HV Fuse-Link with controlled power dissipation+ for switch-fuse combinations

HV fuse-links with controlled power dissipation (ÜLA+) have been specifically designed for use in switch-fuse combinations. The products are characterised by low power dissipation and an optimised circuit-breaking behaviour, even at high rated currents.

- **Quick tripping:** The circuit-breaking behaviour of the HV fuse-links has been designed to respond much quicker, breaking the circuit within 10 to 100 ms to ensure compliance with the requirements of switch-fuse combinations according to IEC60671-105 / VDE 0671 T105. The task of switching the transformer short-circuit current is a mandatory requirement of the HV fuse-link. This is supported by the specific characteristic of the fuse-link.

- **Less power dissipation:** Up to 30% less power dissipation allows large transformers to be protected by one switch-fuse combination to save costs.

- **Combined monitoring:** The combined monitoring of temperature and power dissipation ensures a unique level of equipment protection.

HV fuse-links with controlled power dissipation (ÜLA+) are available from 6/12 kV to 20/36 kV. Thanks to their optimised values, the products of these series are especially suitable for use in gas-insulated SF6 switchgears.

Sales launch:	Delivery time	Documentation:
April 2012	Ex stock, subject to prior sale	Product information 002, gross price sheet

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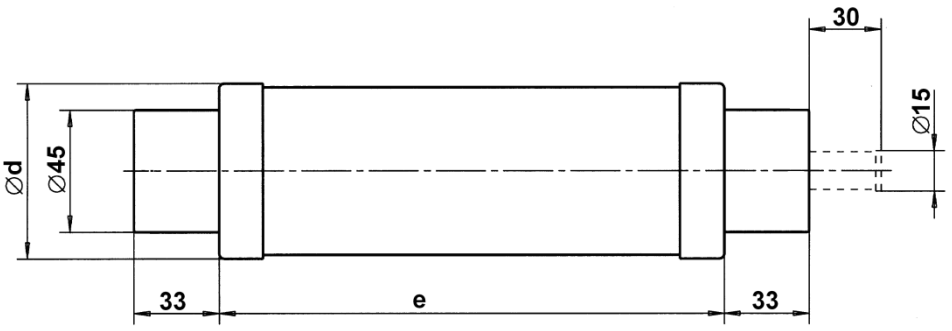
Dimensions drawings



Technical data

H.V. back-up fuse-links acc. to VDE 0670 T402/IEC 60 282-1 **with controlled power dissipation**

Electrical data, dimensions, weights

Order no.	Rated voltage range	Rated current	Rated breaking current	Rated Minimum breaking current	Dimensions		Resistances and power dissipation		Total I²t	Weight
	U_n kV	I_n A	I_1 kA	I_3 A	e mm	d mm	R_{kalt} mΩ	P_{warm} W	A²s	kg
67523.0100	6/12	10	63	35	292	56	227	29	3.000	1,6
67523.0160		16		64			66	21	3.700	
67523.0200		20		90			51	25	4.700	
67523.0250		25		95			40	29	4.920	
67523.0320		31,5		110			30	39	7.000	
67523.0400		40		134			20	46	14.000	
67523.0500		50		190			15	62	25.300	
67523.0630		63	80	250		65	11,9	58	52.200	2,1
67523.0800		80		280			9,5	82	78.000	
67523.1000		100		330		78	7,4	103	152.000	2,3
67523.1250		125		430		88	5,2	109	266.800	2,5
67524.1000		100		325	442	78	7,5	100	169.500	3,3
67524.1250		125		430			5,3	109	291.000	
67524.1600		160		460			4,4	175	358.500	
67543.0060	10/24	6,3	63	23	442	56	640	31	800	2,3
67543.0100		10		36			386	48	2.000	
67543.0160		16		73			127	42	2.340	
67543.0200		20		91			97	53	3.900	
67543.0250		25		116			73	60	6.500	
67543.0320		31,5		125			57	84	7.000	
67543.0400		40		161			41	96	14.200	
67543.0500		50		210		65	27	89	27.900	3,1
67543.0630		63		235		78	21	102	67.000	3,3
67543.0800		80		265			17	153	92.500	
67543.1000		100		345		88	13,6	200	152.000	5,9
67543.1250		125		435			10,1	254	279.000	
67553.0060	20/36	6,3	31,5	20	537	56	889	39	600	2,7
67553.0100		10		33			529	66	2.000	
67553.0160		16		66			190	67	2.340	
67553.0200		20		95			153	84	3.900	
67553.0250		25		110			118	100	6.500	
67553.0320		31,5	20	135		65	82	119	7.000	3,7
67553.0400		40		200			63	176	14.200	
67553.0500		50	35	220		88	40	130	34.000	6,5
67553.0630		63		250			31	165	72.500	
67553.0800		80		340			24	229	119.000	

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Selection table for H.V. back-up fuses

VDE 0670 T402 with controlled power dissipation Selection accoridung IEC 60671-105

