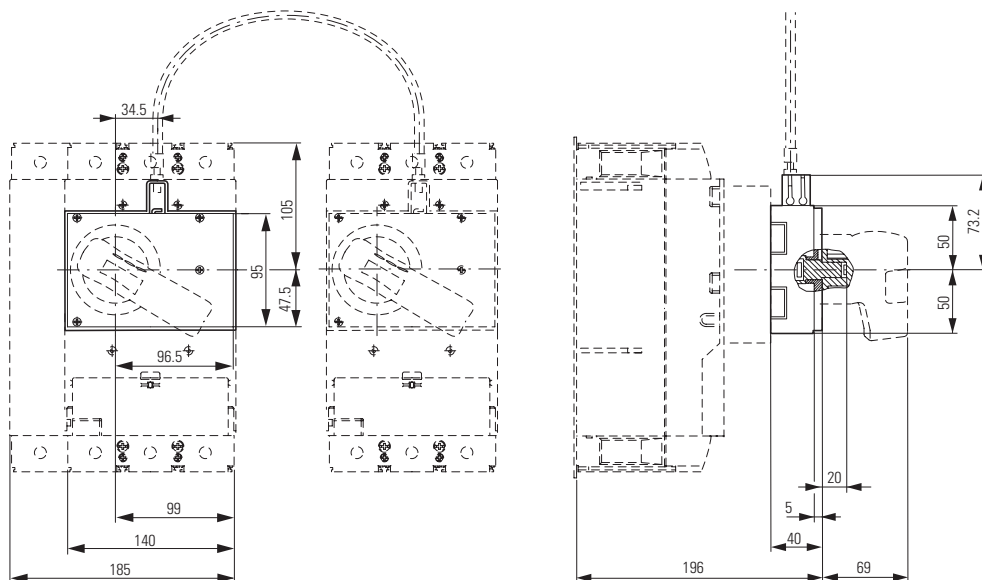
Circuit-breakers LZM

Dimensions

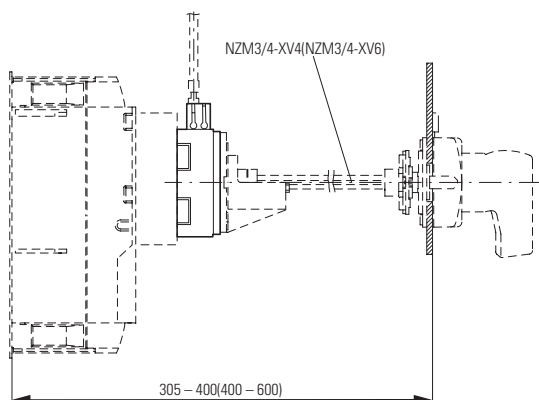
Size 3: accessories NZM3-XMV, NZM3-XTVD..., NZM3-XDV

Mechanical interlock

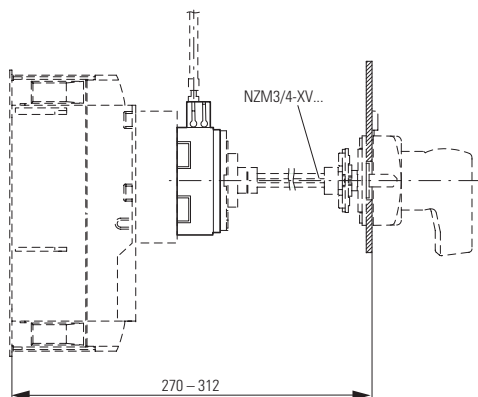
NZM3-XMV + NZM3-XDV(R)



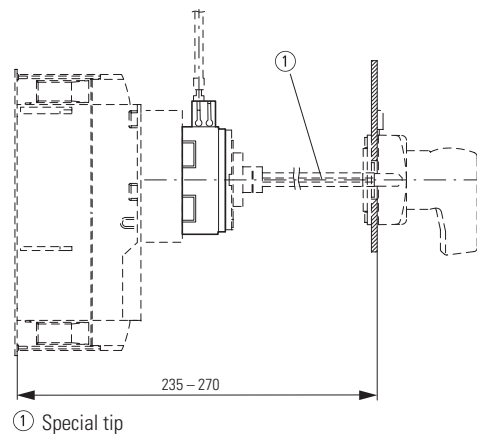
NZM3-XMV + NZM3-XTVD(V)(R)



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



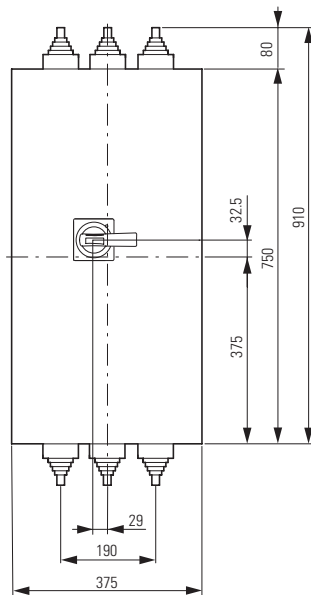
NZM3-XMV + NZM3-XTVD(V)(R)-0



Size 3: accessories NZM3-XCI..., NZM3-XAD...

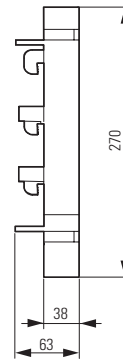
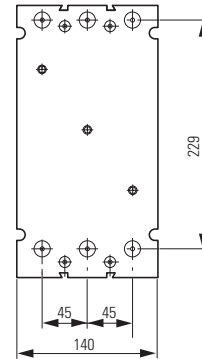
Insulated enclosures

