





5SD74 lightning arresters, type 1

	For TN-C and IT systems	For TN-C systems	For TN-S and TT systems
Protection paths	L-PE	L-PEN	L-N, L-PE and N-PE
Rated voltage U_n	690 V AC	240/415 V AC	240 V AC
Maximum continuous voltage U_c	800 V AC	350 V AC	350 V AC
			 

Circuit	Mounting width			
With remote signaling				
1 + 0	— ¹⁾	5SD7411-2	—	—
1 + 1	4 MW	—	—	5SD7412-1
3 + 0	6 MW	—	5SD7413-1	—
3 + 1	8 MW	—	—	5SD7414-1

¹⁾ No modular installation device.

Further technical specifications

		5SD7411-2	5SD7412-1	5SD7413-1	5SD7414-1
Standards					
Standards		IEC 61643-11, EN 61643-11	IEC 61643-11, EN 61643-11	IEC 61643-11, EN 61643-11	IEC 61643-11, EN 61643-11
Approvals		—	KEMA, UL/cUL	KEMA, UL/cUL	KEMA, UL/cUL
Voltage					
Protection level U_p	L-N and L-PEN	≤ 4.50 kV	≤ 1.50 kV	≤ 1.50 kV	≤ 1.50 kV
	L-PE	—	≤ 2.50 kV	—	≤ 2.50 kV
	N-PE	—	≤ 1.50 kV	—	≤ 1.50 kV
Current					
Lightning impulse current I_{imp} (10/350 μ s)	L-N and L-PEN, 1P/3P	35 kA	25 kA	25/75 kA	25/75 kA
	N-PE	—	100 kA	—	100 kA
Rated discharge surge current I_n (8/20 μ s)	L-N and L-PEN, 1P/3P	35 kA	25 kA	25/75 kA	25/75 kA
	N-PE	—	100 kA	—	100 kA
Follow current discharge capacity I_{fi} (AC)	L-N and L-PEN for 264/350 V	—	50/25 kA	50/25 kA	50/25 kA
	N-PE	—	100 A	—	100 A
Function					
Response time t_A	L-N and L-PEN	≤ 100 ns	≤ 100 ns	≤ 100 ns	≤ 100 ns
	L-N and N-PE	—	≤ 100 ns	—	≤ 100 ns
Connections					
Conductor cross-section	Finely stranded	16 ... 50 mm ²	2.5 ... 25 mm ²	2.5 ... 25 mm ²	2.5 ... 25 mm ²
	Solid	16 ... 50 mm ²	2.5 ... 35 mm ²	2.5 ... 35 mm ²	2.5 ... 35 mm ²
Protection devices					
Max. back-up fuse acc. to IEC 61643-1	For stub wiring (gL/gG)	400 A	315 A	315 A	315 A
	For V wiring (gL/gG)	125 A	125 A	125 A	125 A
Short-circuit withstand current	With max. back-up fuse	50 kA	50 kA	50 kA	50 kA
Environmental conditions					
Degree of protection		IP20, with connected conductors			
Temperature range		-40 ... +80 °C			




Accessories

Replacement plugs



Protection paths	Basic units	Article No.
N-PE	5SD7412-1 and 5SD7414-1	5SD7418-0
L-N and L-PEN	For 5SD7412-1, 5SD7413-1 and 5SD7414-1	5SD7418-1

5SD74 combination surge arresters, type 1 + type 2

	For TN-C systems	For TN-S and TT systems	
Protection paths	L-PEN	L-N, L-PE and N-PE	L-N, L-PE and N-PE
Rated voltage U_n	240/415 V AC	240 V AC	240 V AC
Maximum continuous voltage U_c	350 V AC	350 V AC	350 V AC
			

Circuit	Mounting width		
With remote signaling			
1 + 1	4 MW	–	5SD7442-1
3 + 0	6 MW	5SD7443-1	–
3 + 1	8 MW	–	5SD7444-1

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Further technical specifications

		5SD7442-1	5SD7443-1	5SD7444-1
Standards				
Standards		IEC 61643-11; EN 61643-11		
Approvals		KEMA, UL/cUL		
Voltage				
Protection level U_p	L-N and L-PEN	≤1.50 kV	≤1.50 kV	≤1.50 kV
	L-PE	≤2.20 kV	–	≤2.20 kV
	N-PE	≤1.50 kV	–	≤1.50 kV
Current				
Lightning impulse current I_{imp} (10/350 μs)	L-N and L-PEN	25 kA	25 kA	25 kA
	N-PE	100 kA	–	100 kA
Rated discharge surge current I_n (8/20 μs)	L-N and L-PEN	25 kA	25 kA	25 kA
	N-PE	100 kA	–	100 kA
Follow current discharge capacity I_{fi} (AC)	L-N and L-PEN	25 kA	25 kA	25 kA
	N-PE	100 A	–	100 A
Function				
Response time t_A	L-N and L-PEN	≤25 ns	≤25 ns	≤25 ns
	L-N and N-PE	≤100 ns	–	≤100 ns
Connections				
Conductor cross-section	Finely stranded	2.5 ... 25 mm ²		
	Solid	2.5 ... 35 mm ²		
Protection devices				
Max. back-up fuse acc. to IEC 61643-1	For stub wiring (gL/gG)	315 A		
	For V wiring (gL/gG)	125 A		
Short-circuit withstand current	With max. back-up fuse	25 kA		
Environmental conditions				
Degree of protection		IP20, with connected conductors		
Temperature range		–40 ... +80 °C		
Display				
Visual function/fault indication		Yes		






Accessories

Replacement plugs



Protection paths	Type	Basic units	Article No.
N-PE	–	5SD7442-1 and 5SD7444-1	5SD7418-0
L-N and L-PEN	1	5SD7442-1, 5SD7443-1 and 5SD7444-1	5SD7448-1
	2	5SD7442-1, 5SD7443-1 and 5SD7444-1	5SD7428-1

