






Miniature Circuit Breakers CLS6 DE

- High-quality miniature circuit breakers for commercial and residential applications
- Contact position indicator red - green
- Comprehensive range of accessories suitable for subsequent installation
- Rated currents up to 63 A
- Tripping characteristics B, C, D
- Rated breaking capacity 6 kA according to IEC/EN 60898-1

SG10411







Protective Devices

		Miniature Circuit Breakers CLS6			DE
		Characteristic B			
		Rated Current I _n (A)	Type Designation	Article No.	Units per package
 <p>SG10011</p>	1-pole				
	2	CLS6-B2	247596	12 / 120	
	4	CLS6-B4	247597	12 / 120	
	6	CLS6-B6	247598	12 / 120	
	10	CLS6-B10	247599	12 / 120	
	13	CLS6-B13	247600	12 / 120	
	16	CLS6-B16	247601	12 / 120	
	20	CLS6-B20	247602	12 / 120	
	25	CLS6-B25	247603	12 / 120	
	32	CLS6-B32	247604	12 / 120	
	40	CLS6-B40	247605	12 / 120	
	50	CLS6-B50	247606	12 / 120	
	63	CLS6-B63	247607	12 / 120	
 <p>SG10111</p>	1+N-pole				
	2	CLS6-B2/1N	247630	1 / 60	
	4	CLS6-B4/1N	247631	1 / 60	
	6	CLS6-B6/1N	247632	1 / 60	
	10	CLS6-B10/1N	247633	1 / 60	
	13	CLS6-B13/1N	247634	1 / 60	
	16	CLS6-B16/1N	247635	1 / 60	
	20	CLS6-B20/1N	247636	1 / 60	
	25	CLS6-B25/1N	247637	1 / 60	
	32	CLS6-B32/1N	247638	1 / 60	
	40	CLS6-B40/1N	247639	1 / 60	
	50	CLS6-B50/1N	247640	1 / 60	
	63	CLS6-B63/1N	247641	1 / 60	
 <p>SG10211</p>	2-pole				
	2	CLS6-B2/2	247664	1 / 60	
	4	CLS6-B4/2	247665	1 / 60	
	6	CLS6-B6/2	247666	1 / 60	
	10	CLS6-B10/2	247667	1 / 60	
	13	CLS6-B13/2	247668	1 / 60	
	16	CLS6-B16/2	247669	1 / 60	
	20	CLS6-B20/2	247670	1 / 60	
	25	CLS6-B25/2	247671	1 / 60	
	32	CLS6-B32/2	247672	1 / 60	
	40	CLS6-B40/2	247673	1 / 60	
	50	CLS6-B50/2	247674	1 / 60	
	63	CLS6-B63/2	247675	1 / 60	
 <p>SG10311</p>	3-pole				
	2	CLS6-B2/3	247698	1 / 40	
	4	CLS6-B4/3	247699	1 / 40	
	6	CLS6-B6/3	247700	1 / 40	
	10	CLS6-B10/3	247701	1 / 40	
	13	CLS6-B13/3	247702	1 / 40	
	16	CLS6-B16/3	247703	1 / 40	
	20	CLS6-B20/3	247704	1 / 40	
	25	CLS6-B25/3	247705	1 / 40	
	32	CLS6-B32/3	247706	1 / 40	
	40	CLS6-B40/3	247707	1 / 40	
	50	CLS6-B50/3	247708	1 / 40	
	63	CLS6-B63/3	247709	1 / 40	
 <p>SG10511</p>	3+N-pole				
	2	CLS6-B2/3N	247732	1 / 30	
	4	CLS6-B4/3N	247733	1 / 30	
	6	CLS6-B6/3N	247734	1 / 30	
	10	CLS6-B10/3N	247735	1 / 30	
	13	CLS6-B13/3N	247736	1 / 30	
	16	CLS6-B16/3N	247737	1 / 30	
	20	CLS6-B20/3N	247738	1 / 30	
	25	CLS6-B25/3N	247739	1 / 30	
	32	CLS6-B32/3N	247740	1 / 30	
	40	CLS6-B40/3N	247741	1 / 30	
	50	CLS6-B50/3N	247742	1 / 30	
	63	CLS6-B63/3N	247743	1 / 30	






Explanation CLS6:
C = XClear, LS = MCB, 6 = 6 kA

Protective Devices

	Rated Current I_n (A)	Type Designation	Article No.	Units per package
 <p>SG10411</p>	4-pole			
	2	CLS6-B2/4	247766	1 / 30
	4	CLS6-B4/4	247767	1 / 30
	6	CLS6-B6/4	247768	1 / 30
	10	CLS6-B10/4	247769	1 / 30
	13	CLS6-B13/4	247770	1 / 30
	16	CLS6-B16/4	247771	1 / 30
	20	CLS6-B20/4	247772	1 / 30
	25	CLS6-B25/4	247773	1 / 30
	32	CLS6-B32/4	247774	1 / 30
	40	CLS6-B40/4	247775	1 / 30
	50	CLS6-B50/4	247776	1 / 30
	63	CLS6-B63/4	247777	1 / 30
Miniature Circuit Breakers CLS6			DE	
Characteristic C				
	Rated Current I_n (A)	Type Designation	Article No.	Units per package
 <p>SG10011</p>	1-pole			
	2	CLS6-C2	247608	12 / 120
	4	CLS6-C4	247609	12 / 120
	6	CLS6-C6	247610	12 / 120
	10	CLS6-C10	247611	12 / 120
	13	CLS6-C13	247612	12 / 120
	16	CLS6-C16	247613	12 / 120
	20	CLS6-C20	247614	12 / 120
	25	CLS6-C25	247615	12 / 120
	32	CLS6-C32	247616	12 / 120
	40	CLS6-C40	247617	12 / 120
	50	CLS6-C50	247618	12 / 120
	63	CLS6-C63	247619	12 / 120
 <p>SG10111</p>	1+N-pole			
	2	CLS6-C2/1N	247642	1 / 60
	4	CLS6-C4/1N	247643	1 / 60
	6	CLS6-C6/1N	247644	1 / 60
	10	CLS6-C10/1N	247645	1 / 60
	13	CLS6-C13/1N	247646	1 / 60
	16	CLS6-C16/1N	247647	1 / 60
	20	CLS6-C20/1N	247648	1 / 60
	25	CLS6-C25/1N	247649	1 / 60
	32	CLS6-C32/1N	247650	1 / 60
	40	CLS6-C40/1N	247651	1 / 60
	50	CLS6-C50/1N	247652	1 / 60
	63	CLS6-C63/1N	247653	1 / 60
 <p>SG10211</p>	2-pole			
	2	CLS6-C2/2	247676	1 / 60
	4	CLS6-C4/2	247677	1 / 60
	6	CLS6-C6/2	247678	1 / 60
	10	CLS6-C10/2	247679	1 / 60
	13	CLS6-C13/2	247680	1 / 60
	16	CLS6-C16/2	247681	1 / 60
	20	CLS6-C20/2	247682	1 / 60
	25	CLS6-C25/2	247683	1 / 60
	32	CLS6-C32/2	247684	1 / 60
	40	CLS6-C40/2	247685	1 / 60
	50	CLS6-C50/2	247686	1 / 60
	63	CLS6-C63/2	247687	1 / 60