NZM3-XCI48-TD



Component adapter

NZM3-XAD550



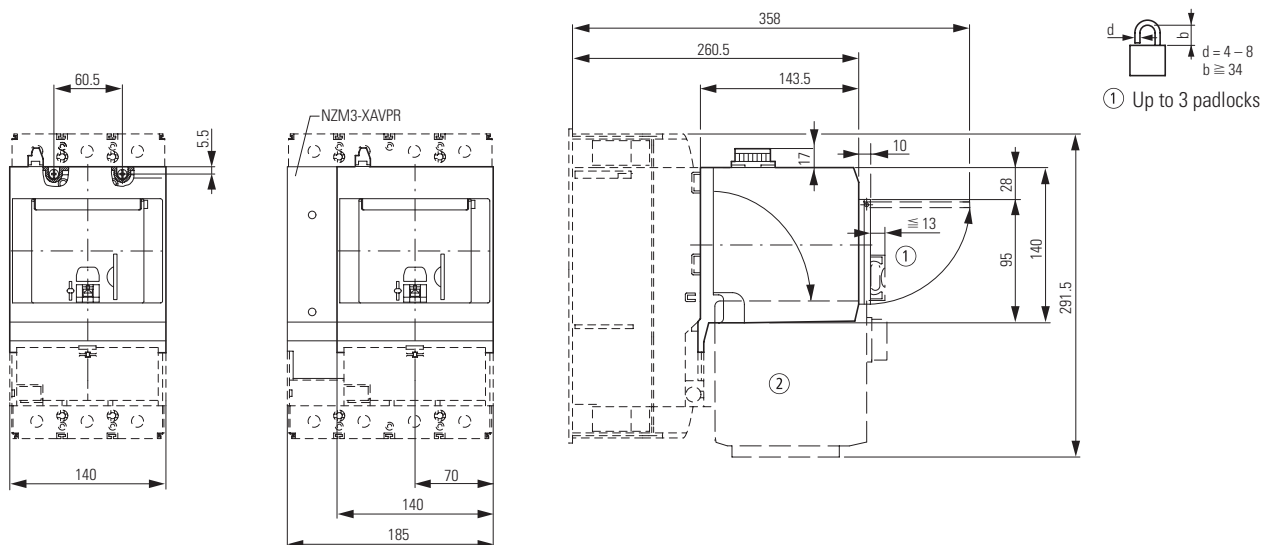
Circuit-breakers LZM

Dimensions

Size 3: accessories NZM3-X...

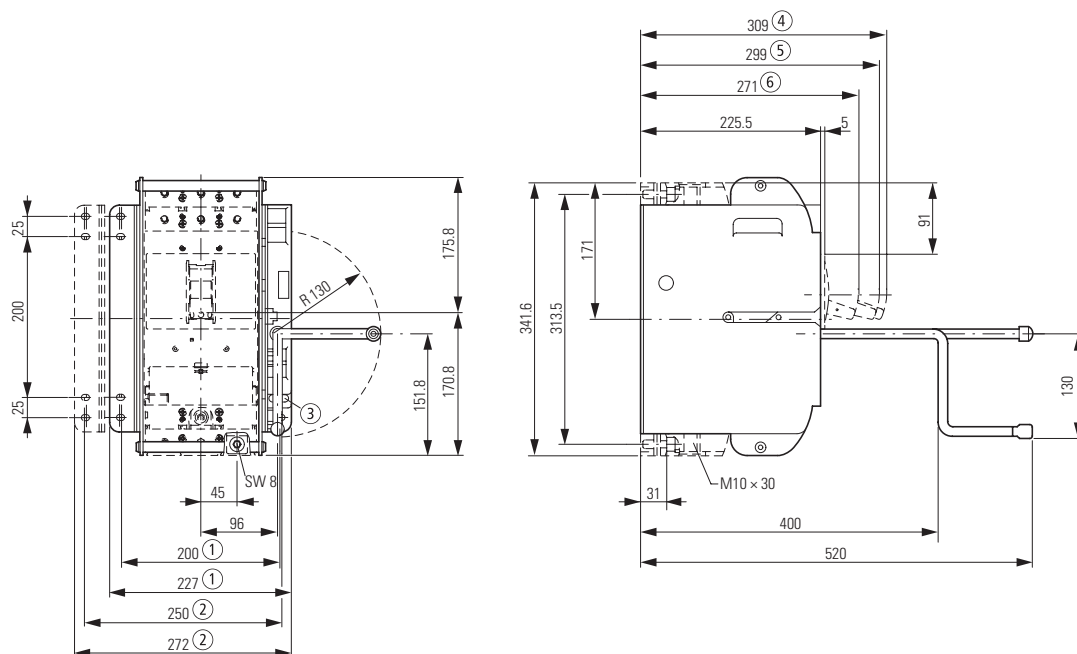
Remote operator

NZM3-XR...



