

SG04210



Description

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

Rated current I_n (A)	Type Designation	Article No.	Units per package
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25 kA, Characteristic B

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1-pole

20	mMCT-B20/1	152562	12
25	mMCT-B25/1	152634	12
32	mMCT-B32/1	152563	12
40	mMCT-B40/1	152564	12
50	mMCT-B50/1	152565	12
63	mMCT-B63/1	152635	12
80	mMCT-B80/1	129646	12
100	mMCT-B100/1	129647	12
125	mMCT-B125/1	129648	12

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2-pole

20	mMCT-B20/2	152704	6
25	mMCT-B25/2	152636	6
32	mMCT-B32/2	152705	6
40	mMCT-B40/2	152706	6
50	mMCT-B50/2	152707	6
63	mMCT-B63/2	152637	6
80	mMCT-B80/2	129654	6
100	mMCT-B100/2	129655	6
125	mMCT-B125/2	129656	6

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3-pole

20	mMCT-B20/3	152716	4
25	mMCT-B25/3	152638	4
32	mMCT-B32/3	152717	4
40	mMCT-B40/3	152718	4
50	mMCT-B50/3	152719	4
63	mMCT-B63/3	152639	4
80	mMCT-B80/3	129662	4
100	mMCT-B100/3	129663	4
125	mMCT-B125/3	129664	4

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3+N-pole

20	mMCT-B20/3N	152740	3
25	mMCT-B25/3N	153012	3
32	mMCT-B32/3N	152741	3
40	mMCT-B40/3N	152742	3
50	mMCT-B50/3N	152743	3
63	mMCT-B63/3N	153013	3
80	mMCT-B80/3N	129678	3
100	mMCT-B100/3N	129679	3
125	mMCT-B125/3N	129680	3

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4-pole

20	mMCT-B20/4	152728	3
25	mMCT-B25/4	153010	3
32	mMCT-B32/4	152729	3
40	mMCT-B40/4	152730	3
50	mMCT-B50/4	152731	3
63	mMCT-B63/4	153011	3
80	mMCT-B80/4	129670	3
100	mMCT-B100/4	129671	3
125	mMCT-B125/4	129672	3

Rated current I_n (A)	Type Designation	Article No.	Units per package
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25 kA, Characteristic C

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1-pole

20	mMCT-C20/1	152566	12
25	mMCT-C25/1	158059	12
32	mMCT-C32/1	152567	12
40	mMCT-C40/1	152568	12
50	mMCT-C50/1	152569	12
63	mMCT-C63/1	158310	12
80	mMCT-C80/1	129649	12
100	mMCT-C100/1	129650	12
125	mMCT-C125/1	129651	12

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2-pole

20	mMCT-C20/2	152708	6
25	mMCT-C25/2	158313	6
32	mMCT-C32/2	152709	6
40	mMCT-C40/2	152710	6
50	mMCT-C50/2	152711	6
63	mMCT-C63/2	158314	6
80	mMCT-C80/2	129657	6
100	mMCT-C100/2	129658	6
125	mMCT-C125/2	129659	6

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3-pole

20	mMCT-C20/3	152720	4
25	mMCT-C25/3	158317	4
32	mMCT-C32/3	152721	4
40	mMCT-C40/3	152722	4
50	mMCT-C50/3	152723	4
63	mMCT-C63/3	158318	4
80	mMCT-C80/3	129665	4
100	mMCT-C100/3	129666	4
125	mMCT-C125/3	129667	4

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3+N-pole

20	mMCT-C20/3N	152744	3
25	mMCT-C25/3N	158325	3
32	mMCT-C32/3N	152745	3
40	mMCT-C40/3N	152746	3
50	mMCT-C50/3N	152747	3
63	mMCT-C63/3N	158326	3
80	mMCT-C80/3N	129681	3
100	mMCT-C100/3N	129682	3
125	mMCT-C125/3N	129683	3