xClear

Protective Devices

	Rated Current I_n (A)	Type Designation	Article No.	Units per package
 <p>SG10311</p>	3-pole			
	2	CLS6-C2/3	247710	1 / 40
	4	CLS6-C4/3	247711	1 / 40
	6	CLS6-C6/3	247712	1 / 40
	10	CLS6-C10/3	247713	1 / 40
	13	CLS6-C13/3	247714	1 / 40
	16	CLS6-C16/3	247715	1 / 40
	20	CLS6-C20/3	247716	1 / 40
	25	CLS6-C25/3	247717	1 / 40
	32	CLS6-C32/3	247718	1 / 40
	40	CLS6-C40/3	247719	1 / 40
	50	CLS6-C50/3	247720	1 / 40
	63	CLS6-C63/3	247721	1 / 40
 <p>SG10511</p>	3+N-pole			
	2	CLS6-C2/3N	247744	1 / 30
	4	CLS6-C4/3N	247745	1 / 30
	6	CLS6-C6/3N	247746	1 / 30
	10	CLS6-C10/3N	247747	1 / 30
	13	CLS6-C13/3N	247748	1 / 30
	16	CLS6-C16/3N	247749	1 / 30
	20	CLS6-C20/3N	247750	1 / 30
	25	CLS6-C25/3N	247751	1 / 30
	32	CLS6-C32/3N	247752	1 / 30
	40	CLS6-C40/3N	247753	1 / 30
	50	CLS6-C50/3N	247754	1 / 30
	63	CLS6-C63/3N	247755	1 / 30
 <p>SG10411</p>	4-pole			
	2	CLS6-C2/4	247778	1 / 30
	4	CLS6-C4/4	247779	1 / 30
	6	CLS6-C6/4	247780	1 / 30
	10	CLS6-C10/4	247781	1 / 30
	13	CLS6-C13/4	247782	1 / 30
	16	CLS6-C16/4	247783	1 / 30
	20	CLS6-C20/4	247784	1 / 30
	25	CLS6-C25/4	247785	1 / 30
	32	CLS6-C32/4	247786	1 / 30
	40	CLS6-C40/4	247787	1 / 30
	50	CLS6-C50/4	247788	1 / 30
	63	CLS6-C63/4	247789	1 / 30
Miniature Circuit Breakers CLS6				DE
Characteristic D				
	Rated Current I_n (A)	Type Designation	Article No.	Units per package
 <p>SG10011</p>	1-pole			
	2	CLS6-D2	247620	12 / 120
	4	CLS6-D4	247621	12 / 120
	6	CLS6-D6	247622	12 / 120
	10	CLS6-D10	247623	12 / 120
	13	CLS6-D13	247624	12 / 120
	16	CLS6-D16	247625	12 / 120
	20	CLS6-D20	247626	12 / 120
	25	CLS6-D25	247627	12 / 120
	32	CLS6-D32	247628	12 / 120
40	CLS6-D40	247629	12 / 120	
 <p>SG10111</p>	1+N-pole			
	2	CLS6-D2/1N	247654	1 / 60
	4	CLS6-D4/1N	247655	1 / 60
	6	CLS6-D6/1N	247656	1 / 60
	10	CLS6-D10/1N	247657	1 / 60
	13	CLS6-D13/1N	247658	1 / 60
	16	CLS6-D16/1N	247659	1 / 60
	20	CLS6-D20/1N	247660	1 / 60
	25	CLS6-D25/1N	247661	1 / 60
	32	CLS6-D32/1N	247662	1 / 60
40	CLS6-D40/1N	247663	1 / 60	

Protective Devices

SG10211



SG10311



SG10511



SG10411



Rated Current I_n (A)	Type Designation	Article No.	Units per package
2-pole			
2	CLS6-D2/2	247688	1 / 60
4	CLS6-D4/2	247689	1 / 60
6	CLS6-D6/2	247690	1 / 60
10	CLS6-D10/2	247691	1 / 60
13	CLS6-D13/2	247692	1 / 60
16	CLS6-D16/2	247693	1 / 60
20	CLS6-D20/2	247694	1 / 60
25	CLS6-D25/2	247695	1 / 60
32	CLS6-D32/2	247696	1 / 60
40	CLS6-D40/2	247697	1 / 60
3-pole			
2	CLS6-D2/3	247722	1 / 40
4	CLS6-D4/3	247723	1 / 40
6	CLS6-D6/3	247724	1 / 40
10	CLS6-D10/3	247725	1 / 40
13	CLS6-D13/3	247726	1 / 40
16	CLS6-D16/3	247727	1 / 40
20	CLS6-D20/3	247728	1 / 40
25	CLS6-D25/3	247729	1 / 40
32	CLS6-D32/3	247730	1 / 40
40	CLS6-D40/3	247731	1 / 40
3+N-pole			
2	CLS6-D2/3N	247756	1 / 30
4	CLS6-D4/3N	247757	1 / 30
6	CLS6-D6/3N	247758	1 / 30
10	CLS6-D10/3N	247759	1 / 30
13	CLS6-D13/3N	247760	1 / 30
16	CLS6-D16/3N	247761	1 / 30
20	CLS6-D20/3N	247762	1 / 30
25	CLS6-D25/3N	247763	1 / 30
32	CLS6-D32/3N	247764	1 / 30
40	CLS6-D40/3N	247765	1 / 30
4-pole			
2	CLS6-D2/4	247790	1 / 30
4	CLS6-D4/4	247791	1 / 30
6	CLS6-D6/4	247792	1 / 30
10	CLS6-D10/4	247793	1 / 30
13	CLS6-D13/4	247794	1 / 30
16	CLS6-D16/4	247795	1 / 30
20	CLS6-D20/4	247796	1 / 30
25	CLS6-D25/4	247797	1 / 30
32	CLS6-D32/4	247798	1 / 30
40	CLS6-D40/4	247799	1 / 30

xClear






Miniature Circuit Breakers CLS4 DE

- High-quality miniature circuit breakers for residential applications
- Contact position indicator red - green
- Comprehensive range of accessories suitable for subsequent installation
- Rated currents up to 63 A
- Tripping characteristics B, C
- Rated breaking capacity 4.5 kA according to IEC/EN 60898-1

