

LZM1-4 circuit-breaker series up to 1600 A

Circuit Breakers LZM



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Brand inception dates:



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Circuit-breakers LZM



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Circuit-breakers LZM 1, 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
- switch suitable for world-wide use

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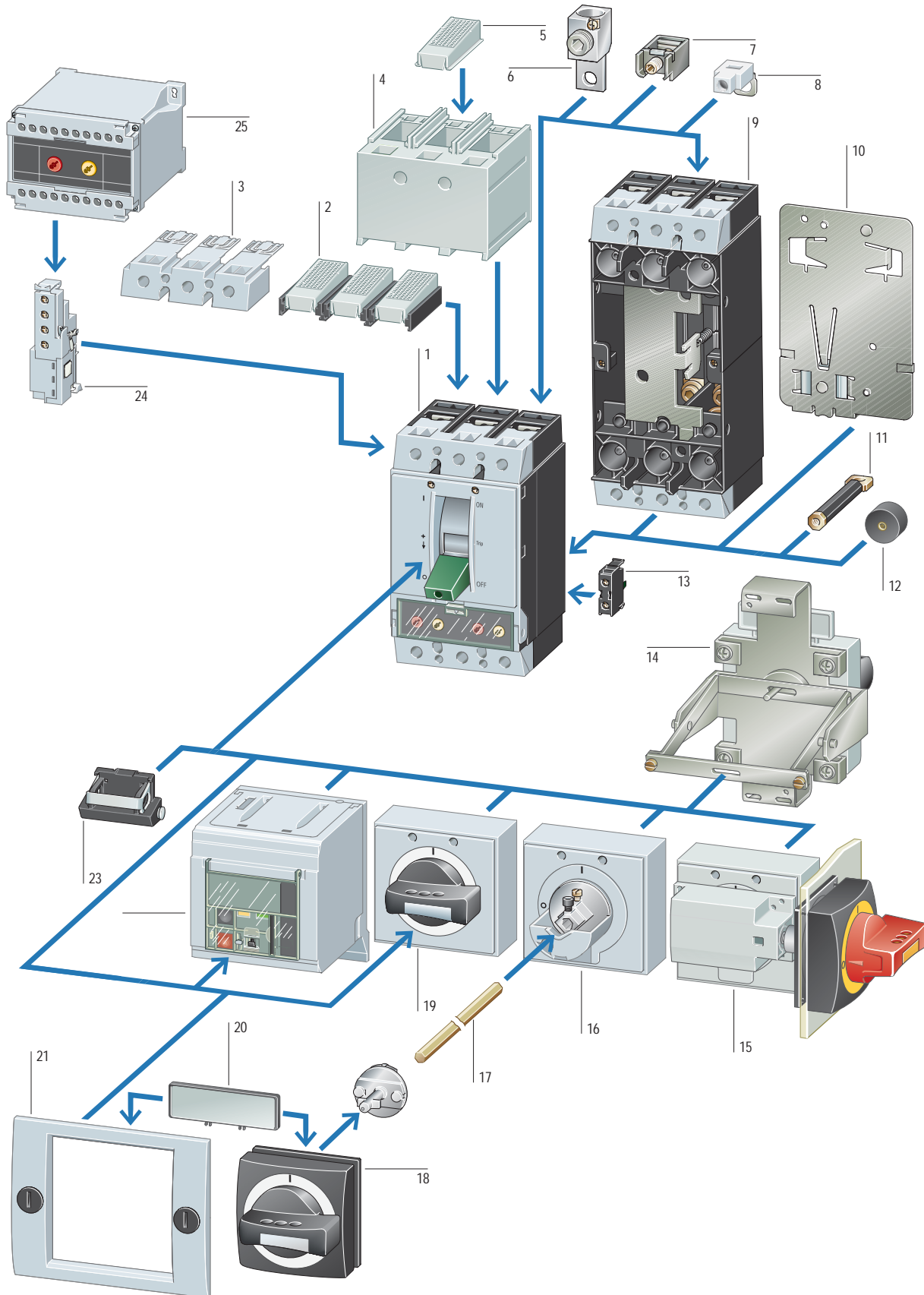
1.1

Circuit-breakers LZM

System overview

1

Circuit-breakers LZM



2

Basic units

Circuit-breaker	1
Rated uninterrupted current up to 1600 A	
Switching capacity 25, 36, 50, 70kA at 415V	
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/EN60947, CCC	
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1.2

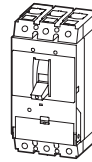
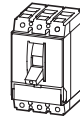
Circuit-breakers LZM

Technical overview

1 Circuit-breaker, 3/4-pole LZM1, LZM2, LZM3, LZM4

Circuit-breaker

With main switch characteristics to IEC/EN 60204 and isolating characteristics to IEC/EN60947, CCC

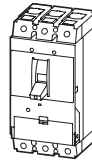
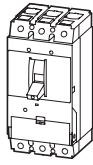
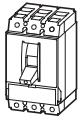


Rated uninterrupted current I_u = Rated current I_n
 Adjustable overload release I_t
 Adjustable short-circuit release I_i
 Delayed short-circuit release I_{sd}

Thermomagnetic releases
System and cable protection

	I_u A	I_u A	I_t A	I_i A
Ambient temperature at 100% I_u min./max. -25 / +50 °C	20	20	0.8 – 1 x I_n	350
	25	25	0.8 – 1 x I_n	350
	32	32	0.8 – 1 x I_n	350
	40	40	0.8 – 1 x I_n	8 – 10 x I_n
	50	50	0.8 – 1 x I_n	6 – 10 x I_n
	63	63	0.8 – 1 x I_n	6 – 10 x I_n
	80	80	0.8 – 1 x I_n	6 – 10 x I_n
	100	100	0.8 – 1 x I_n	6 – 10 x I_n
	125	125 250	0.8 – 1 x I_n	6 – 10 x I_n
	160	160 320	0.8 – 1 x I_n	LZM1: 8 x I_n , 6 – 10 x I_n
		200 400	0.8 – 1 x I_n	LZM1: 8 x I_n , 6 – 10 x I_n
		250 500	0.8 – 1 x I_n	LZM1: 8 x I_n , 6 – 10 x I_n
		300	0.8 – 1 x I_n	LZM1: 8 x I_n , 6 – 10 x I_n
Basic switching capacity		LZMB1-A...	LZMB2-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		LZMC1-A...	LZMC2-A...	LZMC3-A...
400/415 V kA/cos ϕ		36 0.25	36 0.25	36 0.25
440 V kA/cos ϕ		30 0.25	30 0.25	30 0.25
525 V kA/cos ϕ		12 0.5	12 0.5	12 0.5
690 V kA/cos ϕ		8 0.5	8 0.5	8 0.5
Normal switching capacity		LZMN1-A...	LZMN2-A...	LZMN3-A...
400/415 V kA/cos ϕ		50 0.25	50 0.25	50 0.25
440 V kA/cos ϕ		35 0.25	35 0.25	35 0.25
525 V kA/cos ϕ		20 0.30	25 0.25	25 0.25
690 V kA/cos ϕ		10 0.50	20 0.30	20 0.30
Strong switching capacity		LZMS1-A...	LZMS2-A...	LZMS3-A...
400/415 V kA/cos ϕ		70 0.20	70 0.20	70 0.20
440 V kA/cos ϕ		35 0.25	65 0.20	65 0.20
525 V kA/cos ϕ		20 0.30	36 0.25	36 0.25
690 V kA/cos ϕ		10 0.50	20 0.30	25 0.30

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



Magnetic short-circuit release
Motor protection

I_u	I_u	I_u	I_t
A	A	A	A
40			8 - 14 x I_n
50			8 - 14 x I_n
63			8 - 14 x I_n
80			8 - 14 x I_n
100			