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4-pole

20	mMCT-C20/4	152732	3
25	mMCT-C25/4	158321	3
32	mMCT-C32/4	152733	3
40	mMCT-C40/4	152734	3
50	mMCT-C50/4	152735	3
63	mMCT-C63/4	158322	3
80	mMCT-C80/4	129673	3
100	mMCT-C100/4	129674	3
125	mMCT-C125/4	129675	3

Rated current I_n (A)	Type Designation	Article No.	Units per package
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25 kA, Characteristic D

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1-pole

20	mMCT-D20/1	152700	12
25	mMCT-D25/1	158311	12
32	mMCT-D32/1	152701	12
40	mMCT-D40/1	152702	12
50	mMCT-D50/1	152703	12
63	mMCT-D63/1	158312	12
80	mMCT-D80/1	129652	12
100	mMCT-D100/1	129653	12

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2-pole

20	mMCT-D20/2	152712	6
25	mMCT-D25/2	158315	6
32	mMCT-D32/2	152713	6
40	mMCT-D40/2	152714	6
50	mMCT-D50/2	152715	6
63	mMCT-D63/2	158316	6
80	mMCT-D80/2	129660	6
100	mMCT-D100/2	129661	6

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3-pole

20	mMCT-D20/3	152724	4
25	mMCT-D25/3	158319	4
32	mMCT-D32/3	152725	4
40	mMCT-D40/3	152726	4
50	mMCT-D50/3	152727	4
63	mMCT-D63/3	158320	4
80	mMCT-D80/3	129668	4
100	mMCT-D100/3	129669	4

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3+N-pole

20	mMCT-D20/3N	152748	3
25	mMCT-D25/3N	158327	3
32	mMCT-D32/3N	152749	3
40	mMCT-D40/3N	152750	3
50	mMCT-D50/3N	152751	3
63	mMCT-D63/3N	158328	3
80	mMCT-D80/3N	129684	3
100	mMCT-D100/3N	129685	3

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4-pole

20	mMCT-D20/4	152736	3
25	mMCT-D25/4	158323	3
32	mMCT-D32/4	152737	3
40	mMCT-D40/4	152738	3
50	mMCT-D50/4	152739	3
63	mMCT-D63/4	158324	3
80	mMCT-D80/4	129676	3
100	mMCT-D100/4	129677	3

Specifications | Miniature Circuit Breakers mMCT

Description

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

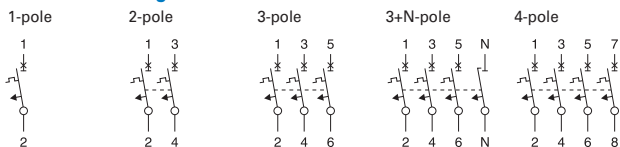
Accessories:

Auxiliary switch for subsequent installation (0.5 MU)	Z-LHK	248440
Shunt trip release subsequent installation (1.5 MU)	Z-LHASA/230	248442
	Z-LHASA/24	248441
Switching interlock	LH-SPL	285752

