Circuit breaker LZM series up to 1000A

**Reliable, safe and simple products for energy distribution systems in high density residential, commercial and industrial buildings.
Enabled by innovative protection concepts.**

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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Circuit-breaker series LZM1 to LZM4

- just 4 compact frame sizes
- available as 3 and 4-pole device up to 1000A
- equal dimension as NZM range
- flexible mounting using modular function groups
- suitable for 50°C according derating table
- switch suitable for world-wide use

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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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Door coupling rotary handles

- identical drilling template for all variants
- innovative automatic centring
- axis support for long-term reliable operation

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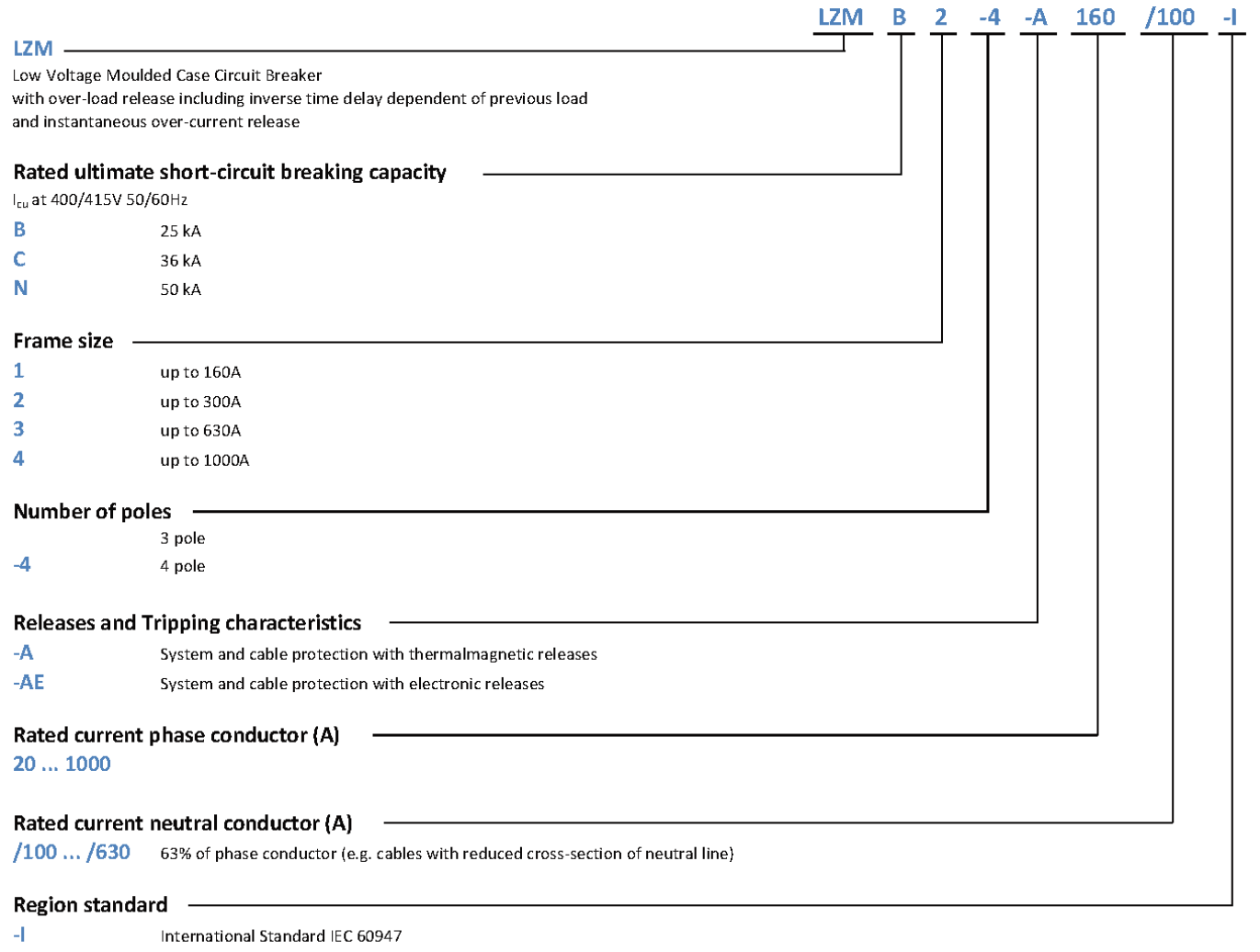
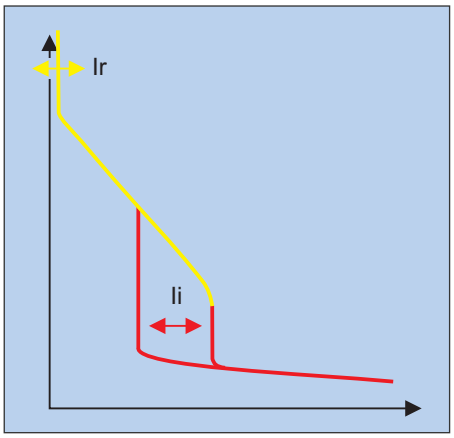
Type code for LZM-I MCCBs



The description of the type code is a logic sequence of short circuit level, frame size, number of poles, trip unit and nominal current.