Electronic releases
Systems, cable, selectivity and generator protection

I_u	I_u	I_t	I_{sd}	I_t
A	A	A	A	A
		0.5-1 x I_n	2 - 10 x I_t	2 - 12 x I_n
	400	0.5-1 x I_n	2 - 10 x I_t	2 - 12 x I_n
	630	0.5-1 x I_n	2 - 10 x I_t	2 - 12 x I_n
40		0.5-1 x I_n	2 - 10 x I_t	2 - 12 x I_n
50		0.5-1 x I_n	2 - 10 x I_t	2 - 12 x I_n
63			2 - 6 x I_t	2 - 8 x I_t
80				
100				

100	125	250
100	160	320
100	200	400
100		500

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...	
50	0.25	50	0.25	50	0.25	50	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
10	0.50	20	0.30	20	0.30	20	0.30

LZMS1-S...		LZMS2-S...		LZMS3-S...		LZMS3-...E...	
70	0.20	70	0.20	70	0.20	70	0.20
35	0.25	65	0.20	65	0.20	65	0.20
20	0.30	36	0.25	36	0.25	36	0.25
10	0.50	20	0.30	25	0.30	25	0.30

1.3

Circuit-breakers LZM

Ordering

1

Terminals standard, terminal screws as accessories



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

Protection of systems and cables

Rated current = rated uninterrupted current

$I_n = I_U$
A

Setting range

Overload releases Short-circuit releases

I_r
A



I_i
A



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

Part no. Article no.

Price see price list

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

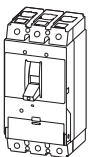
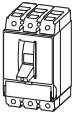
Part no. Article no.

Price see price list

3 pole

Rated current (A)	Overload release range (A)	Short-circuit release range (A)	Part no. Article no.	Part no. Article no.
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
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

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

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

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

Notes

LZMN1-A20 109442	LZMS1-A20 109452
LZMN1-A25 109443	LZMS1-A25 109453
LZMN1-A32 109444	LZMS1-A32 109454
LZMN1-A40 109445	LZMS1-A40 109455
LZMN1-A50 109446	LZMS1-A50 109456
LZMN1-A63 109447	LZMS1-A63 109457
LZMN1-A80 109448	LZMS1-A80 109458
LZMN1-A100 109449	LZMS1-A100 109459
LZMN1-A125 109450	LZMS1-A125 109460
LZMN1-A160 109451	LZMS1-A160 109461
	LZMS2-A20 109534
	LZMS2-A25 109535
	LZMS2-A32 109536
	LZMS2-A40 109537
	LZMS2-A50 109538
	LZMS2-A63 109539
	LZMS2-A80 109540
	LZMS2-A100 109541
	LZMS2-A125 109542
LZMN2-A160 109530	LZMS2-A160 109543
LZMN2-A200 109531	LZMS2-A200 109544
LZMN2-A250 109532	LZMS2-A250 109545
LZMN2-A300 109533	LZMS2-A300 109546
LZMN3-A250 109601	LZMS3-A250 109605
LZMN3-A320 109602	LZMS3-A320 109606
LZMN3-A400 109603	LZMS3-A400 109607
LZMN3-A500 109604	LZMS3-A500 109608

IEC/EN 60947-2
Adjustable overload releases I_r
• 0.8 – 1 x I_n (ex-works 0.8 x I_n)
Adjustable short-circuit releases I_i
• 6 – 10 x I_n (ex-works 6 x I_n)
– LZM...-A40: 8 – 10 x I_n (ex-works 8 x I_n)
Fixed short-circuit release I_i
• 350 A at $I_n = 20 – 32$ A
• 1280 A at $I_n = 160$ A (LZM1)

Std. pack 1 off

1.3

Circuit-breakers LZM

Ordering

1

Terminals standard, terminal screws as accessories



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

Short-circuit protection

Motor protection in conjunction with overload relay

- With short-circuit release
- Without overload release

Rated current =
rated uninterrupted
current
 $I_n = I_u$
A

Setting range
Short-circuit
releases
 I_i
A

Motor rating
AC-3 at 400 V
50/60 Hz
 P
kW

Rated
operational
current AC-3
at 400 V
50/60 Hz
 I_e
A

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

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

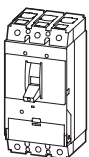
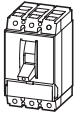


3 pole

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

Notes Notes for terminals ⇔ 21

Terminal screws
standard, terminals
as accessories



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 50/60Hz

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

LZMN1-S40 109472	LZMS1-S40 109477
LZMN1-S50 109473	LZMS1-S50 109478
LZMN1-S63 109474	LZMS1-S63 109479
LZMN1-S80 109475	LZMS1-S80 109480
LZMN1-S100 109476	LZMS1-S100 109481
	LZMS2-S40 109556
	LZMS2-S50 109557
	LZMS2-S63 109558
	LZMS2-S80 109559
	LZMS2-S100 109560
LZMN2-S125 109553	LZMS2-S125 109561
LZMN2-S160 109554	LZMS2-S160 109562
LZMN2-S200 109555	LZMS2-S200 109563
LZMN3-S250 109613	LZMS3-S250 109617
LZMN3-S320 109614	LZMS3-S320 109618
LZMN3-S400 109615	LZMS3-S400 109619
LZMN3-S500 109616	LZMS3-S500 109620

Notes

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_n
• 8 – 14 x I_n (ex-works 12 x I_n)
– LZM...1-S100, LZM...2-S200: 8 – 12.5 x I_n (ex-works 12 x I_n)
Without overload release I_r
– LZM...3-S400: 7 – 12.5 x I_n
– LZM...3-S500: 6 – 10 x 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...4030	
5030	
6330	
8020	
10015	
LZM...2-S...4030	
5030	
6330	
8030	
10030	
12530	
16020	
20010	
LZM...3-S...25030	
32030	
40030	
50020	

Tripping class	Tripping T_p time with load on all poles of 7.2 times current setting value
10 A	2 s < T_p F 10 s
10	4 s < T_p F 10 s
20	6 s < T_p F 20 s
30	9 s < T_p F 30 s

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

Std. pack 1 off

1.3

Circuit-breakers LZM

Ordering

1

Terminals standard, terminal screws as accessories



Thermomagnetic release, 4 pole LZM...1

Rated current = rated uninterrupted current

$I_n = I_u$
A

Setting range
Overload releases
Main pole

I_r
A



Neutral conductor

I_r
A



Short-circuit releases

I_i
A



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

4 pole

Rated current (A)	Setting range (A)	Neutral conductor (A)	Short-circuit releases (A)	Basic switching capacity (kA)	Part no. / Article no.	Comfort switching capacity (kA)	Part no. / Article no.
20	15...20	15...20	350	25	LZMB1-4-A20 109482	36	LZMC1-4-A20 109492
25	20...25	20...25	350	25	LZMB1-4-A25 109483	36	LZMC1-4-A25 109493
32	25...32	25...32	350	25	LZMB1-4-A32 109484	36	LZMC1-4-A32 109494
40	32...40	32...40	320...400	25	LZMB1-4-A40 109485	36	LZMC1-4-A40 109495
50	40...50	40...50	300...500	25	LZMB1-4-A50 109486	36	LZMC1-4-A50 109496
63	50...63	50...63	380...630	25	LZMB1-4-A63 109487	36	LZMC1-4-A63 109497
80	63...80	63...80	480...800	25	LZMB1-4-A80 109488	36	LZMC1-4-A80 109498
100	80...100	80...100	600...1000	25	LZMB1-4-A100 109489	36	LZMC1-4-A100 109499
125	100...125	100...125	750...1250	25	LZMB1-4-A125 109490	36	LZMC1-4-A125 109500
160	125...160	125...160	1280	25	LZMB1-4-A160 109491	36	LZMC1-4-A160 109501