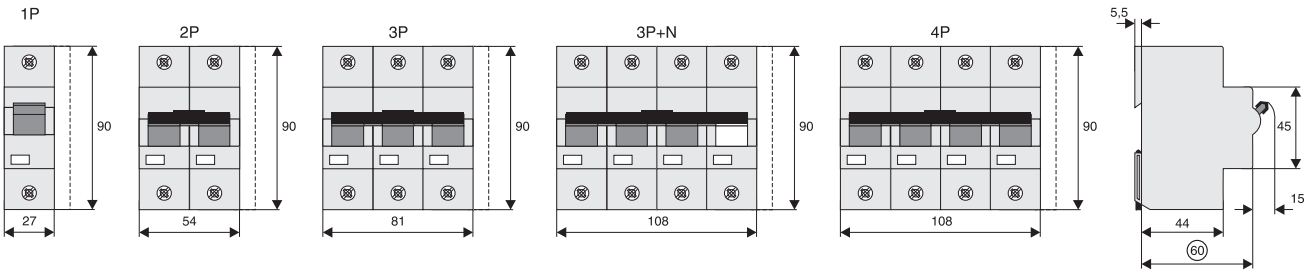
Technical Data

		mMCT
Electrical		
Design according to		EN 60947-2
Current test marks as printed onto the device		
Rated voltage	U_n	AC: 230/400 V DC: 60 V (per pole, max. 2 poles)
Ultimate short circuit breaking capacity according to IEC/EN 60947-2		
Characteristic B, 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		in accordance with B, C, D
Back-up fuse		max. 200 A gL
Rated insulation voltage	U_i	440 V
Peak withstand voltage	U_{imp}	4 kV
Selectivity class		in accordance with class 3
Endurance		$\geq 20,000$ switching operations
Mechanical		
Frame size		45 mm
Device height		90 mm
Device width		27 mm (1.5MU) per pole
Mounting		quick fastening with 2 lock-in positions on DIN rail IEC/EN 60715
Degree of protection		IP20
Degree of protection, built-in		IP40
Upper and lower terminals		lift terminals
Terminal protection		finger and hand touch safe, DGUV VS3, EN 50274
Terminal capacity		2.5-50 mm ²

Connection diagrams

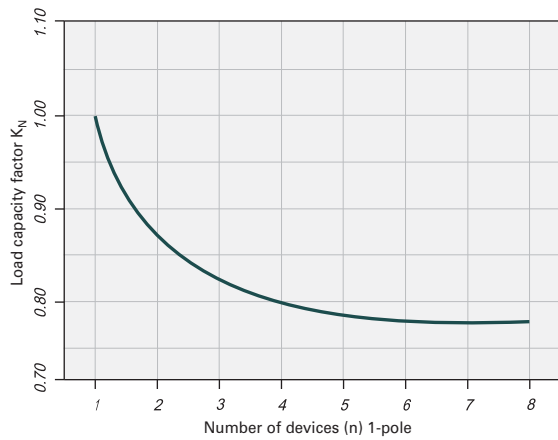


Dimensions (mm)

