Description

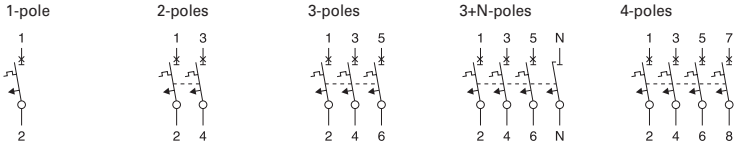
- Independent switching contacts
- With isolator function, meets the requirements of insulation co-ordination, distance between contacts ≥ 4 mm, for secure isolation

Accessories:		
Auxiliary switch for subsequent installation (0.5 MU)	Z-LHK	248440
Shunt Trip Release for subsequent installation (1.5 MU)	Z-LHASA/230	248442
	Z-LHASA/24	248441
Switching interlock	LH-SPL	285752
	LHSP-E	215999
Switchoff interlock	LHSP-A	216000

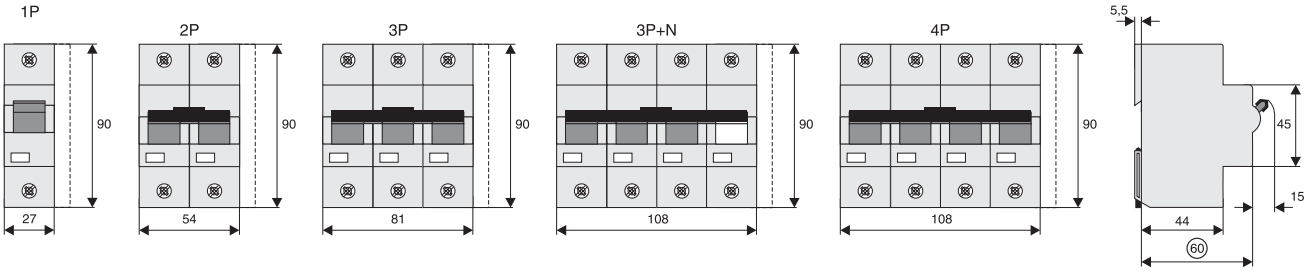
Technical Data

	AZ
Electrical	
Standards	IEC/EN 60947-2
Classified according to	IEC 61373, EN 45545-2
Current test marks as printed onto the device	
Rated operating voltage	230/400 V AC
	60 V DC (per pole)
Limiting breaking capacity according to IEC/EN 60947-2	
Characteristic B	I_n = 20-63 A: 25 kA
	I_n = 80-100 A: 20 kA
	I_n = 125 A: 15 kA
Characteristic C	I_n = 20-63 A: 25 kA
	I_n = 80-100 A: 20 kA
	I_n = 125 A: 15 kA
Characteristic D	I_n = 20-63 A: 25 kA
	I_n = 80 A: 20 kA
	I_n = 100 A: 15 kA
Characteristic	Similar: B, C, D
Max. back-up fuse	200 A gL/gG
Selectivity class	Compliant with class 3
Endurance	>10,000 Operations
Direction of incoming supply	Any
Mechanical	
Frame size	45 mm
Device height	90 mm
Mounting width per pole	27 mm
Terminal protection	finger and hand touch safe according to BGV A2
Mounting	Top-hat rail to IEC/EN 60715
Terminals top and bottom	Lift terminals
Terminal capacity	2.5 – 50 mm² (solid)
Operation temperature	-25 °C up to +55 °C
Storage- and transport temperature	-40 °C up to +75 °C

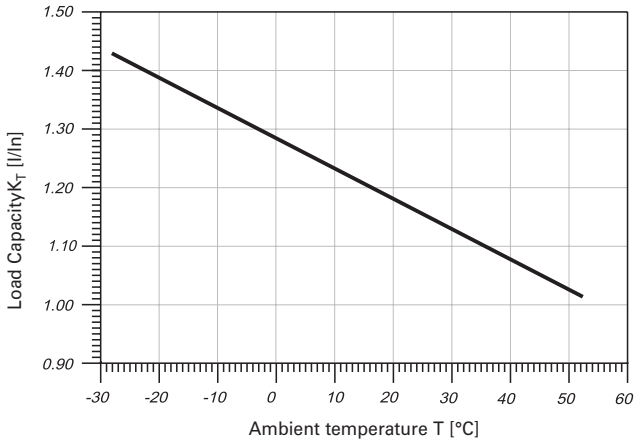
Connection diagram



Dimensions (mm)