SG83711



Protective Devices

		Miniature Circuit Breakers CLS4			DE
		Characteristic B			
		Rated Current I _n (A)	Type Designation	Article No.	Units per package
 <p>SG83011</p>	1-pole				
	2	CLS4-B2	247824	12 / 120	
	4	CLS4-B4	247825	12 / 120	
	6	CLS4-B6	247826	12 / 120	
	10	CLS4-B10	247827	12 / 120	
	13	CLS4-B13	247828	12 / 120	
	16	CLS4-B16	247829	12 / 120	
	20	CLS4-B20	247830	12 / 120	
	25	CLS4-B25	247831	12 / 120	
	32	CLS4-B32	247832	12 / 120	
	40	CLS4-B40	247833	12 / 120	
50	CLS4-B50	247834	12 / 120		
63	CLS4-B63	247835	12 / 120		
 <p>SG82811</p>	1+N-pole				
	2	CLS4-B2/1N	247848	1 / 60	
	4	CLS4-B4/1N	247849	1 / 60	
	6	CLS4-B6/1N	247850	1 / 60	
	10	CLS4-B10/1N	247851	1 / 60	
	13	CLS4-B13/1N	247852	1 / 60	
	16	CLS4-B16/1N	247853	1 / 60	
	20	CLS4-B20/1N	247854	1 / 60	
	25	CLS4-B25/1N	247855	1 / 60	
	32	CLS4-B32/1N	247856	1 / 60	
	40	CLS4-B40/1N	247857	1 / 60	
50	CLS4-B50/1N	247858	1 / 60		
63	CLS4-B63/1N	247859	1 / 60		
 <p>SG82711</p>	2-pole				
	2	CLS4-B2/2	247872	1 / 60	
	4	CLS4-B4/2	247873	1 / 60	
	6	CLS4-B6/2	247874	1 / 60	
	10	CLS4-B10/2	247875	1 / 60	
	13	CLS4-B13/2	247876	1 / 60	
	16	CLS4-B16/2	247877	1 / 60	
	20	CLS4-B20/2	247878	1 / 60	
	25	CLS4-B25/2	247879	1 / 60	
	32	CLS4-B32/2	247880	1 / 60	
	40	CLS4-B40/2	247881	1 / 60	
50	CLS4-B50/2	247882	1 / 60		
63	CLS4-B63/2	247883	1 / 60		
 <p>SG83611</p>	3-pole				
	2	CLS4-B2/3	247896	1 / 40	
	4	CLS4-B4/3	247897	1 / 40	
	6	CLS4-B6/3	247898	1 / 40	
	10	CLS4-B10/3	247899	1 / 40	
	13	CLS4-B13/3	247900	1 / 40	
	16	CLS4-B16/3	247901	1 / 40	
	20	CLS4-B20/3	247902	1 / 40	
	25	CLS4-B25/3	247903	1 / 40	
	32	CLS4-B32/3	247904	1 / 40	
	40	CLS4-B40/3	247905	1 / 40	
50	CLS4-B50/3	247906	1 / 40		
63	CLS4-B63/3	247907	1 / 40		
 <p>SG83811</p>	3+N-pole				
	2	CLS4-B2/3N	247920	1 / 30	
	4	CLS4-B4/3N	247921	1 / 30	
	6	CLS4-B6/3N	247922	1 / 30	
	10	CLS4-B10/3N	247923	1 / 30	
	13	CLS4-B13/3N	247924	1 / 30	
	16	CLS4-B16/3N	247925	1 / 30	
	20	CLS4-B20/3N	247926	1 / 30	
	25	CLS4-B25/3N	247927	1 / 30	
	32	CLS4-B32/3N	247928	1 / 30	
	40	CLS4-B40/3N	247929	1 / 30	
50	CLS4-B50/3N	247930	1 / 30		
63	CLS4-B63/3N	247931	1 / 30		

Explanation CLS4:
C = XClear, LS = MCB, 4 = 4.5 kA






Protective Devices

SG83711



Rated Current I_n (A)	Type Designation	Article No.	Units per package
4-pole			
2	CLS4-B2/4	247944	1 / 30
4	CLS4-B4/4	247945	1 / 30
6	CLS4-B6/4	247946	1 / 30
10	CLS4-B10/4	247947	1 / 30
13	CLS4-B13/4	247948	1 / 30
16	CLS4-B16/4	247949	1 / 30
20	CLS4-B20/4	247950	1 / 30
25	CLS4-B25/4	247951	1 / 30
32	CLS4-B32/4	247952	1 / 30
40	CLS4-B40/4	247953	1 / 30
50	CLS4-B50/4	247955	1 / 30
63	CLS4-B63/4	247956	1 / 30

Protective Devices

		Miniature Circuit Breakers CLS4			DE
		Characteristic C			
		Rated Current I_n (A)	Type Designation	Article No.	Units per package
 <p>SG83011</p>	1-pole				
	2	CLS4-C2	247836	12 / 120	
	4	CLS4-C4	247837	12 / 120	
	6	CLS4-C6	247838	12 / 120	
	10	CLS4-C10	247839	12 / 120	
	13	CLS4-C13	247840	12 / 120	
	16	CLS4-C16	247841	12 / 120	
	20	CLS4-C20	247842	12 / 120	
	25	CLS4-C25	247843	12 / 120	
	32	CLS4-C32	247844	12 / 120	
	40	CLS4-C40	247845	12 / 120	
	50	CLS4-C50	247846	12 / 120	
63	CLS4-C63	247847	12 / 120		
 <p>SG82811</p>	1+N-pole				
	2	CLS4-C2/1N	247860	1 / 60	
	4	CLS4-C4/1N	247861	1 / 60	
	6	CLS4-C6/1N	247862	1 / 60	
	10	CLS4-C10/1N	247863	1 / 60	
	13	CLS4-C13/1N	247864	1 / 60	
	16	CLS4-C16/1N	247865	1 / 60	
	20	CLS4-C20/1N	247866	1 / 60	
	25	CLS4-C25/1N	247867	1 / 60	
	32	CLS4-C32/1N	247868	1 / 60	
	40	CLS4-C40/1N	247869	1 / 60	
	50	CLS4-C50/1N	247870	1 / 60	
63	CLS4-C63/1N	247871	1 / 60		
 <p>SG82711</p>	2-pole				
	2	CLS4-C2/2	247884	1 / 60	
	4	CLS4-C4/2	247885	1 / 60	
	6	CLS4-C6/2	247886	1 / 60	
	10	CLS4-C10/2	247887	1 / 60	
	13	CLS4-C13/2	247888	1 / 60	
	16	CLS4-C16/2	247889	1 / 60	
	20	CLS4-C20/2	247890	1 / 60	
	25	CLS4-C25/2	247891	1 / 60	
	32	CLS4-C32/2	247892	1 / 60	
	40	CLS4-C40/2	247893	1 / 60	
	50	CLS4-C50/2	247894	1 / 60	
63	CLS4-C63/2	247895	1 / 60		
 <p>SG83611</p>	3-pole				
	2	CLS4-C2/3	247908	1 / 40	
	4	CLS4-C4/3	247909	1 / 40	
	6	CLS4-C6/3	247910	1 / 40	
	10	CLS4-C10/3	247911	1 / 40	
	13	CLS4-C13/3	247912	1 / 40	
	16	CLS4-C16/3	247913	1 / 40	
	20	CLS4-C20/3	247914	1 / 40	
	25	CLS4-C25/3	247915	1 / 40	
	32	CLS4-C32/3	247916	1 / 40	
	40	CLS4-C40/3	247917	1 / 40	
	50	CLS4-C50/3	247918	1 / 40	
63	CLS4-C63/3	247919	1 / 40		
 <p>SG83811</p>	3+N-pole				
	2	CLS4-C2/3N	247932	1 / 30	
	4	CLS4-C4/3N	247933	1 / 30	
	6	CLS4-C6/3N	247934	1 / 30	
	10	CLS4-C10/3N	247935	1 / 30	
	13	CLS4-C13/3N	247936	1 / 30	
	16	CLS4-C16/3N	247937	1 / 30	
	20	CLS4-C20/3N	247938	1 / 30	
	25	CLS4-C25/3N	247939	1 / 30	
	32	CLS4-C32/3N	247940	1 / 30	
	40	CLS4-C40/3N	247941	1 / 30	
	50	CLS4-C50/3N	247942	1 / 30	
63	CLS4-C63/3N	247943	1 / 30		