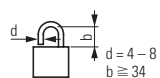
Withdrawable unit

+NZM3(-4)-XAV



① 3-pole

② 4-pole



③ Up to 3 padlocks

④ withdrawn

⑤ test

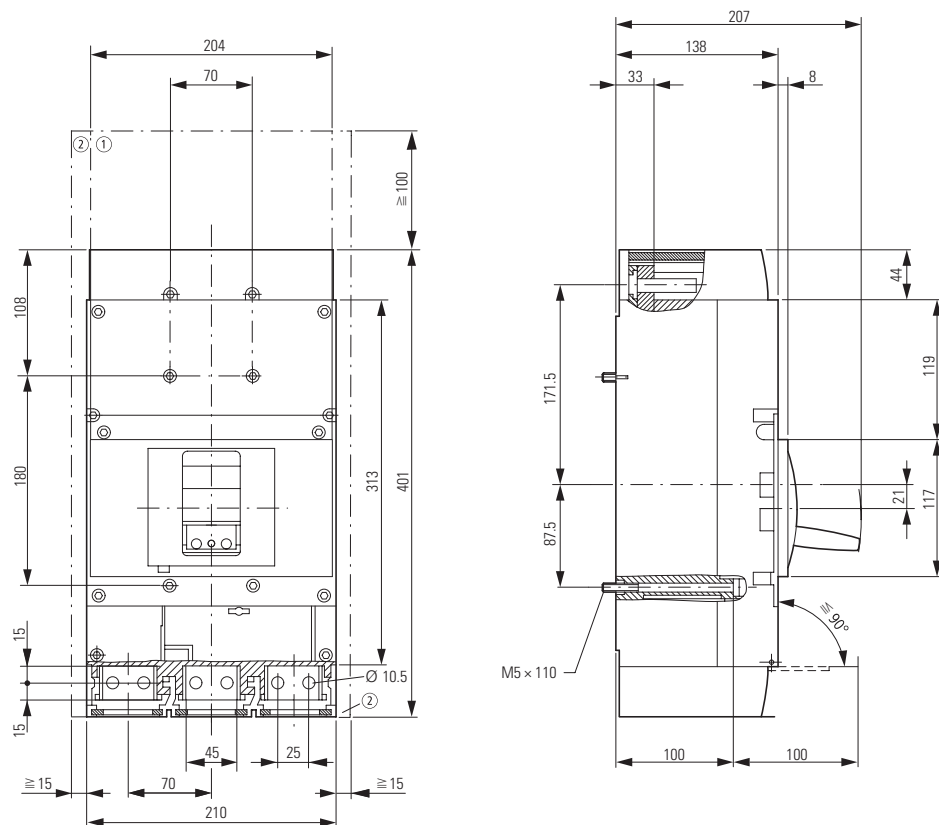
⑥ connected

Circuit-breaker

3 pole

LZMN4

LZMS4



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

Circuit-breakers LZM

Dimensions

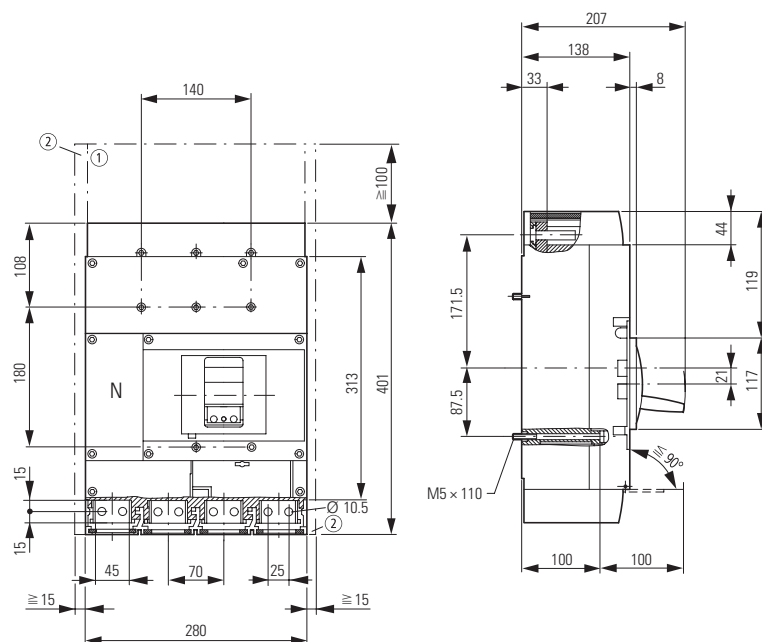
Size 4: accessories LZM4, LZM4...-XK

Circuit-breaker

4 pole

LZMN4-4

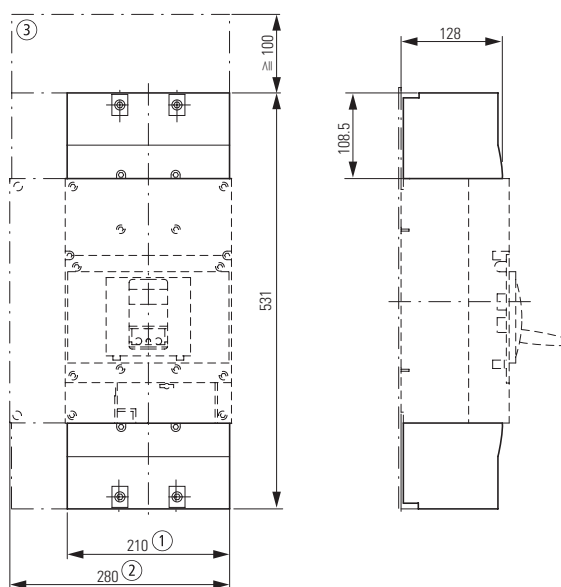
LZMS4-4



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

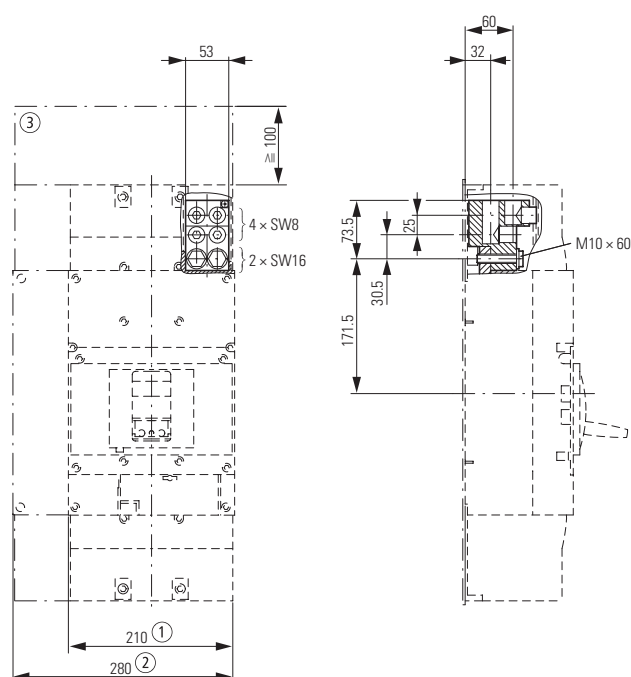
Covers

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

Size 4: accessories NZM4...-XKM

Screw connection

Module plate **Flat cable terminal**

Single hole NZM4(-4)-XKB

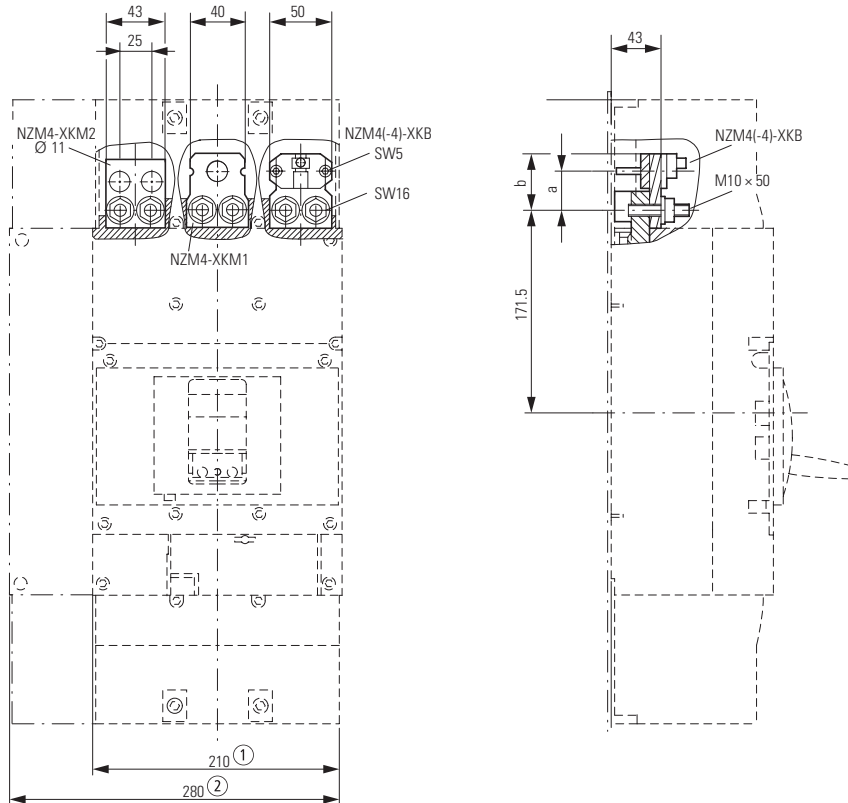
