Miniature Circuit Breakers AZ

SG51412

- High-quality miniature circuit breakers for commercial and industrial applications
- Contact position indicator red - green
- Accessories suitable for subsequent installation
- Rated currents up to 125 A
- Tripping characteristics C, D
- Rated breaking capacity up to 25 kA according to EN 60947-2

AZ Miniature Circuit Breakers (MCBs)
Characteristic C

SG51212

1-pole

Rated current I_n (A)	Type Designation	Article No.	Units per package
20	AZ-C20	211769	12
25	AZ-C25	211774	12
32	AZ-C32	211779	12
40	AZ-C40	211784	12
50	AZ-C50	211789	12
63	AZ-C63	211794	12
80	AZ-C80	211799	12
100	AZ-C100	211804	12
125	AZ-C125	211809	12

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2-pole

20	AZ-2-C20	211770	2
25	AZ-2-C25	211775	2
32	AZ-2-C32	211780	2
40	AZ-2-C40	211785	2
50	AZ-2-C50	211790	2
63	AZ-2-C63	211795	2
80	AZ-2-C80	211800	2
100	AZ-2-C100	211805	2
125	AZ-2-C125	211810	2

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3-pole

20	AZ-3-C20	211771	1
25	AZ-3-C25	211776	1
32	AZ-3-C32	211781	1
40	AZ-3-C40	211786	1
50	AZ-3-C50	211791	1
63	AZ-3-C63	211796	1
80	AZ-3-C80	211801	1
100	AZ-3-C100	211806	1
125	AZ-3-C125	211811	1

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3+N-pole

20	AZ-3N-C20	211773	1
25	AZ-3N-C25	211778	1
32	AZ-3N-C32	211783	1
40	AZ-3N-C40	211788	1
50	AZ-3N-C50	211793	1
63	AZ-3N-C63	211798	1
80	AZ-3N-C80	211803	1
100	AZ-3N-C100	211808	1
125	AZ-3N-C125	211813	1

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4-pole

20	AZ-4-C20	211772	1
25	AZ-4-C25	211777	1
32	AZ-4-C32	211782	1
40	AZ-4-C40	211787	1
50	AZ-4-C50	211792	1
63	AZ-4-C63	211797	1
80	AZ-4-C80	211802	1
100	AZ-4-C100	211807	1
125	AZ-4-C125	211812	1

AZ Miniature Circuit Breakers (MCBs)
Characteristic D

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1-pole

Rated current I_n (A)	Type Designation	Article No.	Units per package
50	AZ-D50	211814	12
63	AZ-D63	211818	12
80	AZ-D80	211822	12
100	AZ-D100	211826	12

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2-pole

Rated current I_n (A)	Type Designation	Article No.	Units per package
50	AZ-2-D50	211815	2
63	AZ-2-D63	211819	2
80	AZ-2-D80	211823	2
100	AZ-2-D100	211827	2

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3-pole

Rated current I_n (A)	Type Designation	Article No.	Units per package
50	AZ-3-D50	211816	1
63	AZ-3-D63	211820	1
80	AZ-3-D80	211824	1
100	AZ-3-D100	211828	1

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3+N-pole

Rated current I_n (A)	Type Designation	Article No.	Units per package
50	AZ-3N-D50	211817	1
63	AZ-3N-D63	211821	1
80	AZ-3N-D80	211825	1
100	AZ-3N-D100	211829	1

Specifications | Miniature Circuit Breakers AZ

Description

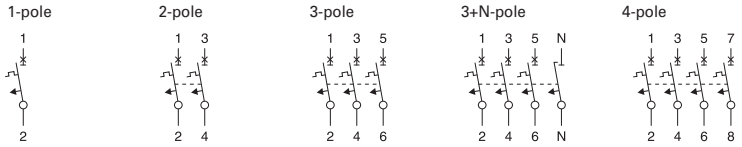
- Independent switching contacts
- With isolator function, meets the requirements of insulation co-ordination, distance between contacts ≥ 4 mm, for secure isolation

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
Tripping interlock	LH-SPL	285752
	LHSP-E	215999
Switchoff interlock	LHSP-A	216000