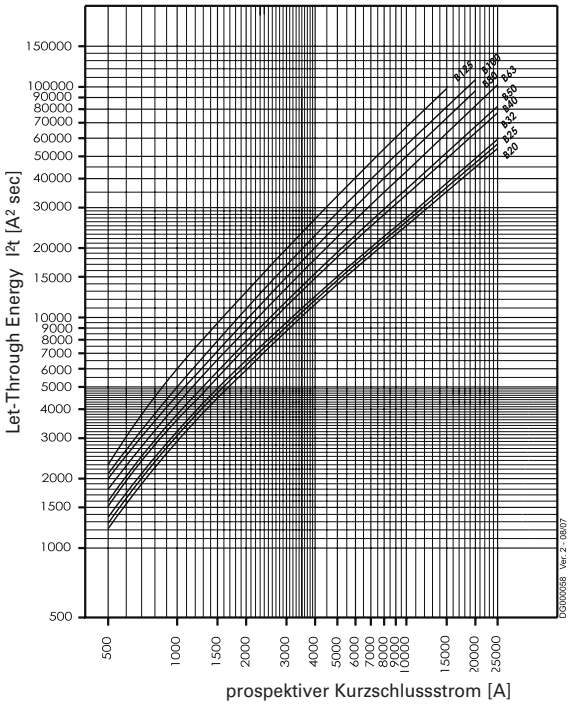
Influence of Ambient Temperature AZ



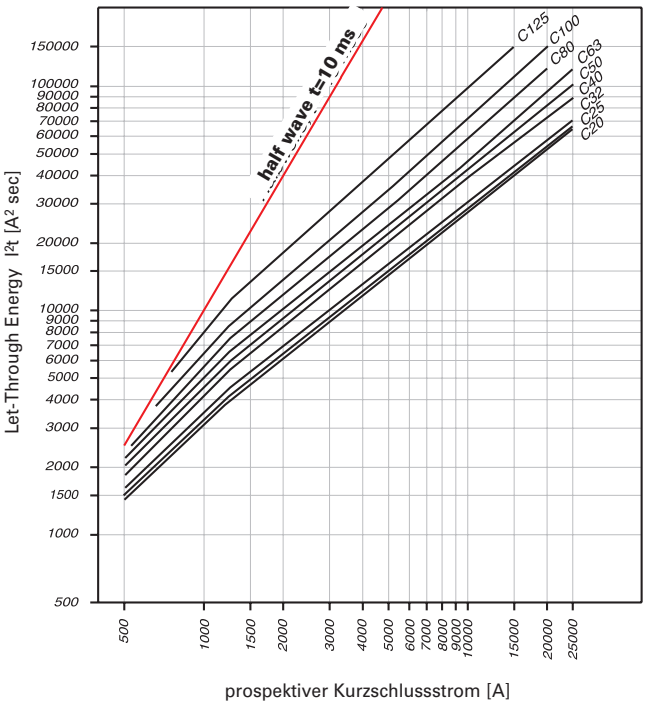
Permitted permanent load at ambient temperature T [°C] and n devices: $I_{DL} = I_n K_T(T) K_N(N)$.

Let-Through Energy AZ

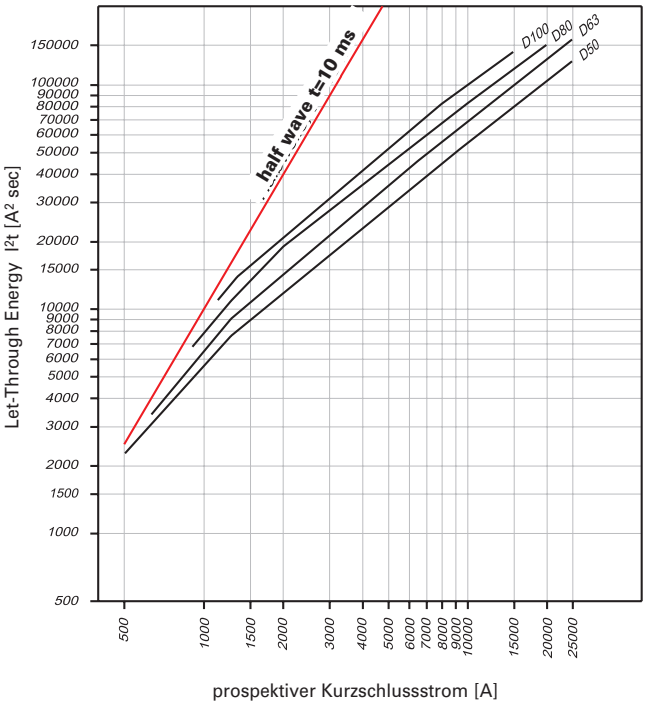
Maximum Let-Through Energy AZ, Characteristic B, 1poles