Rated voltage range of fuse-link (kV) / Service voltage of transformer (kV)		Transformer Output in kVA															
		u_K = 4 %									u_K = 6%						
		100	125	160	200	250	315	400	500	630	630	800	1000	1250	1600	2000	2500
6/12 10	*Transformer rated current in A*	5,8	7,2	9,2	11,5	14,4	18,2	23,1	28,9	36,4	36,4	46,2	57,7	72,2	92,4		
	Short circuit current 2s in A	144	180	231	289	361	455	577	722	909	606	770	962	1203	1540		
	Transfercurrent Itransfer in A T0=40ms	143	143	184	258	321	433	567	512	660	512	660	837	1135	1320		
	Rated current of fuse-link in A	**16**	**16**	**20**	**25**	**31,5**	**40**	**50**	**63**	**80**	**63**	**80**	**100**	**125**	**160**		
	Power dissipation of fuse-links at I_{NTrafo} in W	1,9	3,0	3,4	4,7	5,3	6,9	8,3	8,1	11,3	14,0	19,8	24,1	26,3	42,2		
10/24 20	*Transformer rated current in A*	2,9	3,6	4,6	5,8	7,2	9,1	11,5	14,4	18,2	18,2	23,1	28,9	36,1	46,2	57,7	72,2
	Short circuit current 2s in A	72	90	115	144	180	227	289	361	455	303	385	481	601	770	962	1203
	Transfercurrent Itransfer in A T0=40ms	72	72	72	136	173	239	239	310	436	**307**	436	450	562	701	860	1184
	Rated current of fuse-link in A	**10**	**10**	**10**	**16**	**20**	**25**	**25**	**31,5**	**40**	**31,5**	**40**	**50**	**63**	**80**	**100**	**125**
	Power dissipation of fuse-links at I_{NTrafo} in W	2,6	4,0	6,7	4,0	4,8	5,8	9,7	11,8	13,2	20,2	23,1	23,6	24,1	36,9	48,2	61,2
20/36 30	*Transformer rated current in A*	1,9	2,4	3,1	3,8	4,8	6,1	7,7	9,6	12,1	12,1	15,4	19,2	24,1	30,8	38,5	48,1
	Short circuit current 2s in A	48	60	77	96	120	152	192	241	303	202	257	321	401	513	642	802
	Transfercurrent Itransfer in A T0=40ms	39	39	71	71	71	139	181	181	228	181	228	315	400	450	577	731
	Rated current of fuse-link in A	**6,3**	**6,3**	**10**	**10**	**10**	**16**	**20**	**20**	**25**	**20**	**25**	**31,5**	**40**	**50**	**63**	**80**
	Power dissipation of fuse-links at I_{NTrafo} in W	2,4	3,7	4,1	6,3	6,1	3,6	6,3	13,1	15,9	22,8	28,3	33,0	46,9	51,7	45,7	61,0

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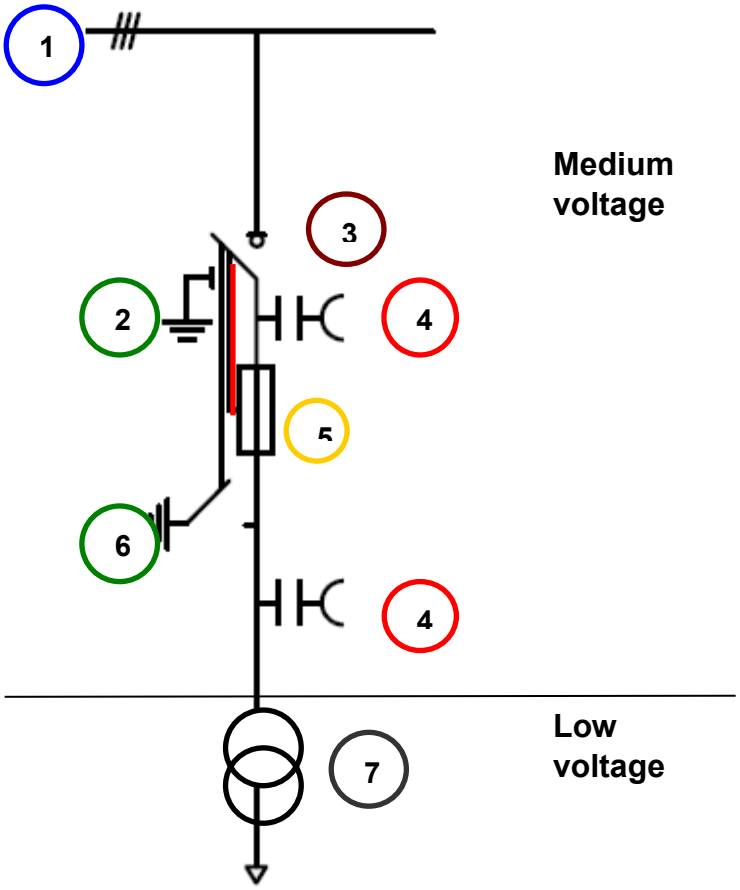
Typical design of a switch-fuse combination



- Busbar system 1
- Earth busbar system 2
- Fuse switch 3
- Capacitiv voltage meter 4
- HV fuse-link 5
- Earth cable outlet 6
- Transformer outlet 7
- Striker trigger
  (HV fuse-link on fuse switch)