NZM4(-4)-XKM1

2-hole

NZM4(-4)-XKM2

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

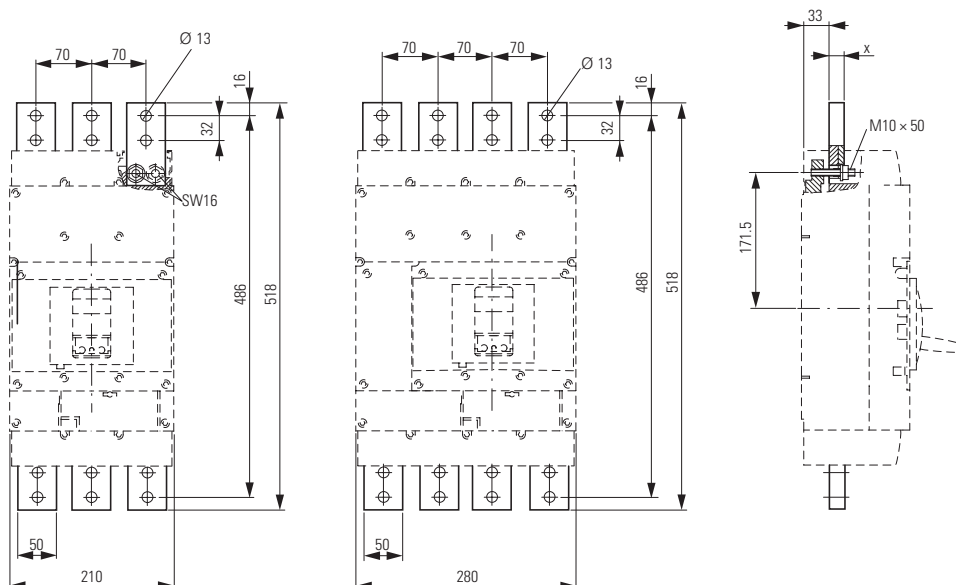
- ① 3 pole
- ② 4 pole
- ③ Clearance from conductive parts ≥ 100 mm up to 690 V



Module plate

2 holes, vertical

NZM4(-4)-XKM2S...



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

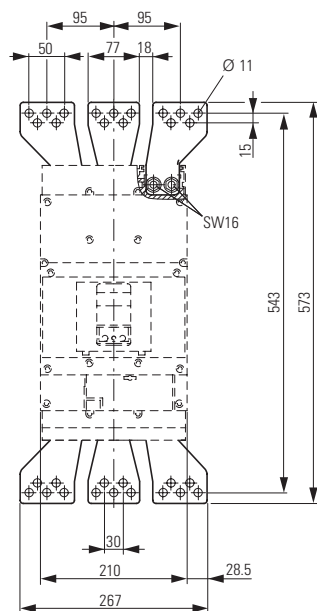
Circuit-breakers LZM

Dimensions

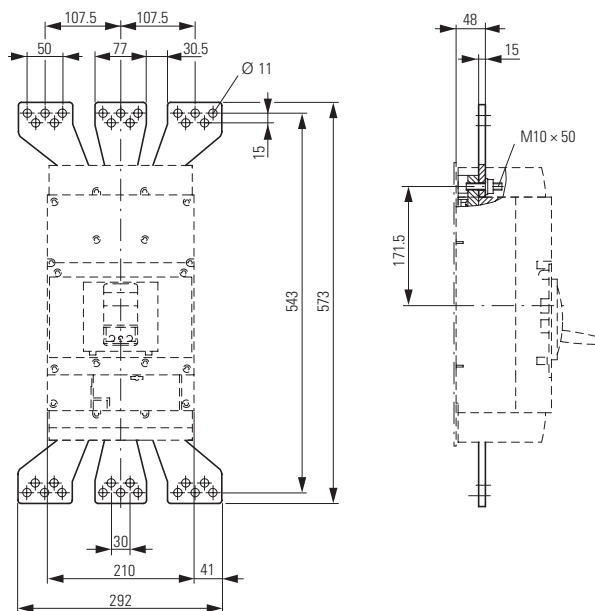
Size 4: accessories NZM4-XKV...

Connection width extension

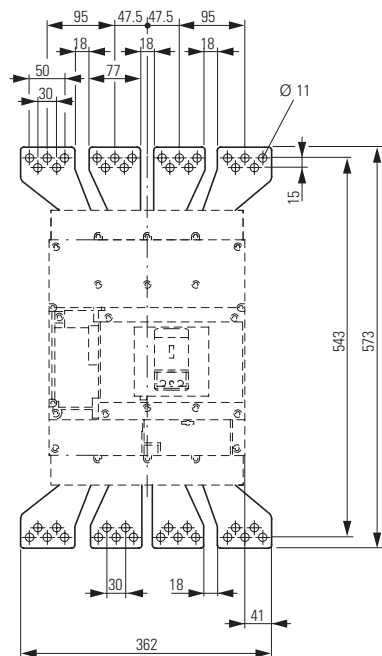
NZM4-XKV95



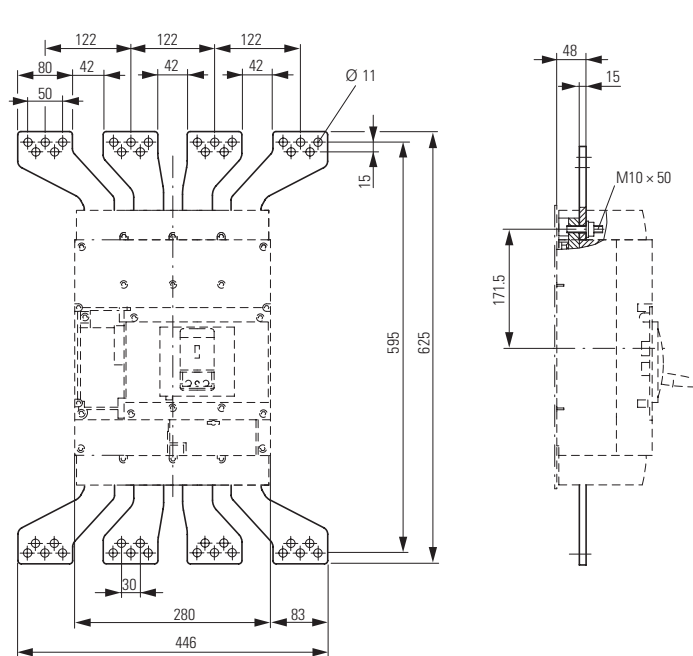
NZM4-XKV110



NZM4-4-XKV95



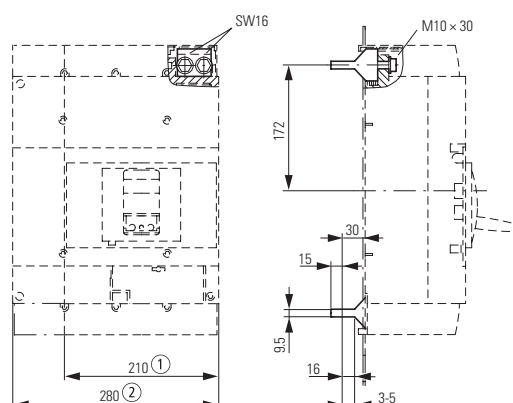
NZM4-4-XKV120



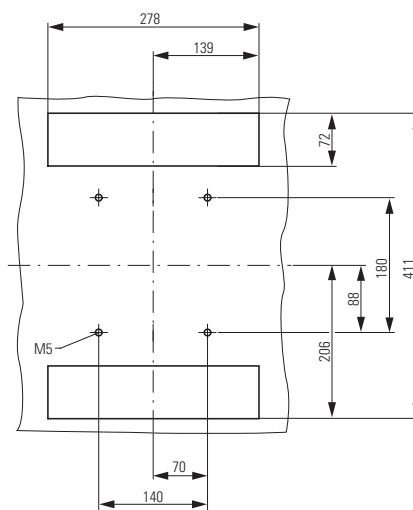
Size 4: accessories NZM4(-4)-XKP, NZM4(-4)-XKR