Explanation CLS4:
C = XClear, **LS** = MCB, **4** = 4.5 kA

Protective Devices

SG83711



Rated Current I_n (A)	Type Designation	Article No.	Units per package
4-pole			
2	CLS4-C2/4	247957	1 / 30
4	CLS4-C4/4	247958	1 / 30
6	CLS4-C6/4	247959	1 / 30
10	CLS4-C10/4	247960	1 / 30
13	CLS4-C13/4	247961	1 / 30
16	CLS4-C16/4	247962	1 / 30
20	CLS4-C20/4	247963	1 / 30
25	CLS4-C25/4	247964	1 / 30
32	CLS4-C32/4	247965	1 / 30
40	CLS4-C40/4	247966	1 / 30
50	CLS4-C50/4	247967	1 / 30
63	CLS4-C63/4	247968	1 / 30

Miniature Circuit Breakers CLS6-DC

- High-quality miniature circuit breakers for DC-applications
- Contact position indicator red - green
- Comprehensive range of accessories suitable for subsequent installation
- Rated currents up to 50 A
- Tripping characteristic C
- Rated breaking capacity 10 kA according to IEC/EN 660898-1
- Up to 250 V DC per pole

xClear

SG83111



Protective Devices

Miniature Circuit Breakers CLS6-DC for AC/DC

DE

Characteristic C

SG83111



SG82611



Rated Current I_n (A)	Type Designation	Article No.	Units per package
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1-pole

2	CLS6-C2-DC	247800	12 / 120
3	CLS6-C3-DC	247801	12 / 120
4	CLS6-C4-DC	247802	12 / 120
6	CLS6-C6-DC	247803	12 / 120
10	CLS6-C10-DC	247804	12 / 120
13	CLS6-C13-DC	247805	12 / 120
16	CLS6-C16-DC	247806	12 / 120
20	CLS6-C20-DC	247807	12 / 120
25	CLS6-C25-DC	247808	12 / 120
32	CLS6-C32-DC	247809	12 / 120
40	CLS6-C40-DC	247810	12 / 120
50	CLS6-C50-DC	247811	12 / 120

2-pole

2	CLS6-C2/2-DC	247812	1 / 60
3	CLS6-C3/2-DC	247813	1 / 60
4	CLS6-C4/2-DC	247814	1 / 60
6	CLS6-C6/2-DC	247815	1 / 60
10	CLS6-C10/2-DC	247816	1 / 60
13	CLS6-C13/2-DC	247817	1 / 60
16	CLS6-C16/2-DC	247818	1 / 60
20	CLS6-C20/2-DC	247819	1 / 60
25	CLS6-C25/2-DC	247820	1 / 60
32	CLS6-C32/2-DC	247821	1 / 60
40	CLS6-C40/2-DC	247822	1 / 60
50	CLS6-C50/2-DC	247823	1 / 60

xClear

Protective Devices

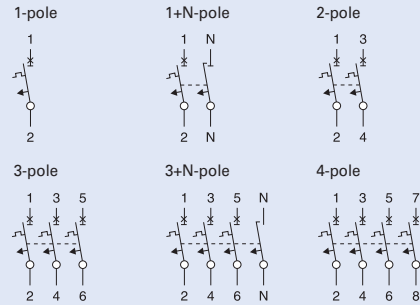
Miniature Circuit Breakers CLS.

- High selectivity between MCB and back-up fuse due to low let-through energy
- Twin-purpose terminal (lift/open-mouthed) above and below
- Compatible with standard busbar
- Meets the requirements of insulation co-ordination, distance between contacts ≥ 4 mm, for secure isolation
- Suitable for applications up to 48 V DC (use CLS6-DC for higher DC voltages)

Accessories:

Auxiliary switch for subsequent installation	Z-AHK	248433
Tripping signal contact for subsequent installation	Z-NHK	248434
Remote control and automatic switching device	Z-FW/LP	248296
Shunt trip release	ZP-ASA	248438, 248439
Undervoltage release	Z-USA/..	248288-248291
Compact enclosure	KLV-TC-2	276240
	KLV-TC-4	276241
Additional terminal 35mm ²	Z-HA-EK/35	263960
Switching interlock	Z-IS/SPE-1TE	274418

Connection diagrams



Technical Data

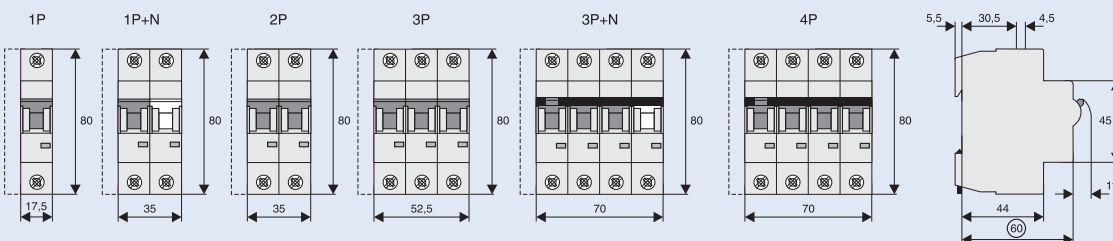
Electrical

Design according to	IEC/EN 60898-1
Current test marks as printed onto the device	
Rated voltage	AC: 230/400V DC: 48V (per pole, max. 2 Pole)
Rated frequency	50/60 Hz
Rated breaking capacity according to IEC/EN 60898-1	
CLS6	6 kA
CLS4	4.5 kA
Characteristic	B, C, D
Back-up fuse	
>6 kA	max. 100 A gL
>4.5 kA	max. 80 A gL
Selectivity class	3
Endurance	$\geq 8,000$ operating cycles
Line voltage connection	optional (above/below)