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 50/60Hz

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

Notes

LZMN1-4-A20 109502	LZMS1-4-A20 109512
LZMN1-4-A25 109503	LZMS1-4-A25 109513
LZMN1-4-A32 109504	LZMS1-4-A32 109514
LZMN1-4-A40 109505	LZMS1-4-A40 109515
LZMN1-4-A50 109506	LZMS1-4-A50 109516
LZMN1-4-A63 109507	LZMS1-4-A63 109517
LZMN1-4-A80 109508	LZMS1-4-A80 109518
LZMN1-4-A100 109509	LZMS1-4-A100 109519
LZMN1-4-A125 109510	LZMS1-4-A125 109520
LZMN1-4-A160 109511	LZMS1-4-A160 109521

IEC/EN 60947-2

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

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

Adjustable short-circuit releases I_i
• $6 - 10 \times I_n$ (ex-works $6 \times I_n$)
– LZM...1-4-A40: $8 - 10 \times I_n$ (ex-works $8 \times I_n$)

Fixed short-circuit release I_i
• 350 A at $I_n = 20 - 32$ A
• 1280 A at $I_n = 160$ A ($8 \times I_n$)

LZM..1-4-A...
• With 100 % overload and short-circuit protection in 4th pole

Std. pack 1 off

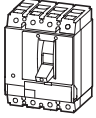
1.3

Circuit-breakers LZM

Ordering

1

Terminal screws standard, terminals as accessories



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

Protection of systems and cables

Rated current = rated uninterrupted current

$$I_n = I_u$$

A

Setting range

Overload releases
Main pole

I_r

A



Neutral conductor

I_r

A



Short-circuit releases

I_i

A



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

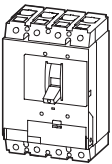
Part no.
Article no.

Price
see price list

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



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 50/60Hz

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

Notes

	LZMS2-4-A20 109582
	LZMS2-4-A25 109583
	LZMS2-4-A32 109584
	LZMS2-4-A40 109585
	LZMS2-4-A50 109586
	LZMS2-4-A63 109587
	LZMS2-4-A80 109588
	LZMS2-4-A100 109589
	LZMS2-4-A125 109590
LZMN2-4-A160 109576	LZMS2-4-A160 109591
LZMN2-4-A160/100 109577	LZMS2-4-A160/100 109592
LZMN2-4-A200 109578	LZMS2-4-A200 109593
LZMN2-4-A200/125 109579	LZMS2-4-A200/125 109594
LZMN2-4-A250 109580	LZMS2-4-A250 109595
LZMN2-4-A250/160 109581	LZMS2-4-A250/160 109596
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

IEC/EN 60947-2

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

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

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

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

LZM..2/3-4-A...
• With 100 % overload and short-circuit protection in 4th pole
LZM..2/3-4-A.../60
• With 60 % overload and short-circuit protection in 4th pole

Std. pack 1 off

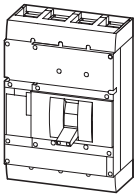
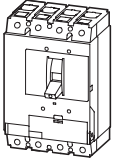
1.3

Circuit-breakers LZM

Ordering

1

Terminal screws standard, terminals as accessories



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

Protection of systems and cables

Rated current =
rated uninterrupted
current

$I_n = I_u$
A

Setting range

Overload releases
Main pole

I_r

A



Neutral
conductor

I_r
A



Short-circuit
releases

I_i
A



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

Part no.
Article no.

Price
see price list

4 pole

Rated current (A)	Overload releases (A)	Neutral conductor (A)	Short-circuit releases (A)	Part no. / Article no.
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

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

Notes

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

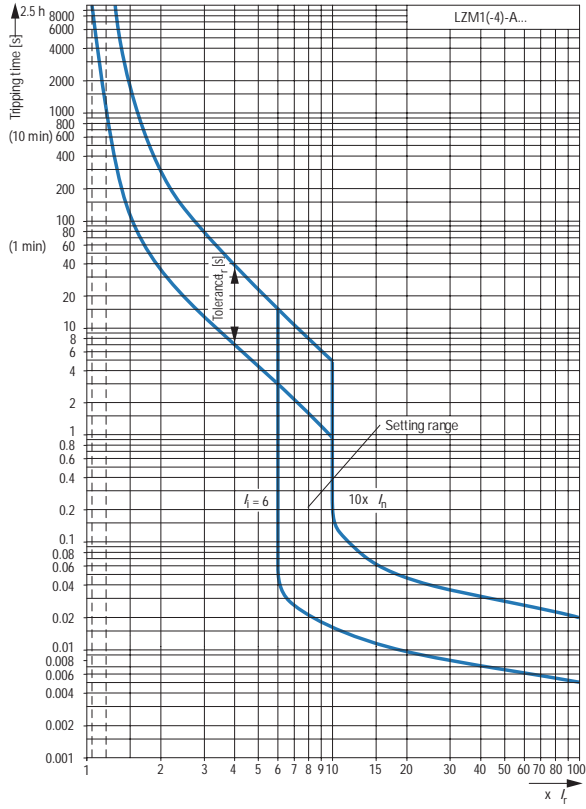
LZMS3-4-AE400 109647
LZMS3-4-AE400/250 109648
LZMS3-4-AE630 109649
LZMS3-4-AE630/400 109650
LZMS4-4-AE800 110976
LZMS4-4-AE800/500 110977
LZMS4-4-AE1000 110978
LZMS4-4-AE1000/630 110979
LZMS4-4-AE1250 110980
LZMS4-4-AE1250/800 110981
LZMS4-4-AE1600 110982
LZMS4-4-AE1600/1000 110983

IEC/EN 60947-2
Adjustable overload releases I_f
• 0.5 – 1 x I_n (ex-works 0.8 x I_n)
Setting on neutral pole implemented via the main pole setting I_f of the main pole.
R.m.s. value measurement and “thermal memory”
Adjustable short-circuit releases I_i
• LZM...3-4-AE400: 2 – 11 x I_n (ex-works 6 x I_n)
• LZM...3-4-AE630: 2 – 8 x I_n (ex-works 6 x I_n)
• LZM...4-4-AE...: 2 – 12 x I_n (ex-works 6 x I_n)

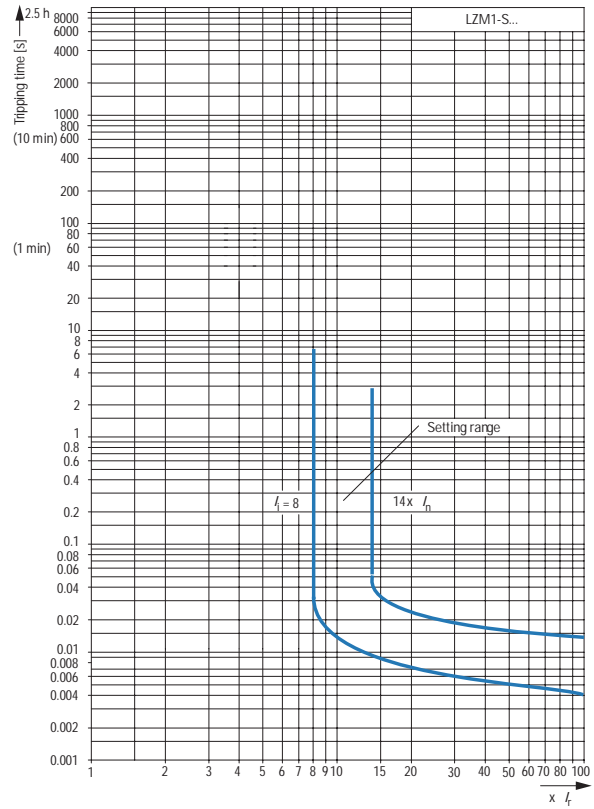
LZM...-4-AE...
• With 100 % overload and short-circuit protection in 4th pole
LZM...-4-AE.../...
• With 60 % overload and short-circuit protection in 4th pole