Connection on rear

NZM4(-4)-XKR

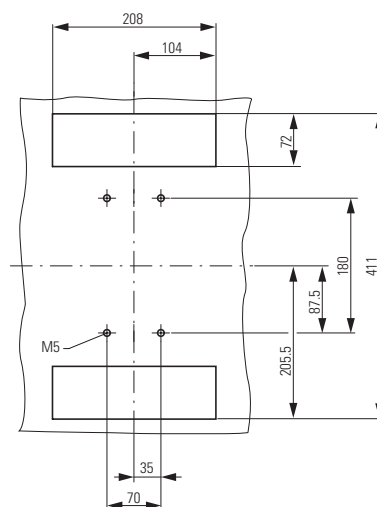
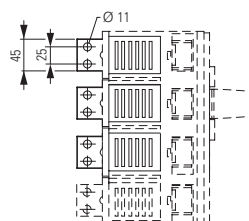


Fitting on mounting plate



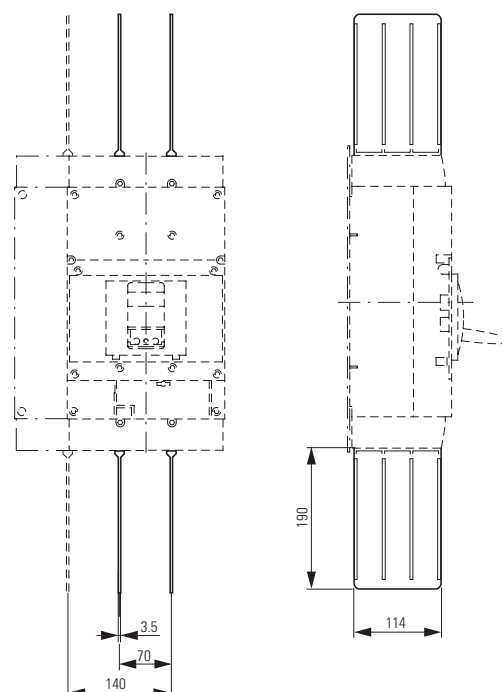
Rear connection possible also with rotation by 90°.

- ① 3 pole
- ② 4 pole



Phase isolators

NZM4-4-XKP



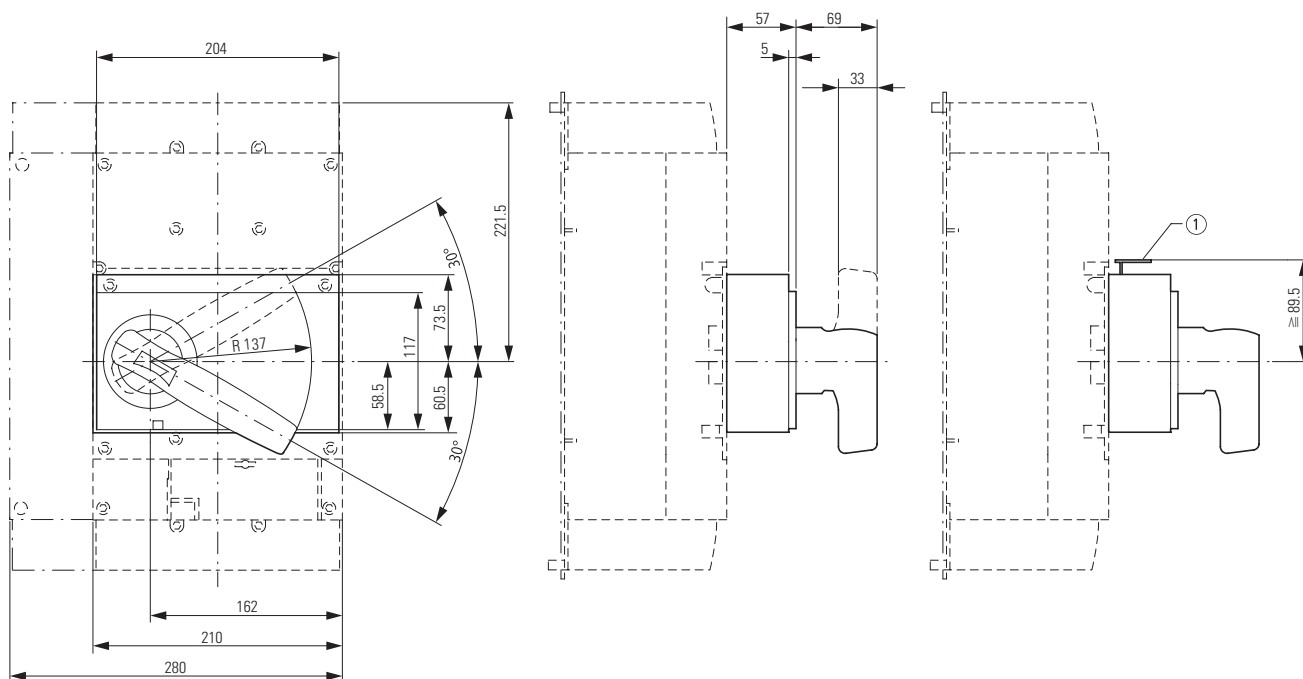
Circuit-breakers LZM

Dimensions

Size 4: accessories NZM4-XDV..., NZM4-XTVD...

Rotary handle on circuit-breaker

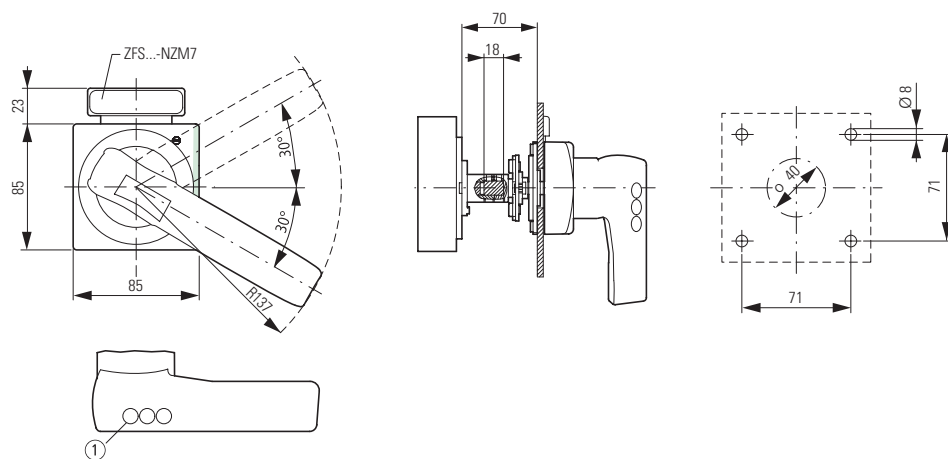
NZM4-XDV(R)



① Up to 3 padlocks

Door coupling rotary handle

NZM4-XTVD(V)(R)...