Maximum Let-Through Energy AZ, Characteristic C, 1poles



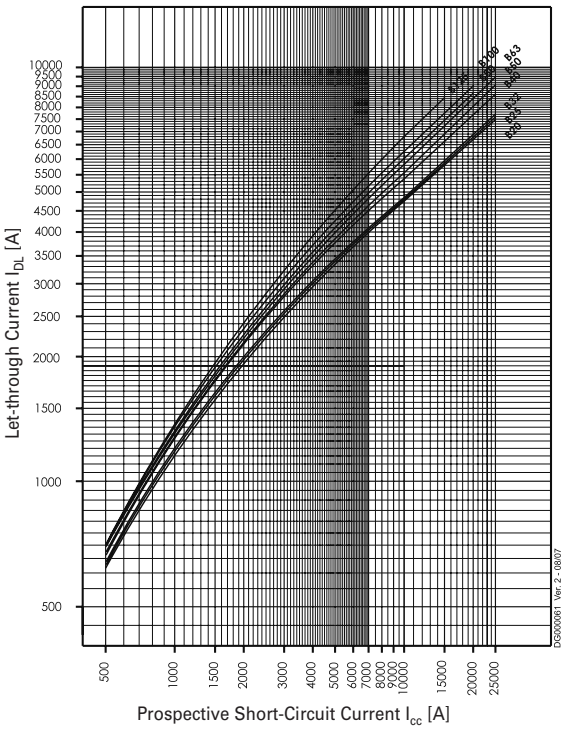
Maximum Let-Through Energy AZ, Characteristic D, 1poles



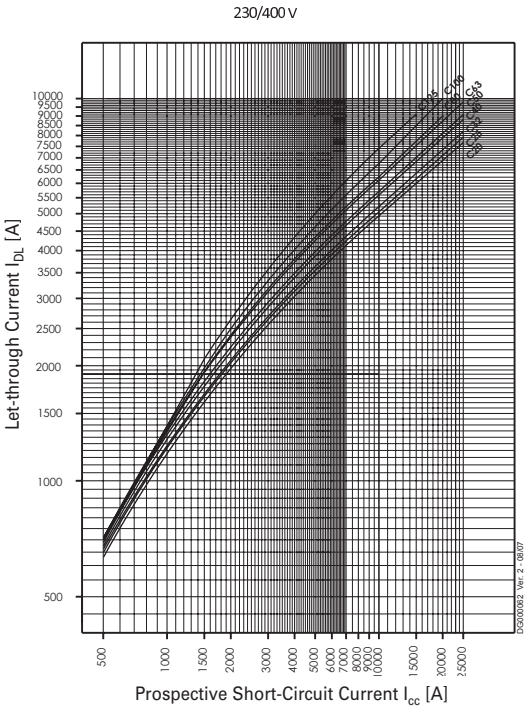
Determined according to EN 60898-1.