Over-current releases

Thermomagnetic release A



1 **Overload protection**

Ir = 0,8 - 1 x In

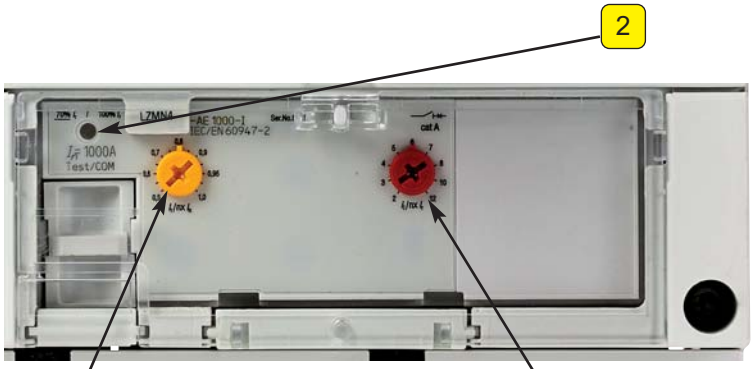
Neutral protection
The neutral pole is protected by the thermal device featuring an Irn tripping threshold of 100% or 60% of the Ir threshold adjusted with respect to the phases.

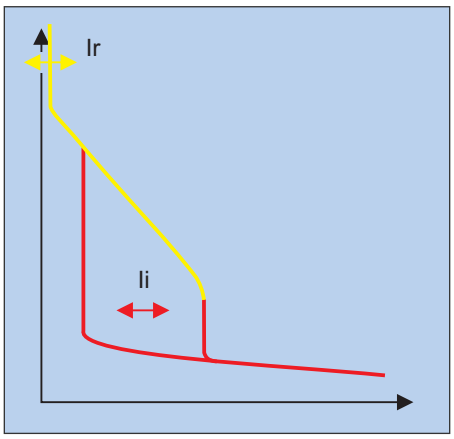
In this way, conductors, which may have a smaller section on the less charged neutral pole as in the phases, may be dimensioned effectively.

2 **Short-circuit protection**
Device with instantaneous tripping and adjustable Ii threshold

Ii = 6 - 10 x In

Electronic release without delay AE





1 **Overload protection**
Device featuring microprocessor with inverse time tripping and adjustable threshold
Ir = 0,5 - 1 x In