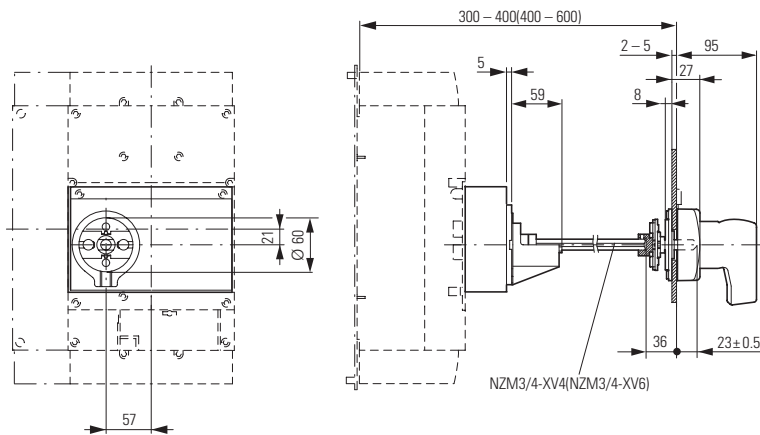


① Up to 3 padlocks

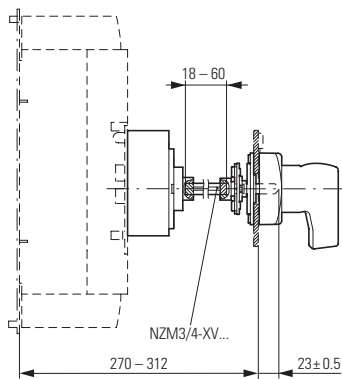
Size 4: accessories NZM4-XTVD..., NZM4...-XV, NZM4-XS...

Door coupling rotary handle with extension shaft

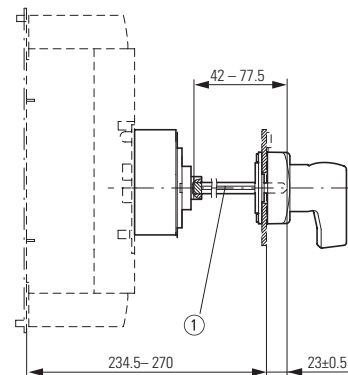
NZM4-XTVD(V)(R)
NZM3/4-XV4(6)



NZM4-XTVD(V)(R)-60

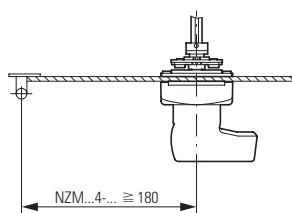


NZM4-XTVD(V)(R)-0



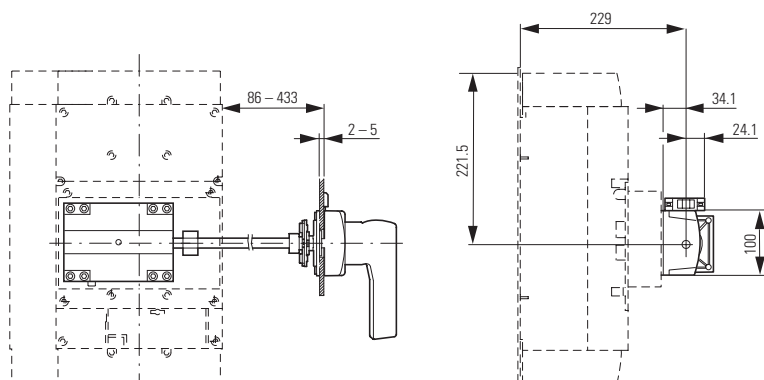
① Special tip

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



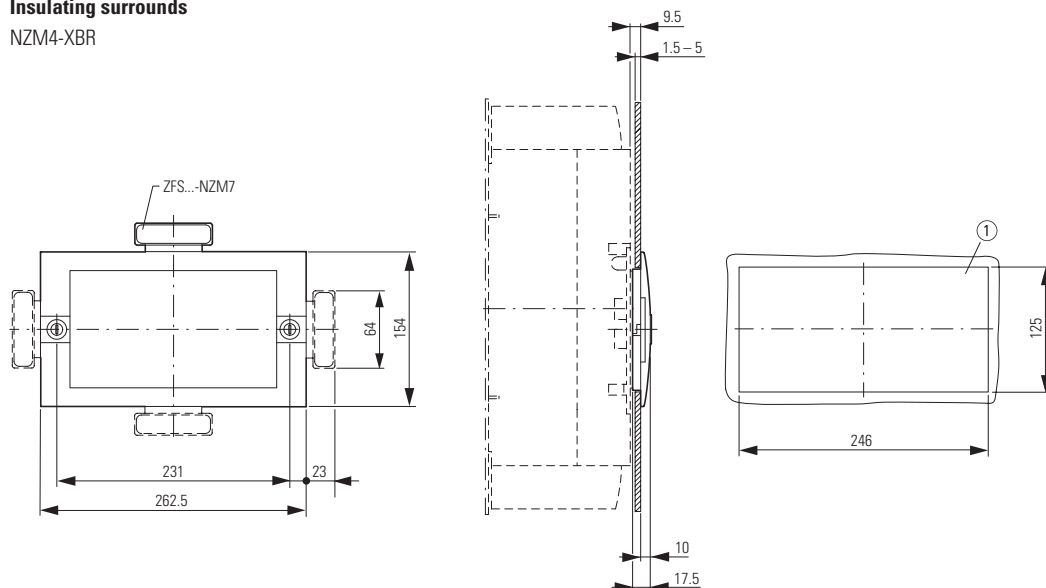
Circuit-breakers LZM

Dimensions

Size 4: accessories NZM4-XBR, NZM4-XMV, NZM4-X...