1 Sizes 1, 2: tripping characteristics LZM1, LZM2

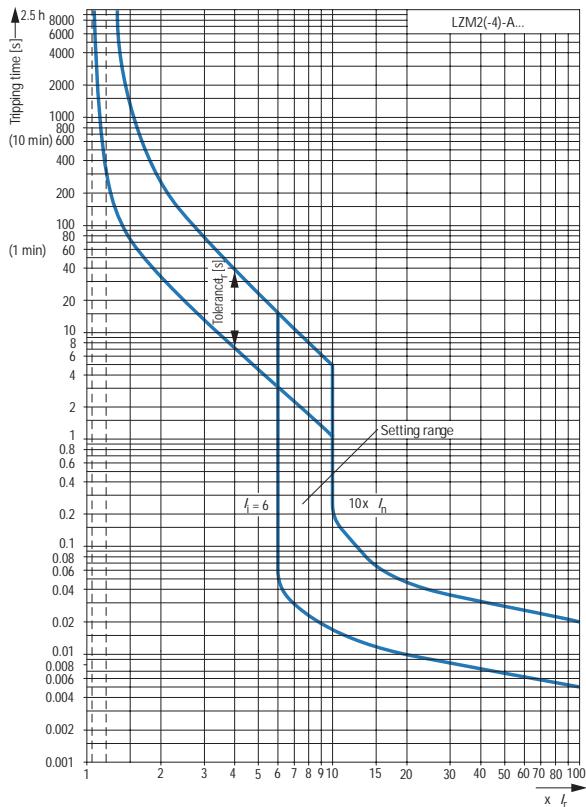
System and line protection with LZM1



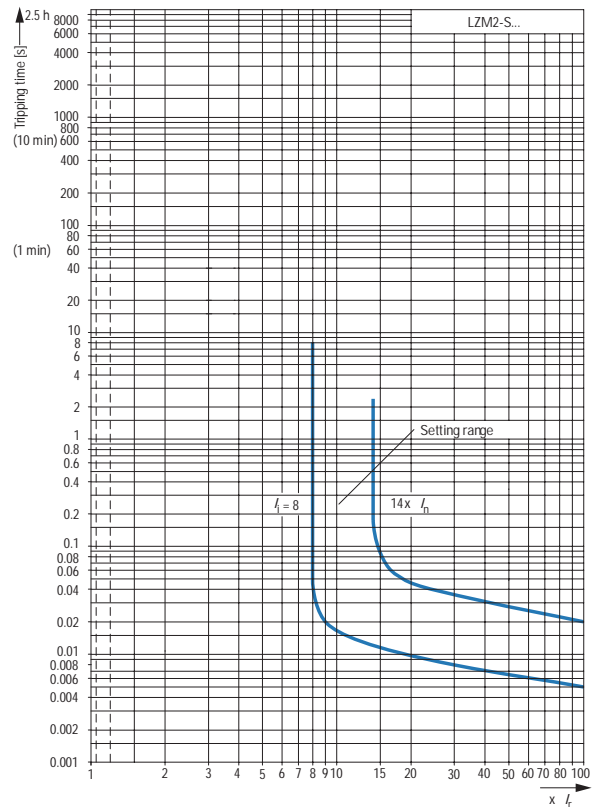
Motor protection with LZM1



System and line protection with LZM2

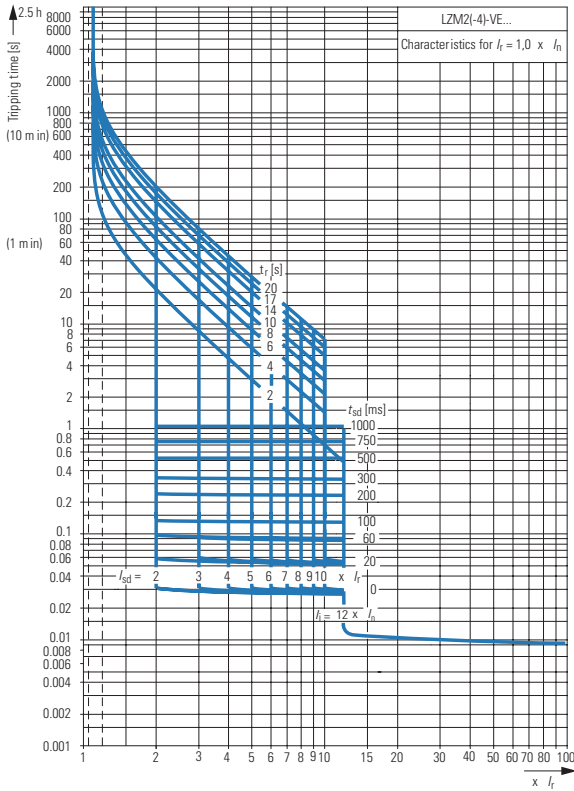


Motor protection with LZM2

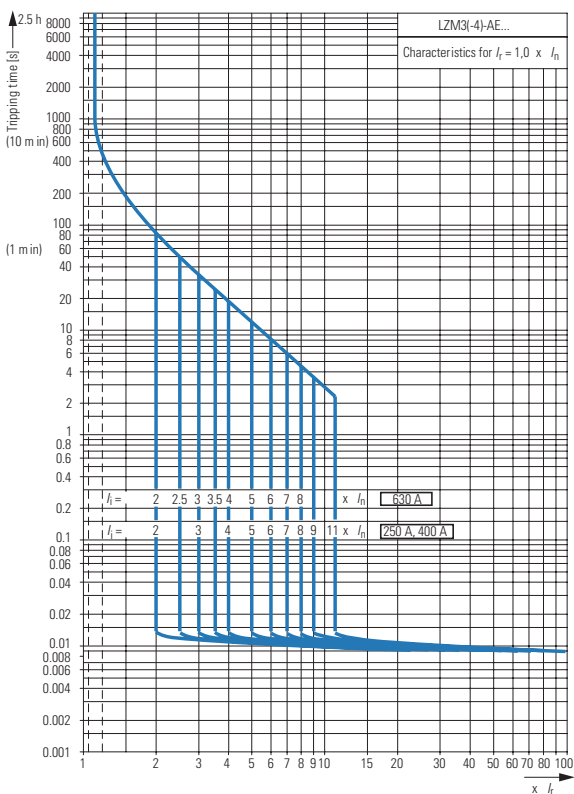


Sizes 2, 3: tripping characteristics LZW2, LZW3

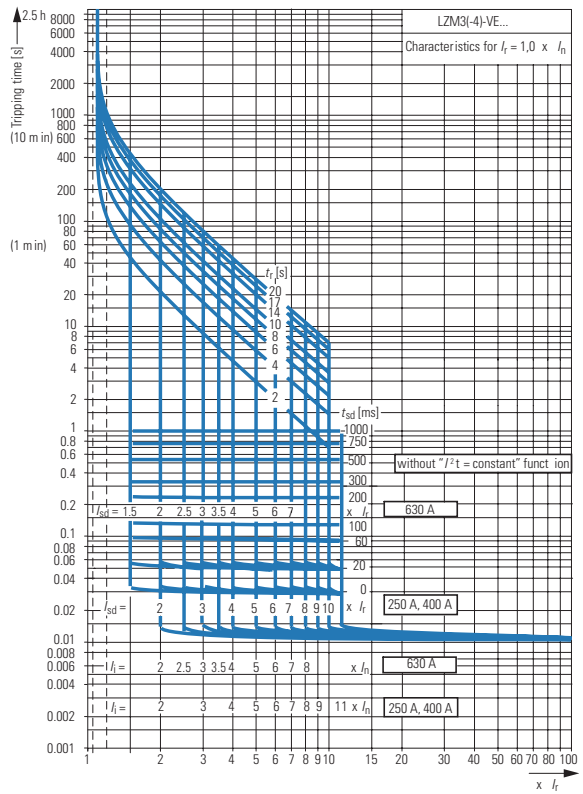
Systems, cable, selectivity and generator protection with LZW2