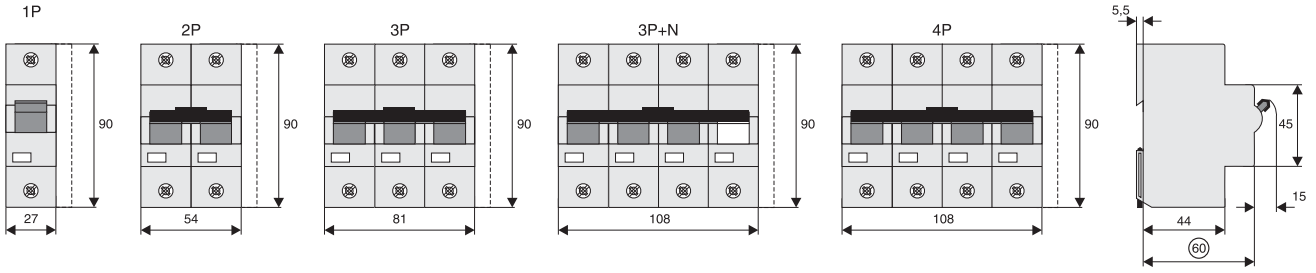
Technical Data

		AZ
Electrical		
Standards		IEC/EN 60947-2
Rated operating voltage		230/400 V AC
		60 V DC (per pole)
Limiting breaking capacity acc. to IEC/EN 60947-2		
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: C, D
Max. back-up fuse		200 A gL/gG
Selectivity class		Compliant with class 3
Lifespan	Operations	>10000
Direction of incoming supply		Any
Mechanical		
Standard front dimensions		45 mm
Device height		90 mm
Terminal protection		Finger and back-of-proof to BGV A2
Mounting width per pole		27 mm
Mounting		Top-hat rail to IEC/EN 60715
Terminals top and bottom		Lift terminals
Terminal capacity (solid)		2.5 – 50 mm²

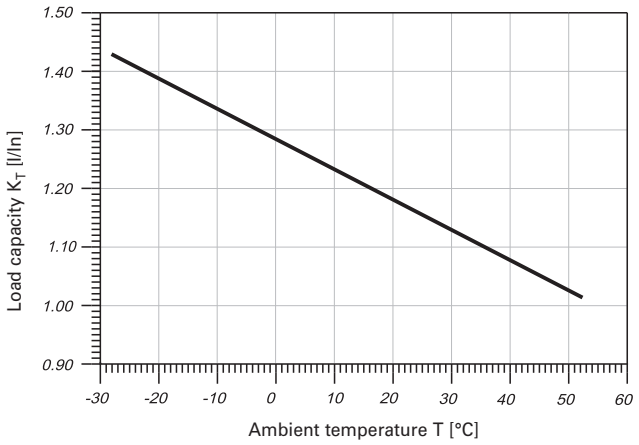
Connection diagram



Dimensions (mm)



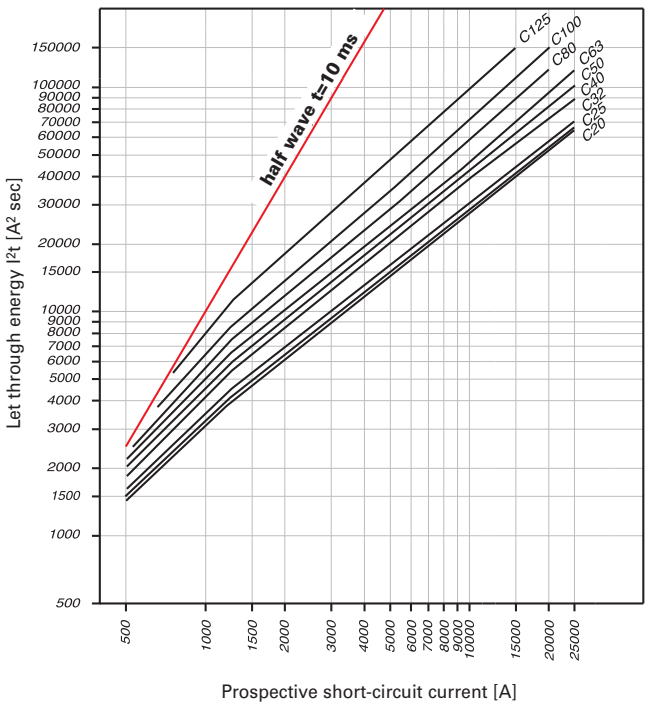
Effect of ambient temperature AZ



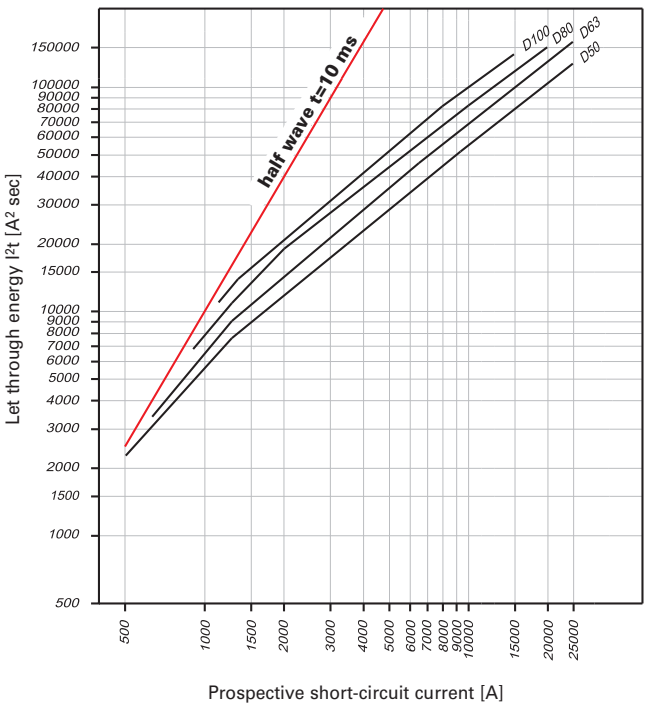
Permitted permanent load at ambient temperature T [°C] with n devices: $I_{DL} = I_n K_T(T) K_N(N)$.