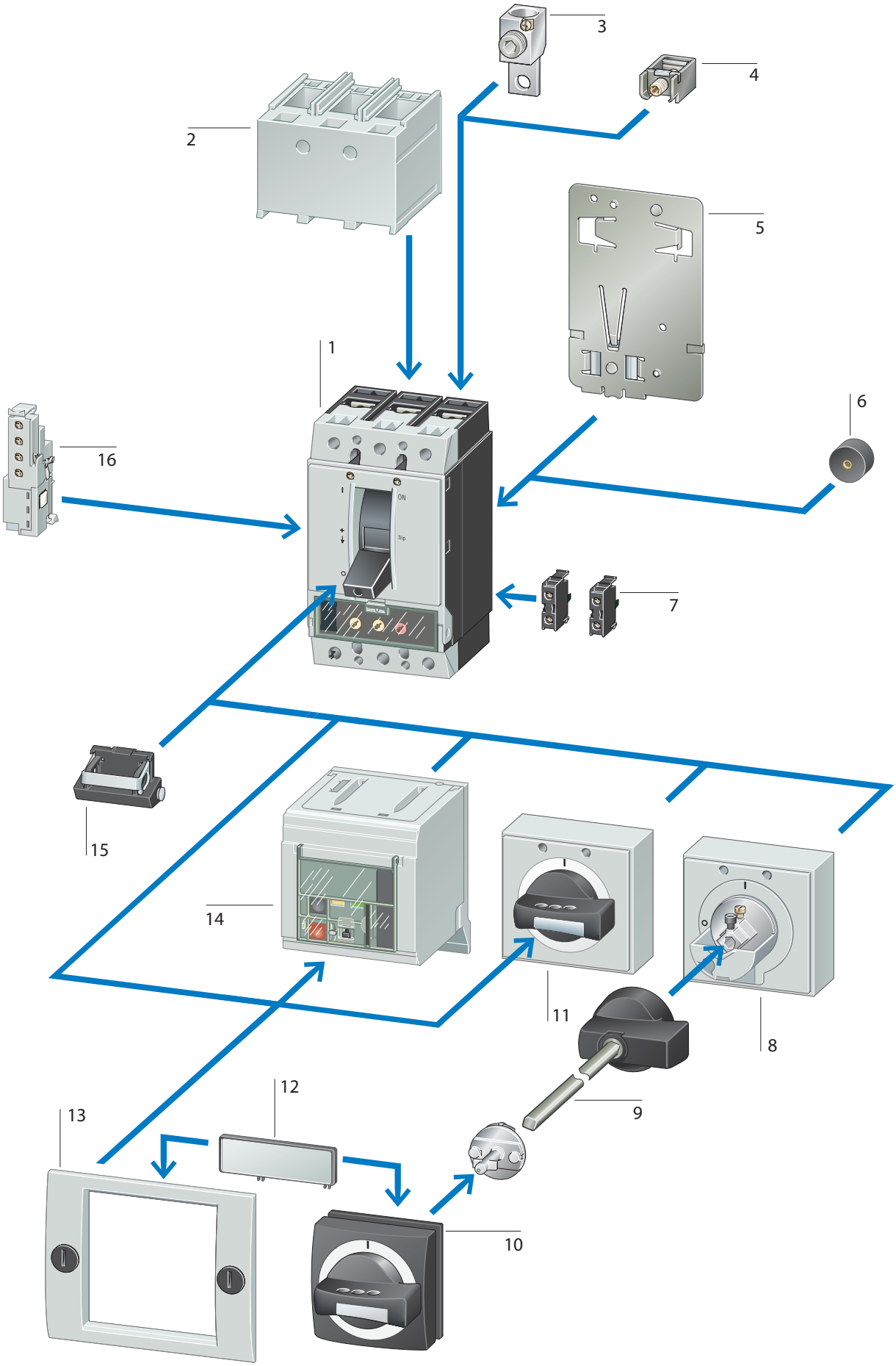
Neutral protection
The neutral pole is protected by the thermal device featuring an Irn tripping threshold of 100% or 60% of the Ir threshold adjusted with respect to the phases.

The protection featuring advance threshold is intended for high In rated currents (≥160A): in these cases, the statutory provision allows the use of cables with a smaller section than in the phases.

2 **Led for indication of overload**
The LED starts to light when the charge value approaches the In value or exceeds it:

Charge	<70% Ir	≥ 70%Ir	≥ 100% Ir
LED	off	steady	on intermittent

3 **Short-circuit protection**
Device featuring instantaneous tripping and adjustable Ii threshold
Ii = 2 - 8/12 x In


3
4
2
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1
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16
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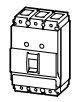
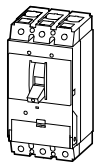
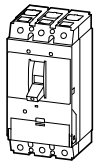
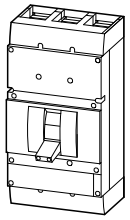
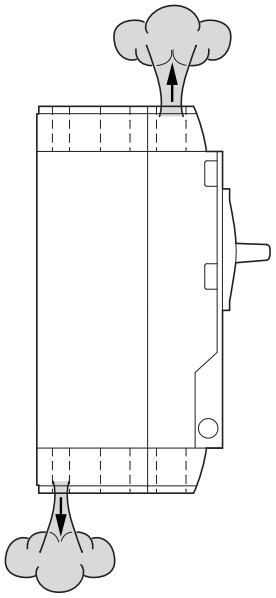
13
10