System and line protection with LZW3

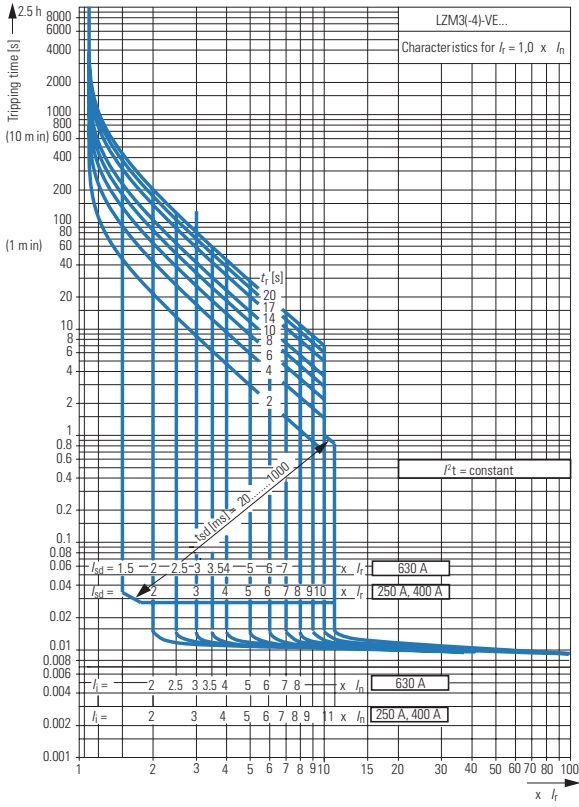


Systems, cable, selectivity and generator protection with LZW3



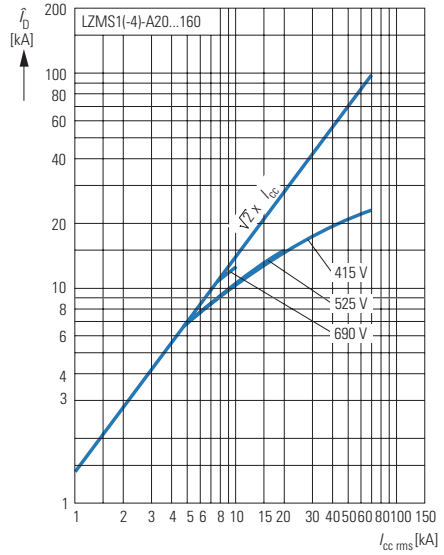
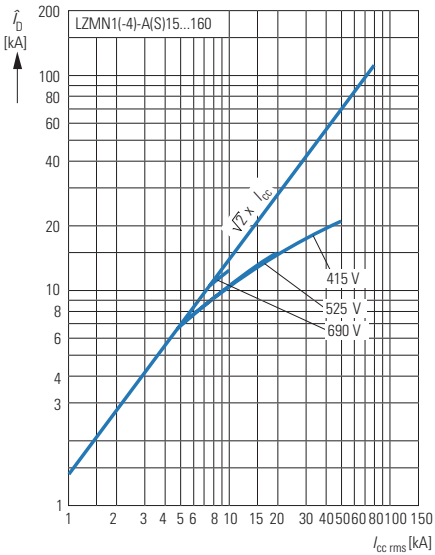
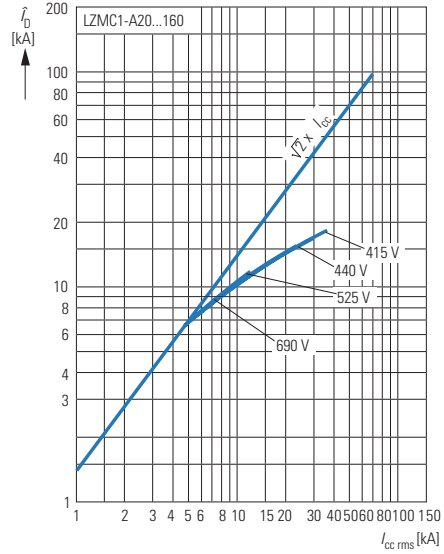
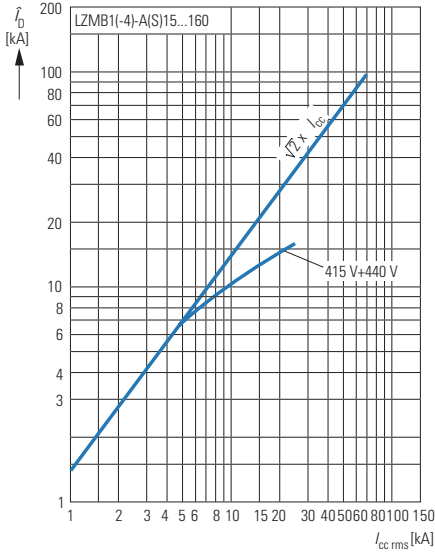
1 Sizes 3, 4: tripping characteristics LZM3, LZM4

Systems, cable, selectivity and generator protection with LZM3



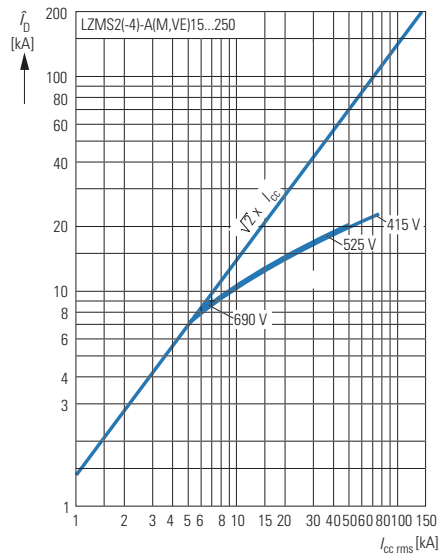
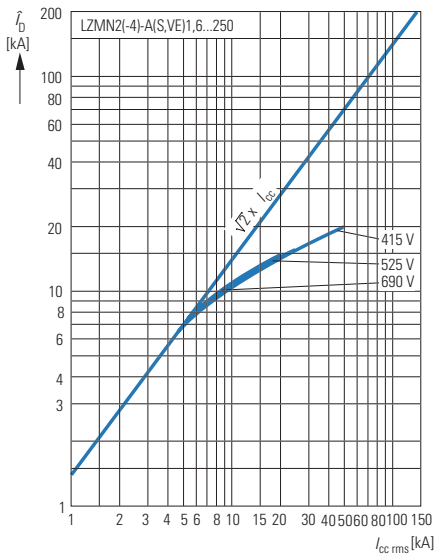
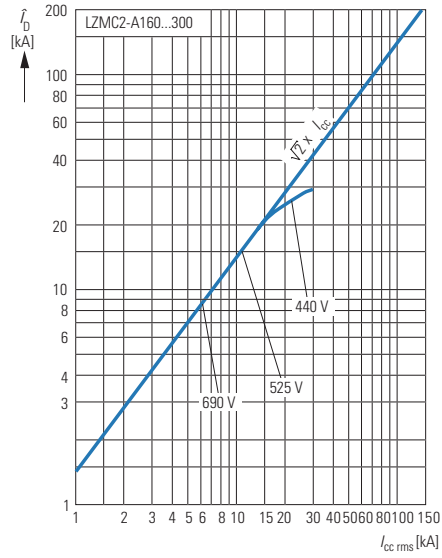
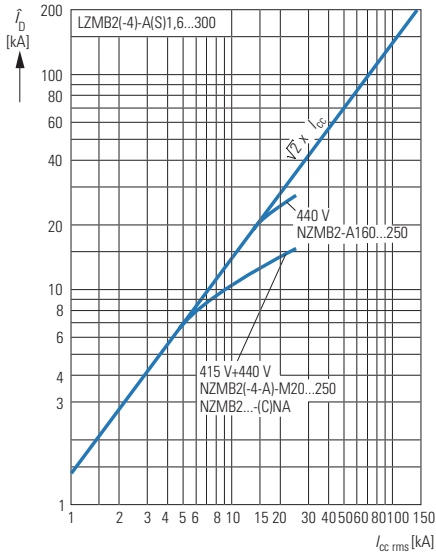
Frame size 1: let-through characteristics LZM1