Maximum Let-Through Energy AZ

Maximum let-through energy AZ, characteristic C, 1-pole



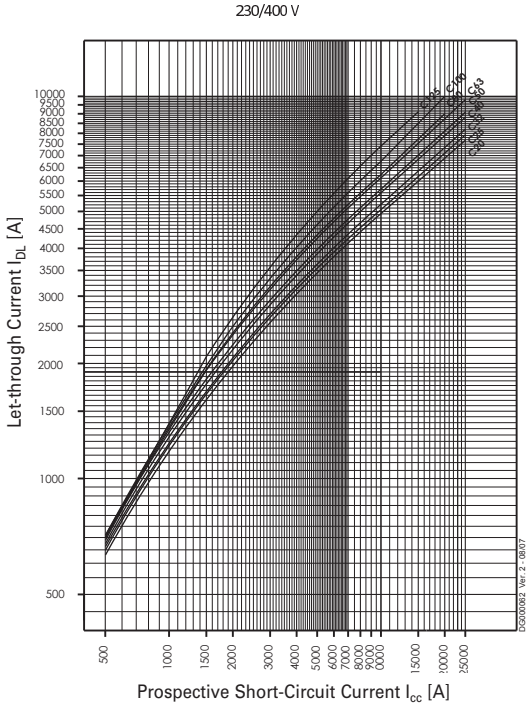
Maximum let-through energy AZ, characteristic D, 1-pole



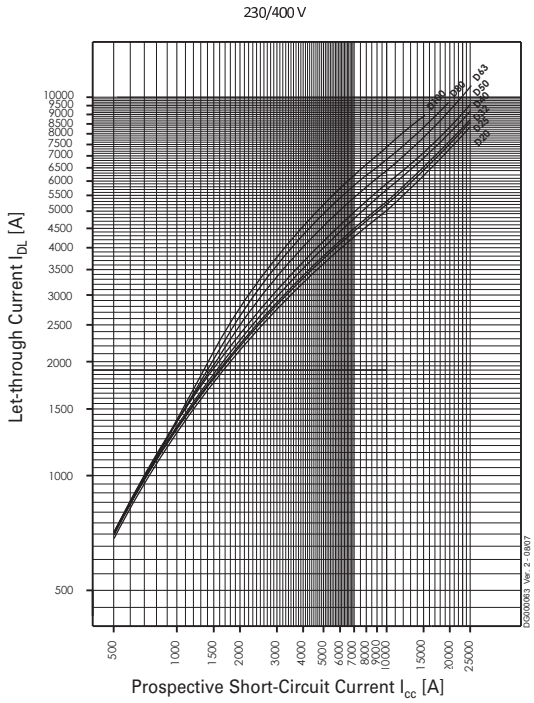
Determined according to EN 60898-1.

Maximum Let-Through Current AZ

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

Rated current I_n AZ in A		Rated current of the back-up fuse in A					
		25	**35**	**50**	**63**	**80**	**100**
C-Characteristic	**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						
D-Characteristic	**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

Rated current I_n AZ in A		Rated current of the back-up fuse in A									
		25	**35**	**40**	**50**	**63**	**80**	**100**	**125**	**160**	**200**
C-Characteristic	**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
D-Characteristic	**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

Short circuit selectivity **characteristic C** towards **NZM***)

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

Short circuit selectivity **characteristic D** towards **NZM***)

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

no selectivity

AZ towards NZM 2

Short circuit selectivity **characteristic C** towards **NZM***)

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

Short circuit selectivity **characteristic D** towards **NZM***)

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									

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-I_n/1(2,3,4) / C(D) + 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-I_n/1(2,3,4) / C(D) + 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-I_n/1(2,3,4) / C(D) + 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-I_n/1(2,3,4) / C(D) + 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-I_n/1(2,3,4) / C(D) + 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-I_n/1(2,3,4) / C(D) + 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-I_n/1(2,3,4) / C(D) + 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-I_n/1(2,3,4) / C(D) + 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