	Rated current = rated uninterrupted current	**Setting range**		Basic switching capacity **25 kA** at 415 V 50/60 Hz		Comfort switching capacity **36 kA** at 415 V 50/60 Hz	
				Part no. Article no.	**Price** see price list	**Part no.** Article no.	**Price** see price list
	$I_n = I_u$	Overload releases	Short-circuit releases				
	A	I_r	I_i				
		A	A				
Protection of systems and cables							
3 pole with thermo-magnetic release							
Terminals standard, terminal screws as accessories							
	20	15…20	350	**LZMB1-A20-I** 111848		**LZMC1-A20-I** 111888	
	25	20 ...25	350	**LZMB1-A25-I** 111849		**LZMC1-A25-I** 111889	
	32	25…32	350	**LZMB1-A32-I** 111850		**LZMC1-A32-I** 111890	
	40	32…40	320…400	**LZMB1-A40-I** 111851		**LZMC1-A40-I** 111891	
	50	40…50	300…500	**LZMB1-A50-I** 111852		**LZMC1-A50-I** 111892	
	63	50…63	380…630	**LZMB1-A63-I** 111853		**LZMC1-A63-I** 111893	
	80	63…80	480…800	**LZMB1-A80-I** 111854		**LZMC1-A80-I** 111894	
	100	80…100	600…1000	**LZMB1-A100-I** 111855		**LZMC1-A100-I** 111895	
	125	100…125	750…1250	**LZMB1-A125-I** 111856		**LZMC1-A125-I** 111896	
	160	125…160	1280	**LZMB1-A160-I** 111857		**LZMC1-A160-I** 111897	
Terminal screws standard, terminals as accessories							
	160	125…160	960...1600	**LZMB2-A160-I** 111922		**LZMC2-A160-I** 111938	
	200	160...200	1200...2000	**LZMB2-A200-I** 111923		**LZMC2-A200-I** 111939	
	250	200...250	1500...2500	**LZMB2-A250-I** 111924		**LZMC2-A250-I** 111940	
	300	240...300	1500...2500	**LZMB2-A300-I** 111925		**LZMC2-A300-I** 111941	
	320	250...320	1920...3200			**LZMC3-A320-I** 111954	
	400	320...400	2400...4000			**LZMC3-A400-I** 111955	
	500	400...500	3000...5000			**LZMC3-A500-I** 111956	
Notes	Notes for terminals → 15						
3 pole with electronic release							
Terminals screws standard, terminals as accessories							
	630	315...630	1260...5040			**LZMC3-AE630-I** 111957	
	800	400...800	1600...9600				
	1000	500...1000	2000...12000				
Notes	Notes for terminals → 19						

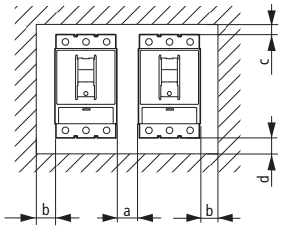
Direction of blow-out



	Top, front	Bottom, rear
LZM1	X	–
LZM2[1)]	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

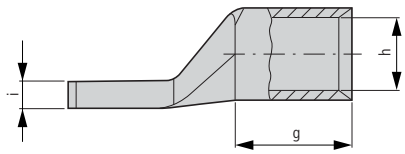
	LZM1	LZM2	LZM3	LZM4
LZM1	0	5	5	15
LZM2	5	5	5	15
LZM3	5	5	5	15
LZM4	15	15	15	15

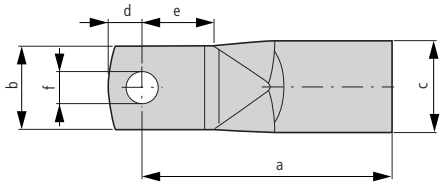
between switch and other parts
Minimum clearances in mm

	b ≦ 440 V	c ≦ 440 V	d ≦ 440 V
LZM1	0	30	0
LZM2[1)]	5	20	35
LZM3	5	30	60
LZM4	15	50	0

[1)] LZM2B(C) – A … c = 20 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	Terminal bolt	Dimensions in mm								
		mm²	ø	a	b	c	d	e	f	g	h	i
KS95-NZM7	LZM2	95	M8	53^{+2}	$23_{\pm 0.5}$	$18_{\pm 0.2}$	$10_{\pm 1}$	19	8,5	25	13,5	4,4
KS120-NZM7	LZM2	120	M8	56^{+2}	$23_{\pm 0.5}$	$19.5_{\pm 0.2}$	$10_{\pm 1}$	19	8,5	26	15	4,4
KS150-NZM7	LZM2	150	M8	61^{+2}	$23_{\pm 0.5}$	$21_{\pm 0.2}$	$10_{\pm 1}$	19	8,5	30	16,5	4,4
NZM2-XKS185	LZM2	185	M8	$65_{\pm 1.5}$	$22_{\pm 1}$	$24_{\pm 0.3}$	$9^{+1}_{-0.5}$	$19^{+2.5}_{-0.5}$	$8.5^{+0.05}_{-0.1}$	$30_{\pm 2}$	$19_{\pm 0.4}$	7
NZM3-XKS185	LZM3, LZM4	185	M10	65	24,5	24	11,5	18	10,5	30	19	$7.0_{\pm 0.8}$
NZM3-XKS240	LZM3, LZM4	240	M10	72	31	26	11,5	19	10,5	35	21	$5.0_{\pm 0.8}$