Let-through current \hat{i}_D



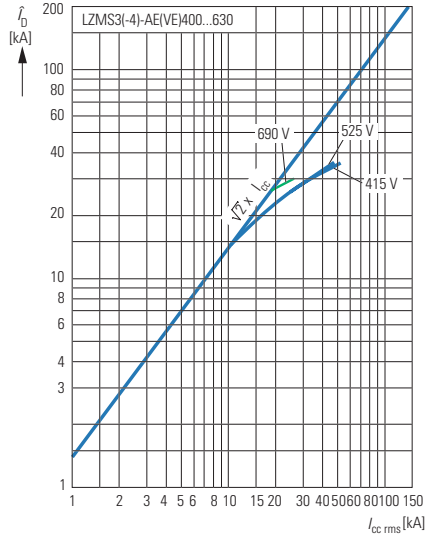
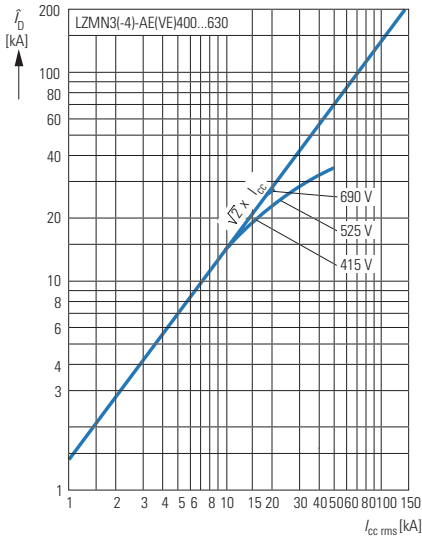
1 Frame size 2: let-through characteristics LZM2

Let-through current \hat{i}_D

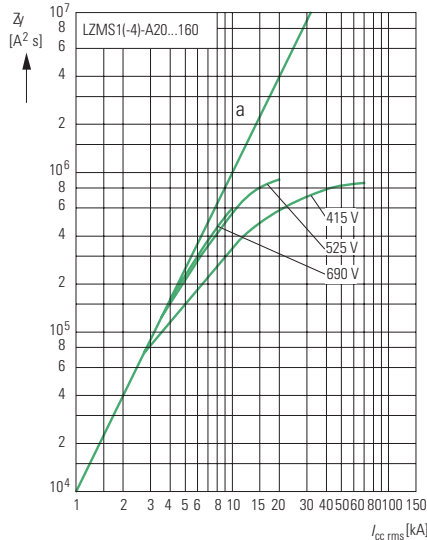
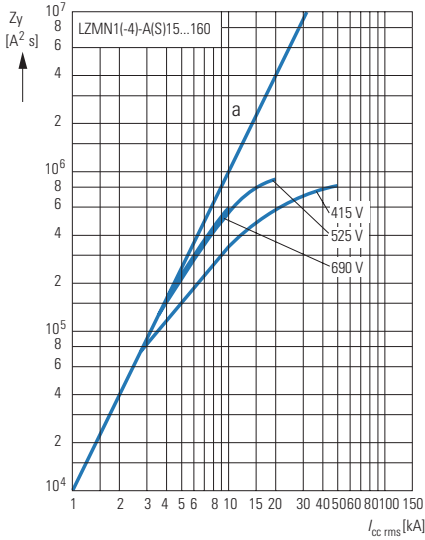
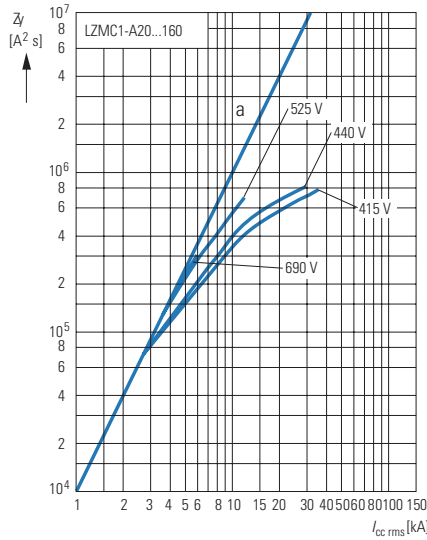
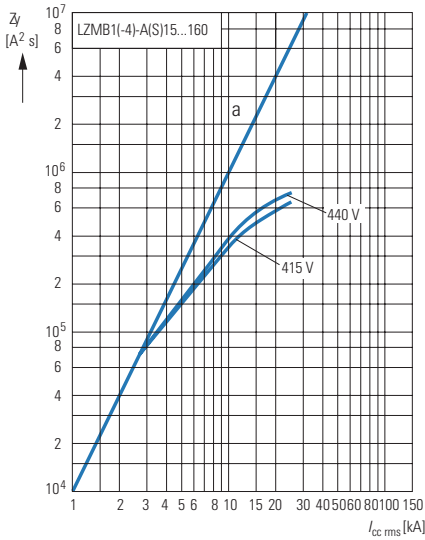