Mechanical

Frame size	45 mm
Device height	80 mm
Device width	17.5 mm per pole (1MU) 26.3 mm: device 1P+N (1.5MU)
Mounting	quick fastening with 2 lock-in positions on DIN rail IEC/EN 60715
Degree of protection	IP20
Upper and lower terminals	open mouthed/lift terminals
Terminal protection	finger and hand touch safe, BGV A3, ÖVE-EN 6
Terminal capacity	1-25 mm ²
Terminal fastening torque	2-2.4 Nm
Busbar thickness	0.8 - 2 mm

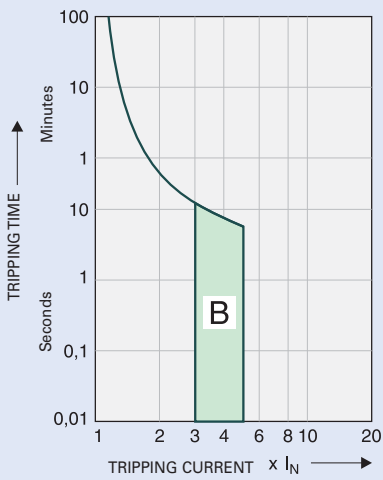
Dimensions (mm)



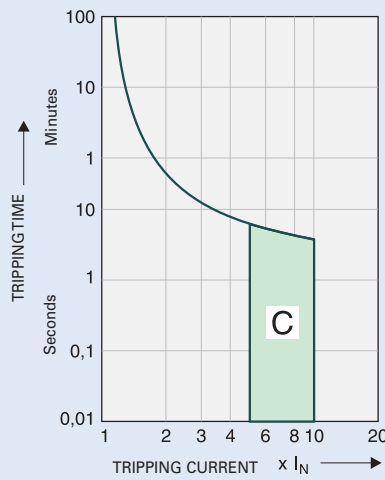
Protective Devices

Tripping Characteristics (IEC/EN 60898-1)

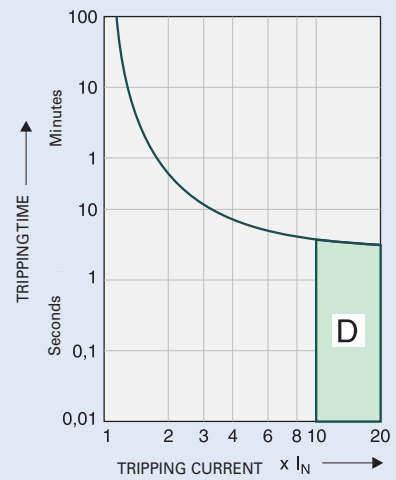
Tripping characteristic B



Tripping characteristic C



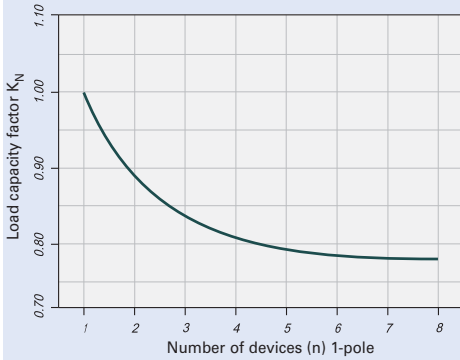
Tripping characteristic D



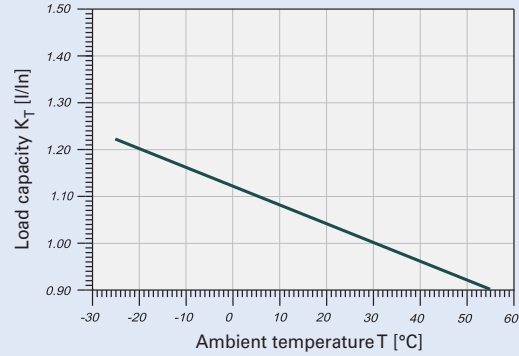
Quick-acting (B), slow (C), very slow (D)

Load Capacity

Load capacity in case of block installation (1-pole)

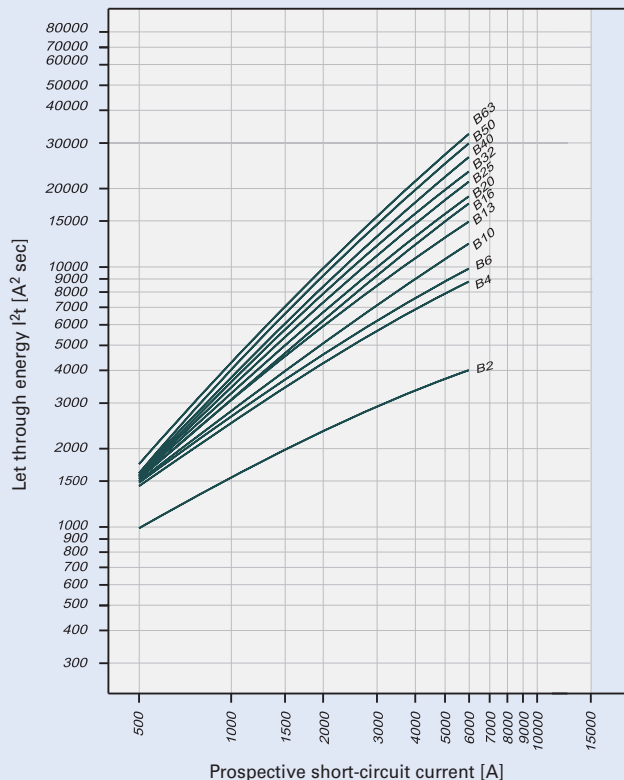


Effect of ambient temperature

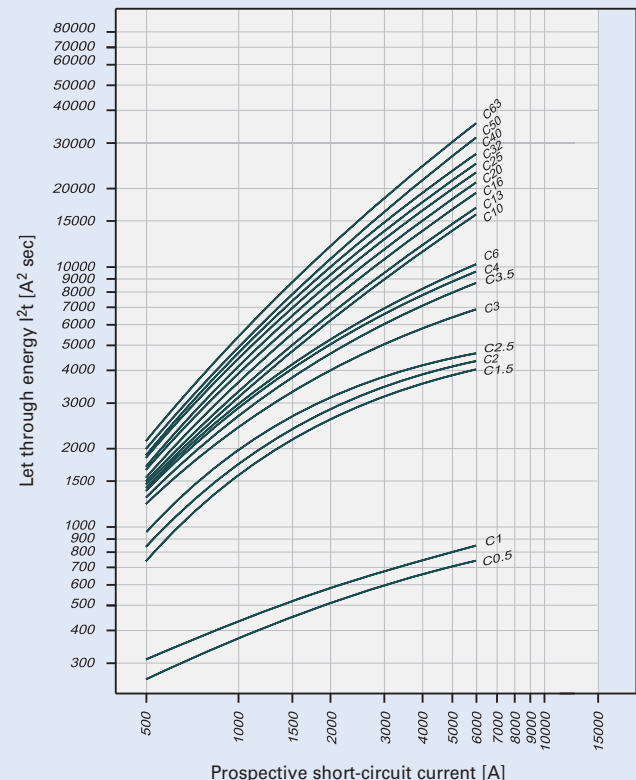


Let-through Energy CLS6

Let-through energy CLS6, characteristic B, 1-pole



Let-through energy CLS6, characteristic C, 1-pole



Determined according to EN 60898-1. Values for characteristic D upon enquiry.