Maximum Let-Through Current AZ

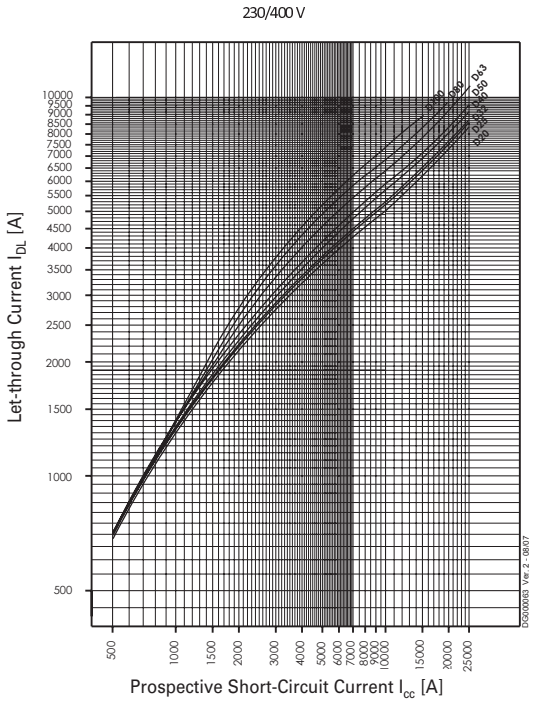
Type B



Type C



Type D



Short Circuit Selectivity AZ

In case of short circuit, there is selectivity between the miniature circuit breakers AZ and the upstream protection devices up to the specified values of the selectivity limit current I_s [kA] (i. e. in case of short-circuit currents I_{ks} under I_s, only the MCB will trip, in case of short circuit currents above this value both protective devices will respond).

AZ towards back-up fuses D01, D02, D03

Characteristic C

AZ	D01. D02. D03					
I_n [A]	25	35	50	63	80	100
20	0.5	1.0	2.0	2.9	3.9	7.6
25		1.0	1.9	2.8	3.8	7.3
32		1.0	1.8	2.7	3.6	7.0
40			1.6	2.2	3.0	5.6
50				2.1	2.8	5.2
63					2.7	4.8
80						4.3
100						
125						

Characteristic D

AZ	D01. D02. D03					
I_n [A]	25	35	50	63	80	100
20	0.5	0.9	1.7	2.5	3.4	6.7
25		0.9	1.6	2.3	3.2	6.2
32		0.9	1.5	2.3	3.0	6.0
40			1.4	2.0	2.6	4.7
50				1.8	2.3	4.3
63					2.1	3.7
80						3.1
100						

AZ towards back-up fuses NH Gr. 00

Characteristic C

AZ	NH Gr. 00									
I_n [A]	25	35	40	50	63	80	100	125	160	200
20	0.5	1.0	1.3	1.9	2.7	3.7	6.7	17.0	25.0	25.0
25		0.9	1.3	1.8	2.6	3.5	6.5	17.0	25.0	25.0
32		0.9	1.2	1.7	2.4	3.3	6.0	15.0	23.0	25.0
40				1.4	2.1	2.9	4.8	12.0	18.0	25.0
50					1.9	2.7	4.5	11.0	17.0	25.0
63							4.2	10.0	15.0	25.0
80							3.8	8.5	12.0	25.0
100								7.0	10.0	25.0
125									7.5	25.0

Characteristic D

AZ	NH Gr. 00									
I_n [A]	25	35	40	50	63	80	100	125	160	200
20	<0.5	0.8	1.1	1.5	2.3	3.1	5.6	16.0	25.0	25.0
25		0.7	1.0	1.4	2.1	3.0	5.3	14.0	23.0	25.0
32		0.7	1.0	1.3	2.1	2.9	5.0	13.0	22.0	25.0
40				1.1	1.8	2.5	4.2	10.0	15.0	25.0
50					1.6	2.3	3.8	8.5	13.0	22.0
63						2.1	3.2	7.0	10.5	18.0
80							2.8	5.5	8.4	15.0
100								4.8	7.5	12.5

AZ towards NZM 1

Characteristic C

AZ	NZM...1-A gL/gG					
I_n [A]	40	50	63	80	100	125
20	0.5	1.0	1.3	1.9	2.7	3.7
20	0.3	0.4	0.5	0.75	0.9	1.25
25	0.3	0.4	0.5	0.7	0.9	1.2
32		0.4	0.5	0.7	0.85	1.2
40			0.5	0.6	0.85	1.1
50				0.6	0.85	1.1
63					0.8	1
80						1
100						
125						

Characteristic D

AZ	NZM...1-A gL/gG					
I_n [A]	40	50	63	80	100	125
50						
63						
80						
100						