Sizes 1, 3: let-through characteristics LZM1, LZM3

Let-through current \hat{i}_D



Let-through energy I^2t

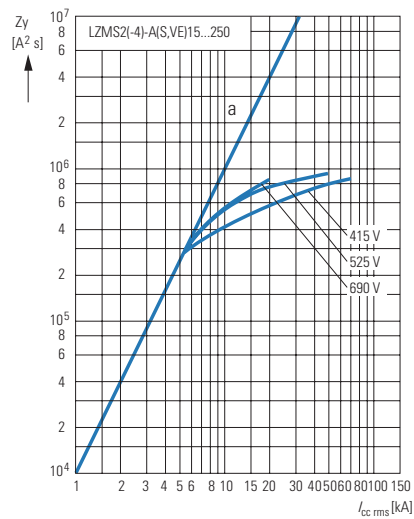
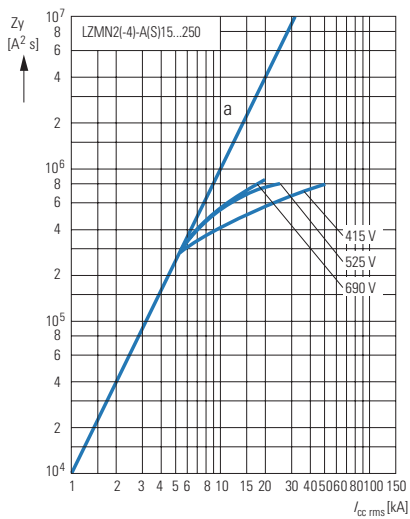
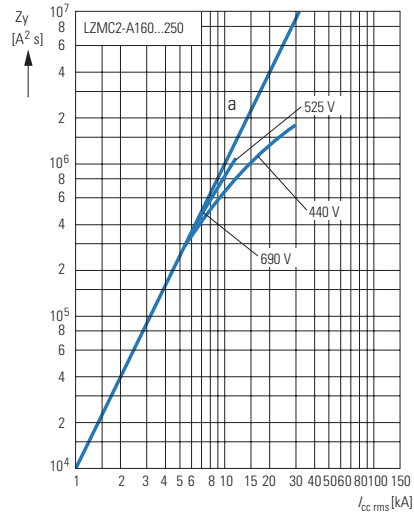
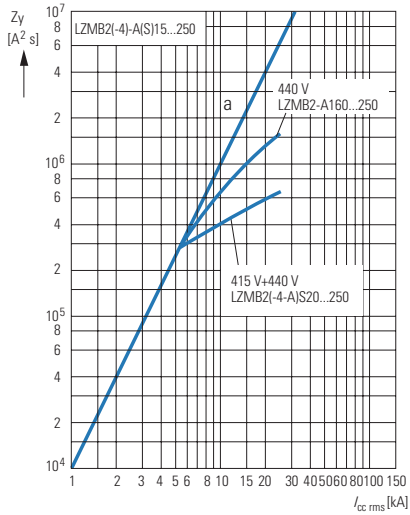


a 1 half-cycle

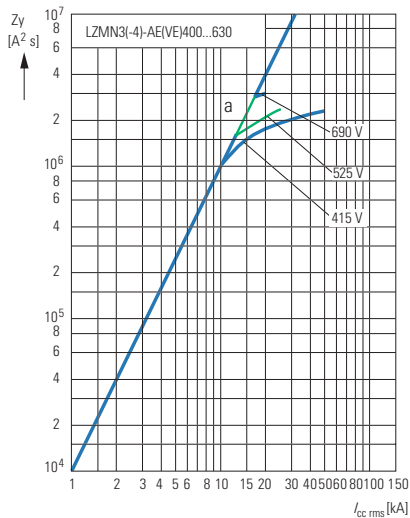
a 1 half-cycle

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

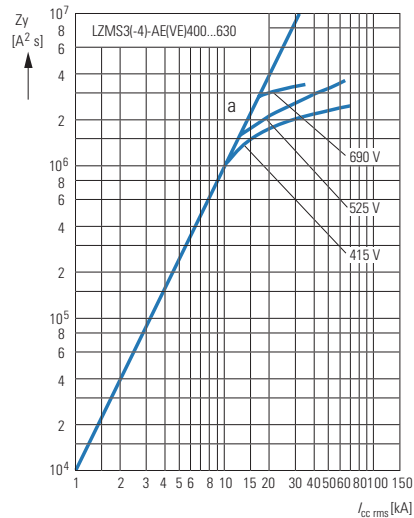
Let-through energy I^2t



a 1 half-cycle



a 1 half-cycle



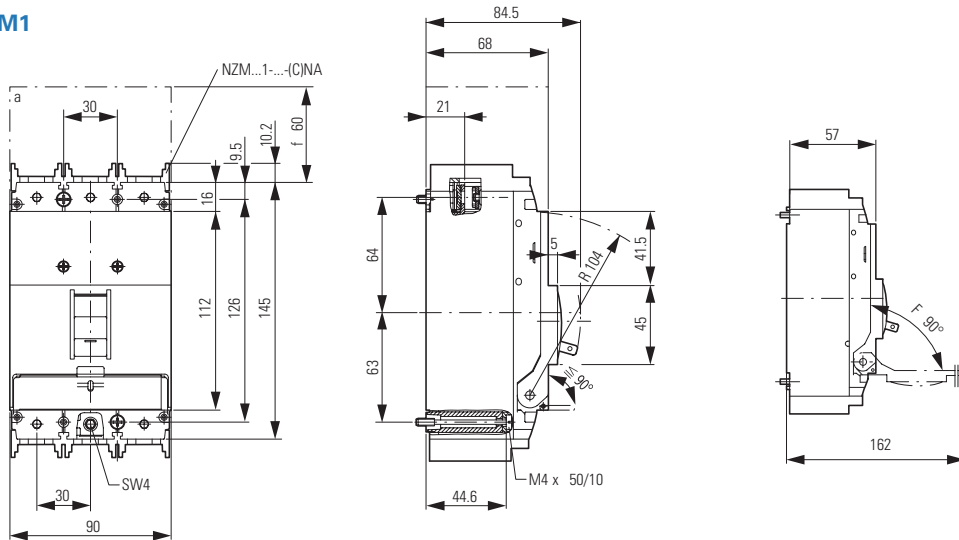
a 1 half-cycle

Size 1: basic units LZM1

Circuit-breaker

3 pole

- LZMB1
- LZMC1
- LZMN1
- LZMS1

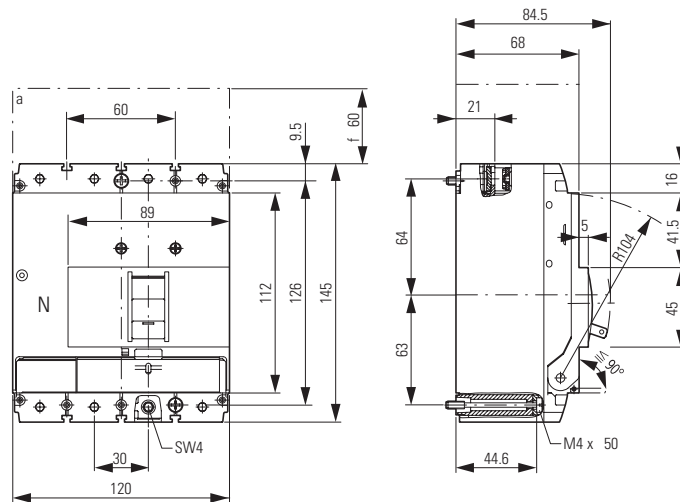


a Blow out area, minimum clearance to other parts 60 mm

Circuit-breaker

4 pole

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



a Blow out area, minimum clearance to other parts 60 mm

Covers

NZM1(-4)-XKSA

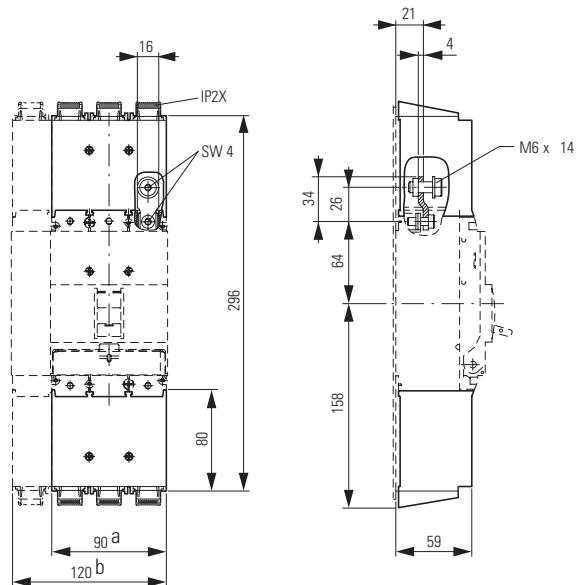
Screw connection

NZM1(-4)-XKS

IP2X protection against contact with a finger for shroud

NZM1(-4)-XIPA

Screw connection



a 3 pole
b 4 pole

1.5 Circuit-breakers LZM

Dimensions

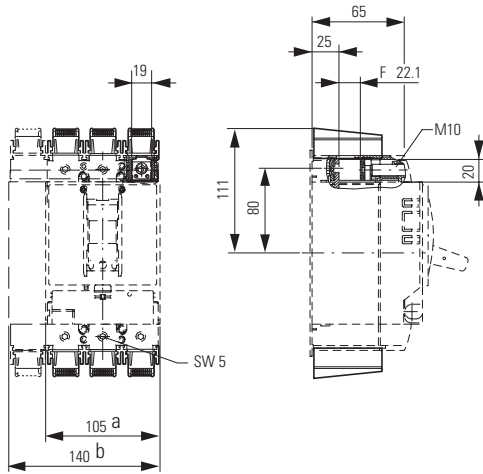
1 Size 2: accessories NZM2...-XK..., NZM2...-XIP..., NZM2-XST...