Protective Devices

Short Circuit Selectivity CLS6

- Short circuit selectivity (in kA) between CLS6 and upstream fuse D0 or NH, operating class gL/GG
- 1,4 . . . selectivity up to 1.4 kA; . . . no selectivity

Selectivity towards back-up fuses D01, D02, D03

Rated current I_n of CLS6 in A	Rated current of the back-up fuse in A gL/GG									
	10	16	20	25	35	50	63	80	100	
B- Characteristic	2	<0,5	<0,5	0,5	0,8	2,2	6,0	6,0	6,0	6,0
	4	<0,5	<0,5	<0,5	0,5	1,2	3,1	5,5	6,0	6,0
	6		<0,5	<0,5	0,5	1,2	2,7	4,5	6,0	6,0
	10			<0,5	0,5	1,1	2,3	3,6	5,0	6,0
	13			<0,5	0,5	1,0	2,0	3,1	4,3	6,0
	16				0,5	1,0	1,7	2,8	3,8	6,0
	20					0,9	1,6	2,7	3,6	6,0
	25					0,9	1,6	2,5	3,3	6,0
	32						1,6	2,3	3,0	5,8
	40							2,2	2,9	5,3
	50							2,1	2,7	4,8
63									4,5	
C- Characteristic	0,5	<0,5	1,1	6,0	6,0	6,0	6,0	6,0	6,0	6,0
	1	<0,5	0,8	3,9	6,0	6,0	6,0	6,0	6,0	6,0
	2	<0,5	<0,5	0,5	0,8	1,7	6,0	6,0	6,0	6,0
	3	<0,5	<0,5	<0,5	0,6	1,3	4,3	6,0	6,0	6,0
	4	<0,5	<0,5	<0,5	0,6	1,2	2,7	4,7	6,0	6,0
	6		<0,5	<0,5	0,6	1,1	2,3	4,0	6,0	6,0
	10			<0,5	0,6	1,1	1,9	2,8	3,9	6,0
	13					1,0	1,8	2,7	3,7	6,0
	16					1,0	1,7	2,5	3,3	6,0
	20					0,9	1,6	2,3	3,1	6,3
	25						1,5	2,2	2,9	5,7
	32							2,1	2,7	5,3
	40								2,6	5,0
50									4,5	
63										

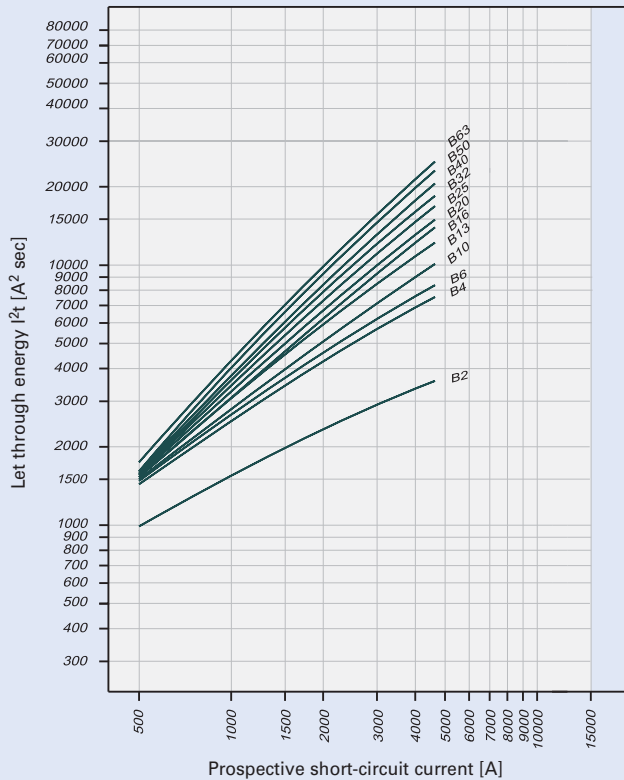
Selectivity towards back-up fuses NH Gr. 00

Rated current I_n of CLS6 in A	Rated current of the back-up fuse in A gL/GG											
	16	20	25	35	40	50	63	80	100	125	160	
B- Characteristic	2	<0,5	<0,5	0,6	3,2	6,0	6,0	6,0	6,0	6,0	6,0	6,0
	4	<0,5	<0,5	<0,5	1,2	1,8	3,0	4,8	7,2	6,0	6,0	6,0
	6	<0,5	<0,5	<0,5	1,1	1,6	2,6	4,0	5,8	6,0	6,0	6,0
	10		<0,5	<0,5	1,1	1,5	2,2	3,2	4,5	6,0	6,0	6,0
	13		<0,5	<0,5	1,0	1,4	2,0	2,9	4,0	6,0	6,0	6,0
	16			<0,5	0,9	1,3	1,8	2,6	3,5	6,0	6,0	6,0
	20				0,9	1,3	1,7	2,4	3,3	6,0	6,0	6,0
	25				0,9	1,1	1,6	2,3	3,1	5,5	6,0	6,0
	32				0,8	1,1	1,5	2,1	2,9	5,0	6,0	6,0
	40						1,5	2,0	2,8	4,6	6,0	6,0
	50							1,9	2,7	4,2	6,0	6,0
63									3,9	6,0	6,0	
C- Characteristic	0,5	0,9	2,7	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0
	1	0,7	2,0	1,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0
	2	<0,5	<0,5	0,6	2,2	4,2	6,0	6,0	6,0	6,0	6,0	6,0
	3	<0,5	<0,5	0,5	1,4	2,1	4,0	6,0	6,0	6,0	6,0	6,0
	4	<0,5	<0,5	<0,5	1,1	1,5	2,5	4,0	6,0	6,0	6,0	6,0
	6	<0,5	<0,5	<0,5	1,0	1,4	2,3	3,6	5,3	6,0	6,0	6,0
	10			<0,5	0,9	1,3	1,8	2,6	3,6	6,0	6,0	6,0
	13				0,9	1,3	1,7	2,5	3,5	6,0	6,0	6,0
	16				0,9	1,1	1,6	2,3	3,2	5,8	6,0	6,0
	20				0,8	1,1	1,5	2,1	3,0	5,3	6,0	6,0
	25						1,4	2,0	2,8	4,8	6,0	6,0
	32							1,9	2,6	4,5	6,0	6,0
	40								2,5	4,3	6,0	6,0
50									4,0	6,0	6,0	
63										6,0	6,0	