Insulating surrounds

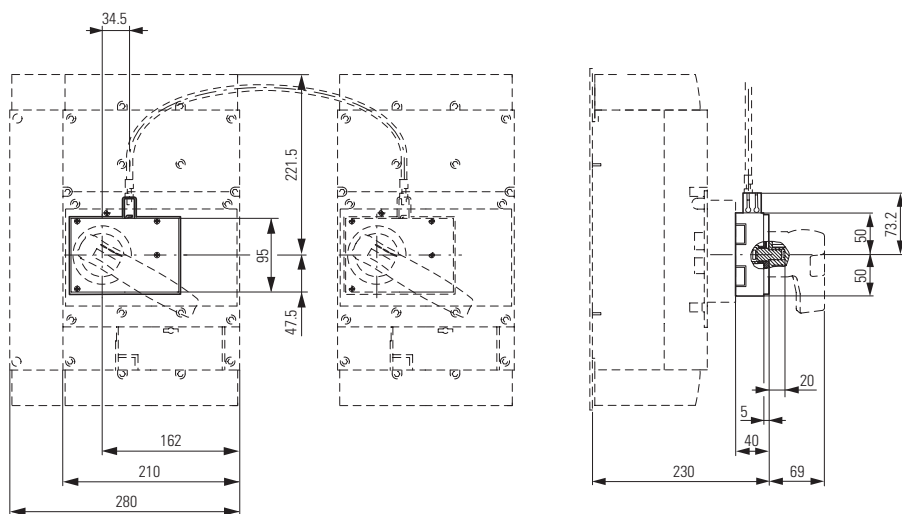
NZM4-XBR



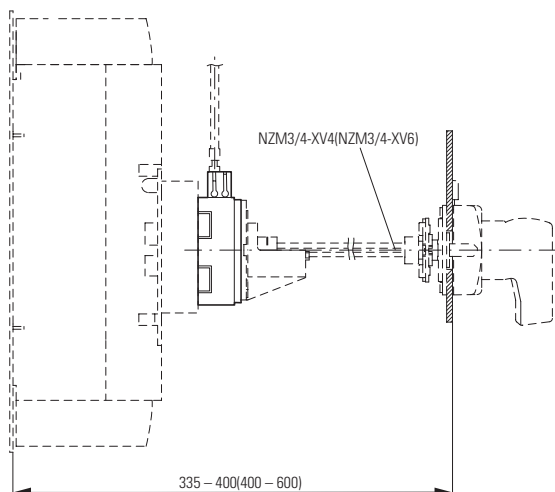
① Mounting aperture

Mechanical interlock

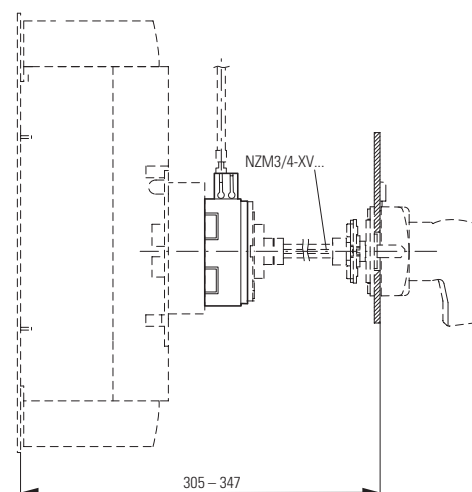
NZM4-XMV + NZM4-XDV(R)



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



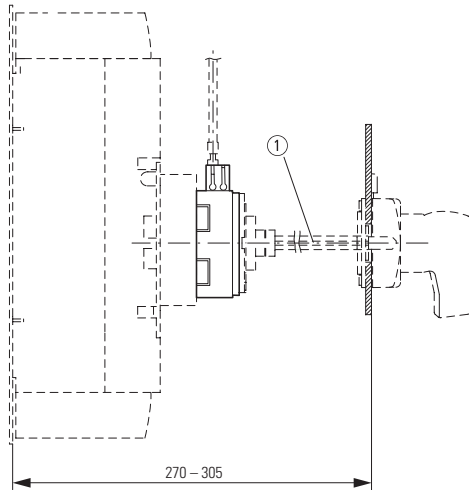
NZM4-XMV + NZM4-XTVD(V)(R)-60



Size 4: accessories NZM4-XMV, NZM4-X...

Mechanical interlock

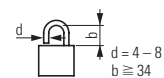
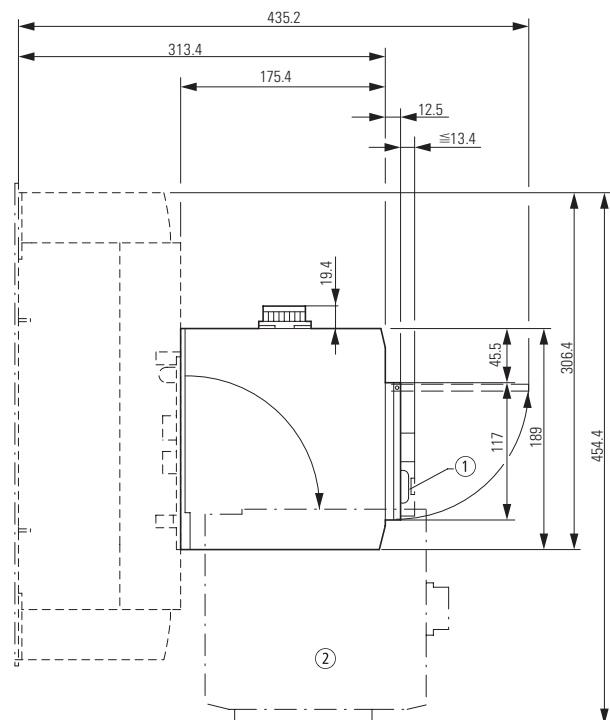
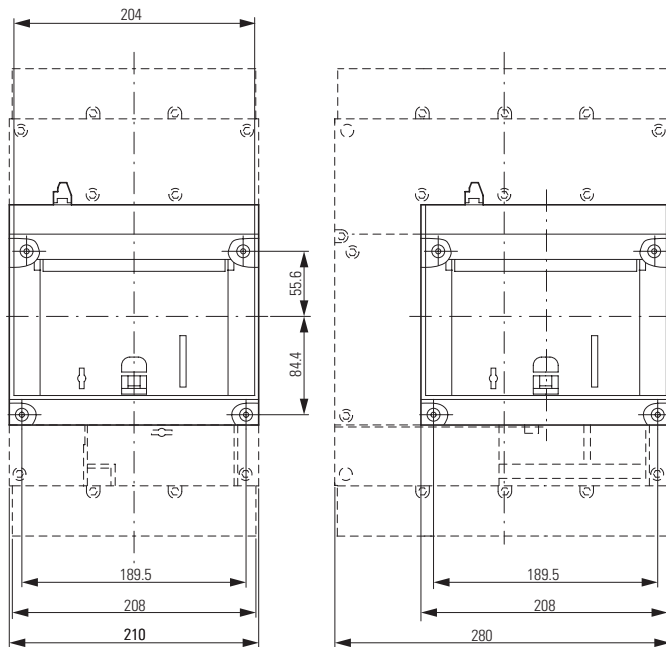
NZM4-XMV + NZM4-XTVD(V)(R)-0



① Special tip

Remote operator

NZM4-XR...