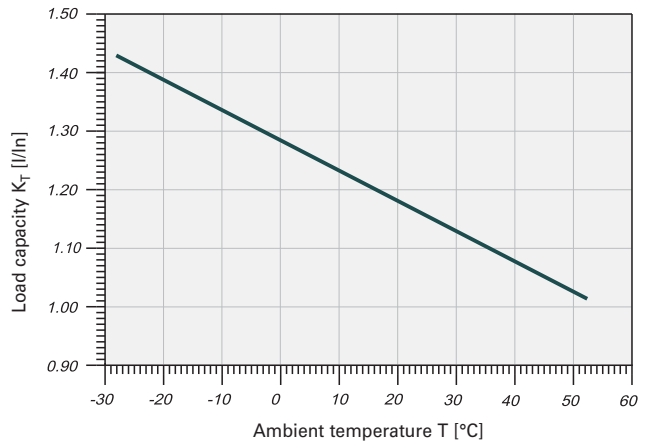


Load Capacity

Load capacity in case of block installation



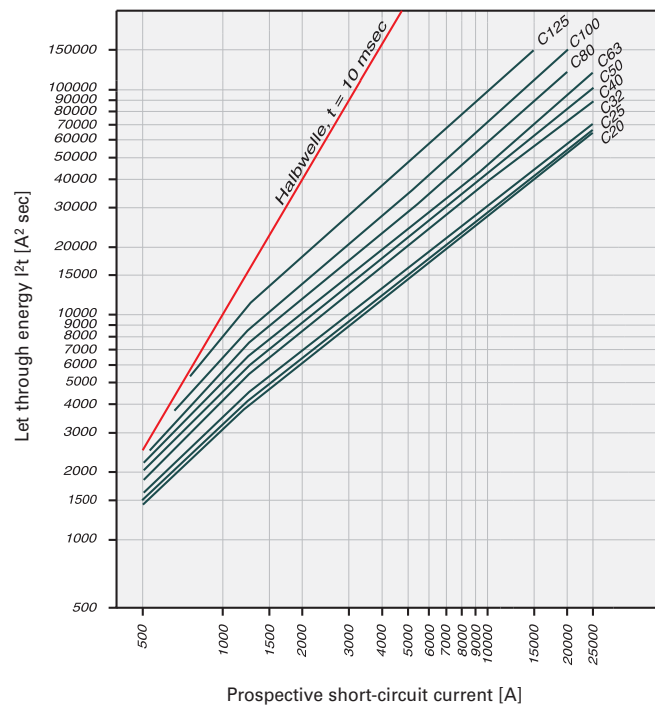
Effect of ambient temperature



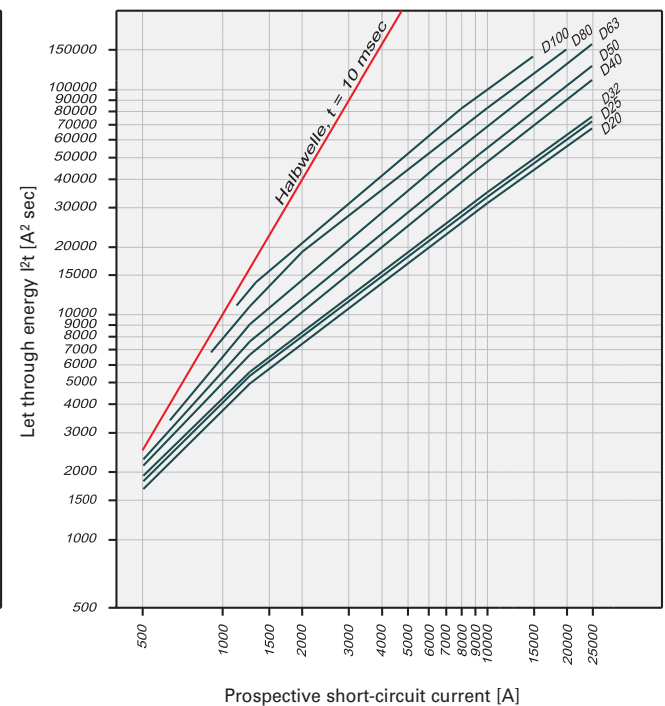
Permitted permanent load at ambient temperature T [°C] with n devices: $I_{DL} = I_n K_T(T) K_N(N)$.

Durchlassenergie

Maximum let-through energy mMCT, Characteristic C, 1-pole



Maximum let-through energy mMCT, Characteristic D, 1-pole



Determined according to 60898-1.

Short Circuit Selectivity mMCT towards D01, D02, D03 and NH size 00

- Short circuit selectivity (in kA) mMCT and upstream fuse D0 or NH, operating class gL/gG
- 1.4 . . . selectivity up to 1.4 kA; Darker areas: no selectivity

Selectivity towards back-up fuses D01, D02, D03

Characteristic C

mMCT I_n [A]	Rated current of the back-up fuse in A gL/gG					
	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

mMCT I_n [A]	Rated current of the back-up fuse in A gL/gG					
	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						

Selectivity towards back-up fuses NH size 00

Characteristic C

mMCT I_n [A]	Rated current of the back-up fuse in A gL/gG									
	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

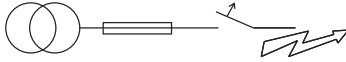
Characteristic D

mMCT I_n [A]	Rated current of the back-up fuse in A gL/gG									
	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

Short Circuit Selectivity mMCT towards NZM

In case of short circuit, there is selectivity between the miniature circuit breakers mMCT and the upstream NZM 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). Overload and short-circuit release unit NZM at max. value.

*) basically in accordance with EN 60898-1 D.5.2.b



Short circuit selectivity **Characteristic C** towards **NZM1***)

mMCT	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 **NZM1***)

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

Short circuit selectivity **Characteristic C** towards **NZM2***)

mMCT	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 **NZM2***)

mMCT	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										

1) Selectivity limit current I_s under 0.5 kA

2) Selectivity limit current I_s = rated breaking capacity I_{cn} of the MCB

Darker areas: no selectivity