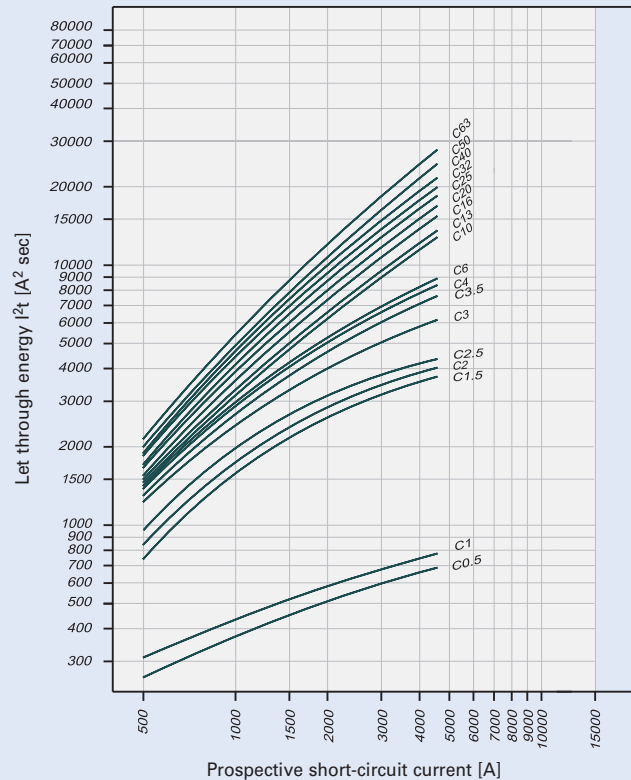
Protective Devices

Let-through Energy CLS4

Let-through energy CLS4, characteristic B, 1-pole



Let-through energy CLS4, characteristic C, 1-pole



Determined according to EN 60898-1.

Short Circuit Selectivity CLS4

- Short circuit selectivity (in kA) between CLS4 and upstream fuse D0 NH, operating class gL/gG
- 1,4 ... selectivity up to 1.4 kA; ... no selectivity

Selectivity towards back-up fuses D01, D02, D03

Rated current I_n of CLS4 in A	Rated current of the back-up fuse in A gL/gG									
	10	16	20	25	35	50	63	80	100	
B Characteristic	2	<0,5	<0,5	0,5	0,8	2,2	4,5	4,5	4,5	4,5
	4	<0,5	<0,5	<0,5	0,5	1,2	3,1	4,5	4,5	4,5
	6		<0,5	<0,5	0,5	1,2	2,7	4,5	4,5	4,5
	10			<0,5	0,5	1,1	2,3	3,6	4,5	4,5
	13			<0,5	0,5	1,0	2,0	3,1	4,3	4,5
	16				0,5	1,0	1,7	2,8	3,8	4,5
	20					0,9	1,6	2,7	3,6	4,5
	25					0,9	1,6	2,5	3,3	4,5
	32						1,6	2,3	3,0	4,5
	40							2,2	2,9	4,5
C Characteristic	0,5	<0,5	1,1	4,5	4,5	4,5	4,5	4,5	4,5	4,5
	1	<0,5	0,8	3,9	4,5	4,5	4,5	4,5	4,5	4,5
	2	<0,5	<0,5	0,5	0,8	1,7	4,5	4,5	4,5	4,5
	3	<0,5	<0,5	<0,5	0,6	1,3	4,3	4,5	4,5	4,5
	4	<0,5	<0,5	<0,5	0,6	1,2	2,7	4,5	4,5	4,5
	6		<0,5	<0,5	0,6	1,1	2,3	4,0	4,5	4,5
	10			<0,5	0,6	1,1	1,9	2,8	3,9	4,5
	13					1,0	1,8	2,7	3,7	4,5
	16					1,0	1,7	2,5	3,3	4,5
	20					0,9	1,6	2,3	3,1	4,5
	25						1,5	2,2	2,9	4,5
	32							2,1	2,7	4,5
	40								2,6	4,5
50									4,5	
63									4,5	

Protective Devices

Short Circuit Selectivity CLS4

- Short circuit selectivity (in kA) between CLS4 and upstream fuse NH, operating class gL/gG
- 1,4 . . . selectivity up to 1.4 kA; . . . no selectivity

Selectivity towards back-up fuses NH Gr. 00

Rated current I_n of CLS4 in A	Rated current of the back-up fuse in A gL/gG											
	16	20	25	35	40	50	63	80	100	125	160	
B- Characteristic	2	<0,5	<0,5	0,6	3,2	4,5	4,5	4,5	4,5	4,5	4,5	4,5
	4	<0,5	<0,5	<0,5	1,2	1,8	3,0	4,8	7,2	4,5	4,5	4,5
	6	<0,5	<0,5	<0,5	1,1	1,6	2,6	4,0	5,8	4,5	4,5	4,5
	10		<0,5	<0,5	1,1	1,5	2,2	3,2	4,5	4,5	4,5	4,5
	13		<0,5	<0,5	1,0	1,4	2,0	2,9	4,0	4,5	4,5	4,5
	16			<0,5	0,9	1,3	1,8	2,6	3,5	4,5	4,5	4,5
	20				0,9	1,3	1,7	2,4	3,3	4,5	4,5	4,5
	25				0,9	1,1	1,6	2,3	3,1	4,5	4,5	4,5
	32				0,8	1,1	1,5	2,1	2,9	4,5	4,5	4,5
	40						1,5	2,0	2,8	4,5	4,5	4,5
	50							1,9	2,7	4,2	4,5	4,5
	63									3,9	4,5	4,5
	C- Characteristic	0,5	0,9	2,7	4,5	4,5	4,5	4,5	4,5	4,5	4,5	4,5
1		0,7	2,0	1,0	4,5	4,5	4,5	4,5	4,5	4,5	4,5	4,5
2		<0,5	<0,5	0,6	2,2	4,2	4,5	4,5	4,5	4,5	4,5	4,5
3		<0,5	<0,5	0,5	1,4	2,1	4,0	4,5	4,5	4,5	4,5	4,5
4		<0,5	<0,5	<0,5	1,1	1,5	2,5	4,0	4,5	4,5	4,5	4,5
6		<0,5	<0,5	<0,5	1,0	1,4	2,3	3,6	4,5	4,5	4,5	4,5
10				<0,5	0,9	1,3	1,8	2,6	3,6	4,5	4,5	4,5
13					0,9	1,3	1,7	2,5	3,5	4,5	4,5	4,5
16					0,9	1,1	1,6	2,3	3,2	4,5	4,5	4,5
20					0,8	1,1	1,5	2,1	3,0	4,5	4,5	4,5
25							1,4	2,0	2,8	4,5	4,5	4,5
32								1,9	2,6	4,5	4,5	4,5
40									2,5	4,3	4,5	4,5
50									4,0	4,5	4,5	
63										4,5	4,5	

Protective Devices

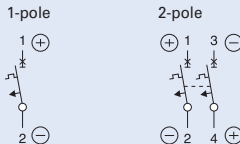
Miniature Circuit Breakers CLS6-DC

- High selectivity between MCB and back-up fuse due to low let-through energy
- Compatible with standard busbar
- Twin-purpose terminal (lift/open-mouthed) above and below
- Busbar positioning optionally above or below
- Meets the requirements of insulation co-ordination, distance between contacts ≥ 4 mm, for secure isolation
- Rated breaking capacity 10 kA according to IEC/EN 60947-2
- Rated voltage up to 250 V (per pole), $\tau = 4$ ms
- Take into account polarity!