① Up to 3 padlocks
Remote operator folded

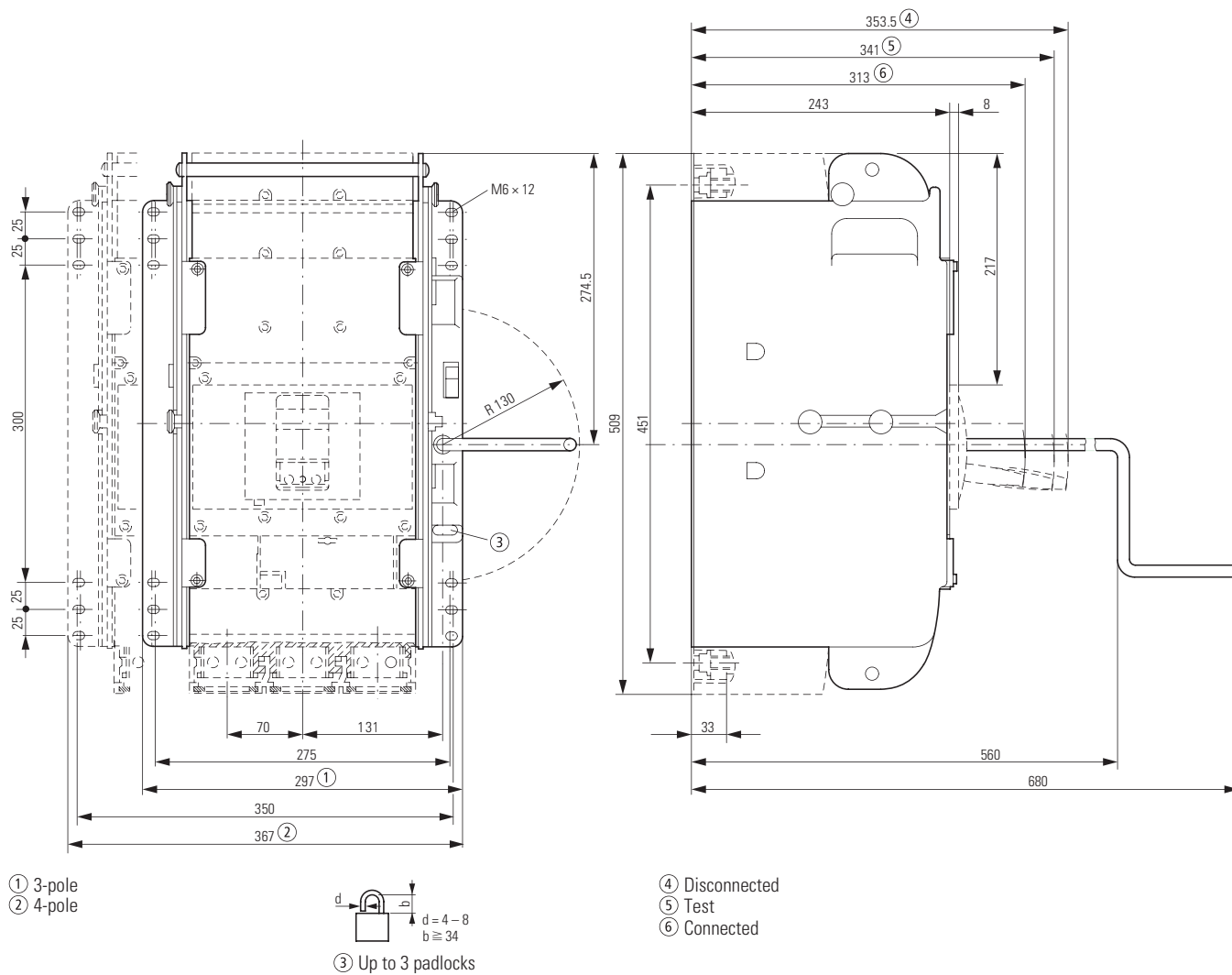
Circuit-breakers LZM

Dimensions

Size 4: accessories NZM4...-XAV

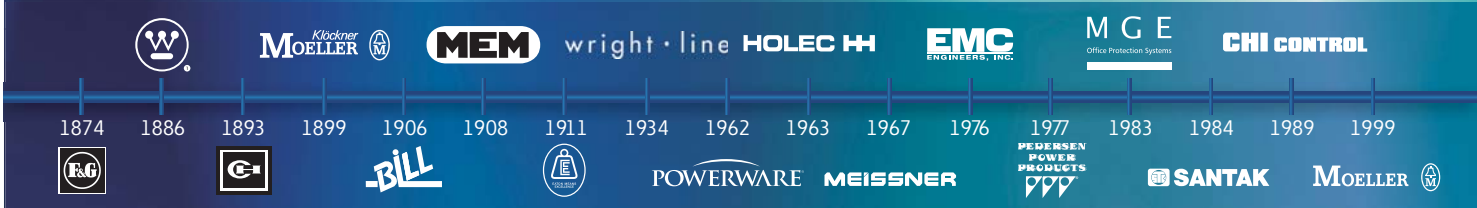
Withdrawable unit

+NZM4-4-XAV



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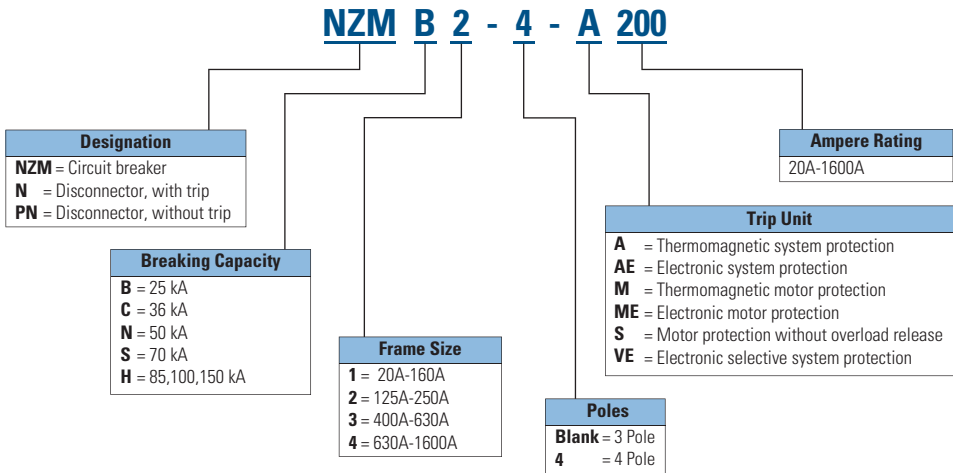
Circuit Protection & Control Products Quick Selection Guide

Molded Case Circuit Breaker

NZM Series



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LZM Series



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