Box terminal

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

IP2X protection against contact with a finger

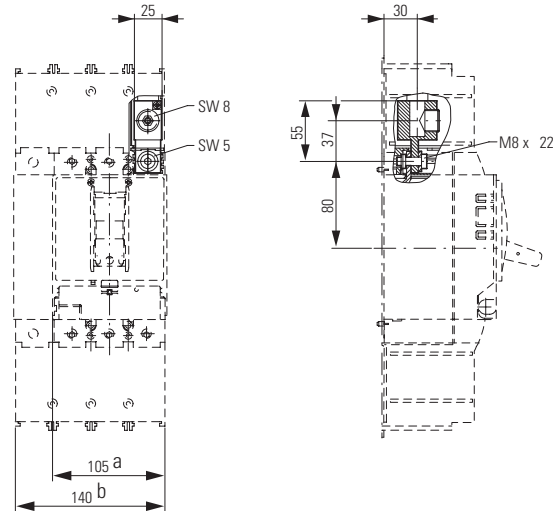
NZM2(-4)-XIPK



a 3 pole
b 4 pole

Tunnel terminal

NZM2(-4)-XKA



Covers

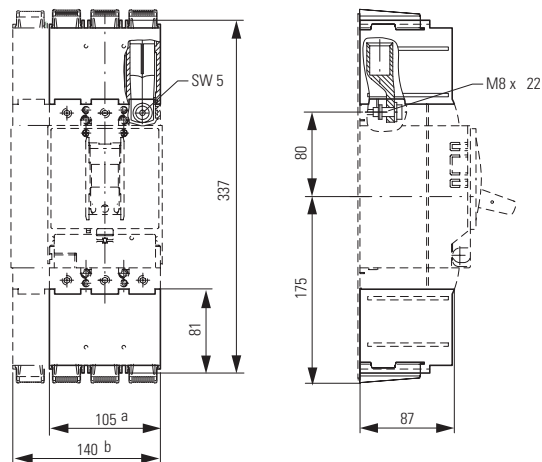
NZM2(-4)-XKSA

Cable lug

NZM2-XKS185

IP2X protection against contact with a finger for shroud

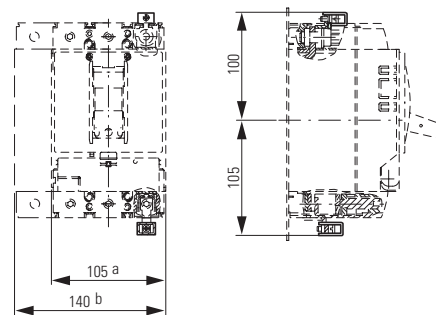
NZM2(-4)-XIPA



Control circuit terminal

NZM2-XSTS

NZM-XSTK



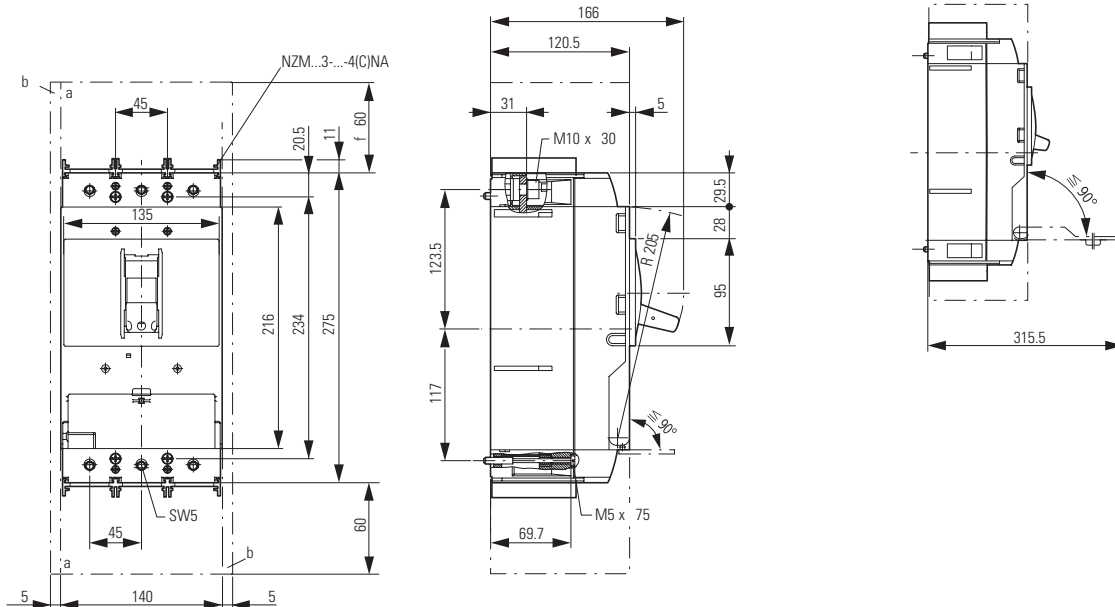
a 3 pole
b 4 pole

Size 3: Basic units LZM3

Circuit-breaker

3 pole

- LZMC3
- LZMN3
- LZMS3

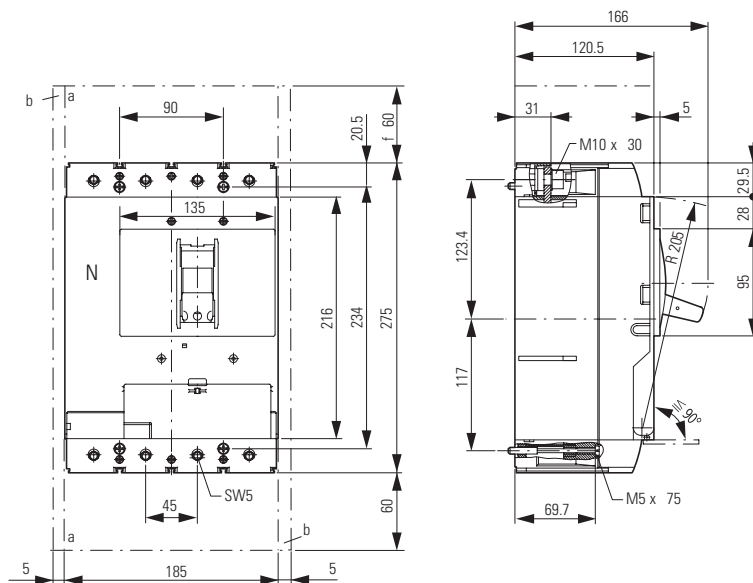


a Blow-out space, minimum distance to other parts 60 mm
b Minimum distance to adjacent parts 5 mm

Circuit-breaker

4 pole

- LZMC3-4
- LZMN3-4
- LZMS3-4



a Blow-out space, minimum distance to other parts 60 mm
b Minimum distance to adjacent parts 5 mm

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