Shaded fields: no selectivity

AZ towards NZM 2

Characteristic C

AZ	NZM...2-A gL/gG								
I_n [A]	40	50	63	80	100	125	160	200	250
20	0.3	0.4	0.5	0.75	0.9	1.25	1.8	2.5	3.5
25	0.3	0.4	0.5	0.7	0.9	1.2	1.7	2.4	3.3
32		0.4	0.5	0.7	0.85	1.2	1.65	2.3	3.2
40			0.5	0.6	0.85	1.1	1.5	2.1	2.9
50				0.6	0.85	1.1	1.5	2	2.8
63					0.8	1	1.4	1.8	2.5
80						1	1.4	1.8	2.4
100							1.3	1.7	2.3
125								1.6	2.1

Characteristic D

AZ	NZM...2-A gL/gG								
I_n [A]	40	50	63	80	100	125	160	200	250
50							1	1.4	2.6
63							1	1.3	2.3
80									2.1
100									

Shaded fields: no selectivity

Back-up Protection AZ

The up-stream protective devices will protect the down-stream AZ up to the short-circuit current specified.

AZ and NZM(B)(C)(N)(H)1

AZ	NZMB1
I_n [A]	U_e = 230/400 V
20	25 kA
25	25 kA
32	25 kA
40	25 kA
50	25 kA
63	25 kA
80	25 kA
100	25 kA
125	25 kA

AZ	NZMC1
I_n [A]	U_e = 230/400 V
20	36 kA
25	36 kA
32	36 kA
40	36 kA
50	36 kA
63	36 kA
80	36 kA
100	36 kA
125	36 kA

AZ	NZMN1
I_n [A]	U_e = 230/400 V
20	50 kA
25	50 kA
32	50 kA
40	50 kA
50	50 kA
63	50 kA
80	50 kA
100	50 kA
125	50 kA

AZ	NZMH1
I_n [A]	U_e = 230/400 V
20	80 kA
25	80 kA
32	80 kA
40	80 kA
50	80 kA
63	80 kA
80	80 kA
100	80 kA
125	80 kA

AZ and NZM(B)(C)(N)(H)2

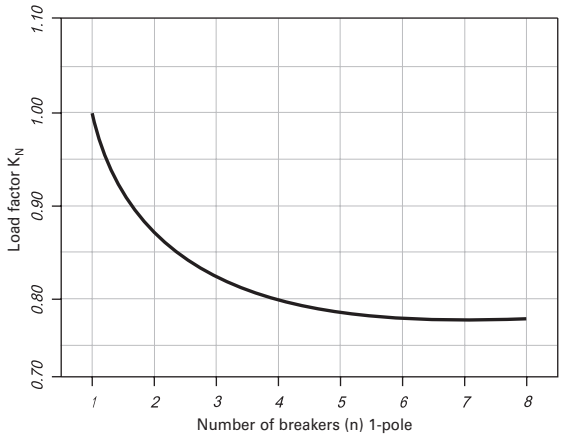
AZ	NZMB2
I_n [A]	U_e = 230/400 V
20	25 kA
25	25 kA
32	25 kA
40	25 kA
50	25 kA
63	25 kA
80	25 kA
100	25 kA
125	25 kA

AZ	NZMC2
I_n [A]	U_e = 230/400 V
20	36 kA
25	36 kA
32	36 kA
40	36 kA
50	36 kA
63	36 kA
80	36 kA
100	36 kA
125	36 kA

AZ	NZMN2
I_n [A]	U_e = 230/400 V
20	50 kA
25	50 kA
32	50 kA
40	50 kA
50	50 kA
63	50 kA
80	50 kA
100	50 kA
125	50 kA

AZ	NZMH2
I_n [A]	U_e = 230/400 V
20	65 kA
25	65 kA
32	65 kA
40	65 kA
50	65 kA
63	65 kA
80	65 kA
100	65 kA
125	65 kA

Load capacity in case of block installation AZ



Derating table for AZ above 2000m sea level

				60947-2			
				U_e 230/400 V			
				80/B, C, D and 100/B, C	80, 100/B, C, D	100/D and 125/B, C	100/D and 125/B, C
Above sea level (m)	Overvoltage category	Disconnect function	I/I_n	I_{cu}	I_{cs}	I_{cu}	I_{cs}
m	x	x	x	kA	kA	kA	kA
<=2000	III	yes	1	20	10	15	7.5
>2000-2500	II	no	0.93	15	7.5	10	6
>2500-3000	II	no	0.88	15	7.5	10	6
>3000-3500	II	no	0.83	15	7.5	10	6
>3500-4000	II	no	0.78	15	7.5	10	6