Accessories:

Auxiliary switch for subsequent installation	ZP-IHK	286052
Tripping signal contact for subsequent installation	ZP-NHK	248437
Remote control and automatic switching device	Z-FW/LP	248296
Shunt trip release	ZP-ASA/..	248438, 248439
Undervoltage release	Z-USA/..	248288-248291
Compact enclosure	KLV-TC-2	276240
	KLV-TC-4	276241
Additional terminal 35mm ²	Z-HA-EK/35	263960
Switching interlock	Z-IS/SPE-1TE	274418

Connection diagrams



Technical Data

Electrical

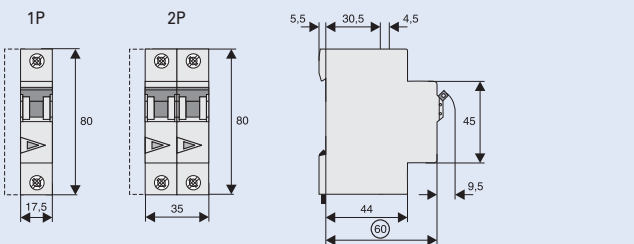
Design according to	IEC/EN 60947-2
Current test marks as printed onto the device	
Rated voltage DC	1-2 A type: 220V (per pole) 3-50 A types: 250V (per pole)
Rated breaking capacity according to IEC/EN 60947-2	10 kA
Characteristic	C
Back-up fuse	max. 100 A gL
Selectivity class	3
Rated peak withstand voltage U_{imp}	4 kV (1.2/50 μ s)
Endurance electrical comp.	$\geq 4,000$ operating cycles
mechanical comp.	$\geq 20,000$ operating cycles
Line voltage connection	optional (above/below)

Mechanical

Frame size	45 mm
Device height	80 mm
Device width	17.5 mm per pole (1MU)
Mounting	quick fastening with 3 lock-in positions on DIN rail IEC/EN 60715
Degree of protection	IP20
Upper and lower terminals	open mouthed/lift terminals
Terminal protection	finger and hand touch safe, BGV A3, ÖVE-EN 6
Terminal capacity	1-25 mm ²
Terminal fastening torque	2-2.4 Nm
Busbar thickness	0.8 - 2 mm
Mounting	independent of position

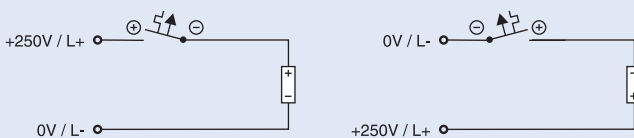
Note: not for PV string protection!

Dimensions (mm)

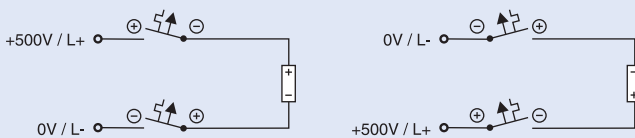


Connection examples

Connection example at 250V=, 1-pole



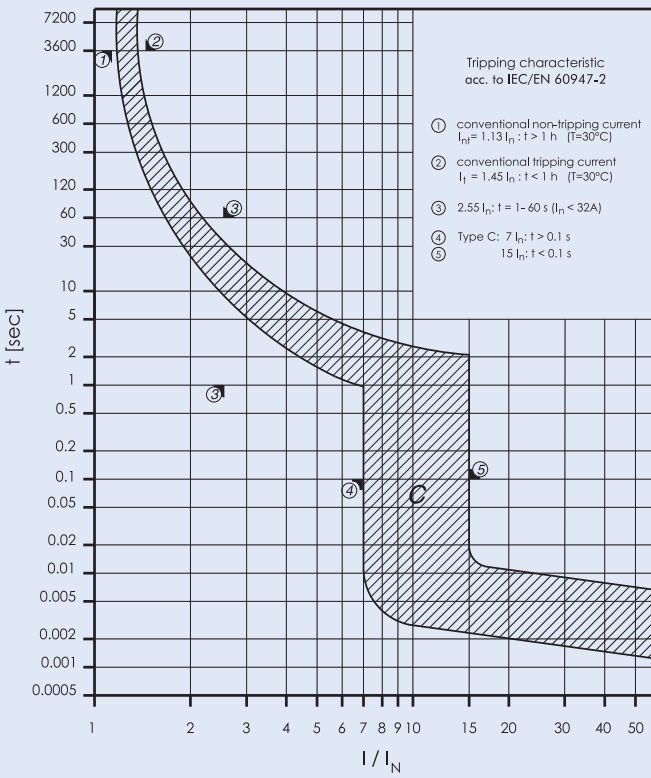
Connection example at 500V=, 2-pole



Protective Devices

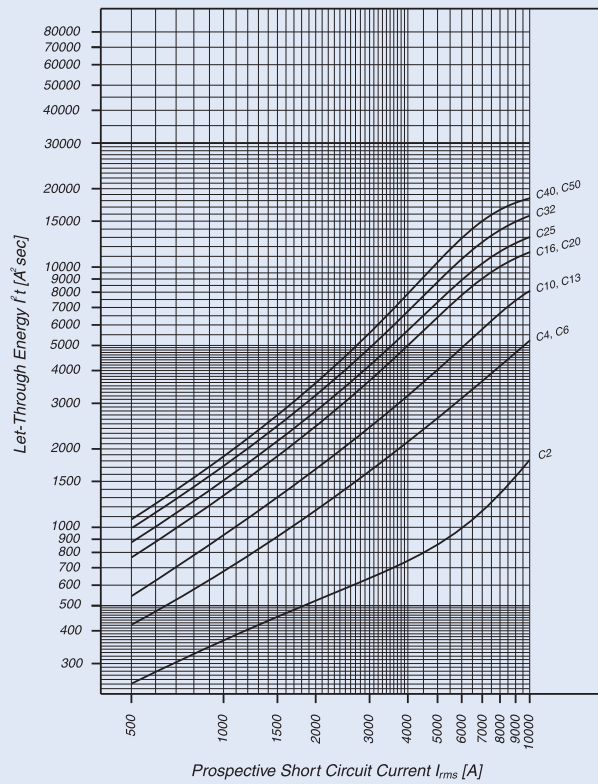
Tripping characteristic CLS6-DC

Type C



Let-through Energy CLS6-DC

Type C, 250 V d.c., $\tau = 5 \text{ ms}$ (acc. to IEC/EN 60947-2)



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