5SD74 combination surge arresters, type 1 / type 2

	For TN-C and IT systems	For TN-C systems	For TN-S and TT systems	For photovoltaic systems	
Protection paths	L-PE	L-PEN	L-N, L-PE and N-PE	L-N, L-PE and N-PE	(L+) – (L–)
Rated voltage U_n	690 V AC	240/415 V AC	240 V AC	240/415 V AC	–
Maximum continuous voltage U_c	800 V AC	335 V AC	335 V AC	335 V AC	1000 V DC
					




Circuit	Mounting width				Plug-in
With remote signaling					
1 + 0	– ¹⁾	5SD7411-2	–	–	–
3 + 0	3 MW	–	5SD7413-3	–	–
3 + 1	4 MW	–	–	–	5SD7414-3
Without remote signaling					
1 + 1	2 MW	–	–	5SD7412-2	–
3 + 0	3 MW	–	5SD7413-2	–	5SD7483-6
3 + 1	4 MW	–	–	–	5SD7414-2

¹⁾ No modular installation device.

Further technical specifications		5SD7411-2	5SD7412-2	5SD7413-2 5SD7413-3	5SD7414-2 5SD7414-3	5SD7483-6
Standards						
Standards		IEC 61643-11	IEC 61643-11	IEC 61643-11	IEC 61643-11	EN 50539
Approvals		–	KEMA	KEMA	KEMA	KEMA
Voltage						
Protection level U_p	L-N and L-PEN	≤4.50 kV	≤1.20 kV	≤1.20 kV	≤1.20 kV	≤3.50 kV
	L-PE	–	–	–	≤2.0 kV	–
	N-PE	–	≤1.70 kV	–	≤1.70 kV	–
Current						
Lightning impulse current I_{imp} (10/350 μs)	L-N and L-PEN	35 kA	12.5 kA	12.5 kA	12.5 kA	≤5 kA
	N-PE	–	50 kA	–	50 kA	–
Rated discharge surge current I_n (8/20 μs)	L-N and L-PEN	35 kA	12.5 kA	12.5 kA	12.5 kA	15 kA
	N-PE	–	50 kA	–	–	–
Max. discharge surge current I_{max} (8/20 μs)	L-N	100 kA	12.5 kA	50 kA	50 kA	40 kA
	N-PE	–	50 kA	–	50 kA	–
Function						
Response time t_A	L-N and L-PEN	<100 ns	≤25 ns	≤25 ns	≤25 ns	≤25 ns
	L-N and N-PE	–	≤100 ns	–	≤100 ns	≤25 ns
Connections						
Conductor cross-section	Finely stranded	16 ... 50 mm ²	1.5 ... 25 mm ²	1.5 ... 25 mm ²	1.5 ... 25 mm ²	1.5 ... 25 mm ²
	Solid	16 ... 50 mm ²	1.5 ... 35 mm ²	1.5 ... 35 mm ²	1.5 ... 35 mm ²	1.5 ... 35 mm ²
Protection devices						
Max. back-up fuse acc. to IEC 61643-1	For stub wiring (gL/gG)	400 A	160 A	160 A	160 A	–
	For V wiring (gL/gG)	125 A	80 A	80 A	80 A	–
Short-circuit withstand current	With max. back-up fuse	50 kA	25 kA	25 kA	25 kA	–
Environmental conditions						
Degree of protection		IP20, with connected conductors				
Temperature range		–40 ... +80 °C				

Accessories

Replacement plugs

	Protection paths	Type	Basic units	Article No.
	N-PE	–	5SD7412-2, 5SD7412-3, 5SD7414-2 and 5SD7414-3	5SD7418-2
	L-N and L-PEN	1	5SD7412-2, 5SD7412-3, 5SD7413-2, 5SD7413-3, 5SD7414-2 and 5SD7414-3	5SD7418-3
	L-PE (PV)	2	5SD7483-6	5SD7498-3

5SD74 surge arresters, type 2

Standard design

	For TN and TT systems		For TN-C and IT systems	For TN-C systems	For IT systems		For TN-S and TT systems
Protection paths	N-PE	L-PEN and L-N	L-PEN and L-N	L-PEN	L-PEN and L-PE	L-PEN and L-PE	L-N, L-PE and N-PE
Rated voltage U_n	240/415 V AC	240/415 V AC	400/690 V AC	240/415 V AC	400/690 V AC	554/960 V AC	240/415 V AC
Maximum continuous voltage U_c	260 V AC	350 V AC	800 V AC	350 V AC	580 V AC	760 V AC	350 V AC (L-N, L-PE) 260 V AC (N-PE)



Circuit	Mounting width							
With remote signaling								
1 + 0	1 MW	–	5SD7461-1	–	–	–	–	–
	2 MW	–	–	5SD7481-1	–	–	–	–
3 + 0	3 MW	–	–	–	5SD7463-1	5SD7473-1	5SD7483-5	–
3 + 1	4 MW	–	–	–	–	–	–	5SD7464-1
Without remote signaling								
1 + 0	1 MW	5SD7481-0	5SD7461-0	–	–	–	–	–
3 + 0	3 MW	–	–	–	5SD7463-0	–	–	–
3 + 1	4 MW	–	–	–	–	–	–	5SD7464-0

Further technical specifications	5SD7461-0		5SD7481-0		5SD7463-0		5SD7464-0	
	5SD7481-0	5SD7461-1	5SD7481-1	5SD7463-1	5SD7464-1	5SD7473-1	5SD7483-5	
Standards								
Standards	IEC 61643-11; EN 61643-11	IEC 61643-11; EN 61643-11	IEC 61643-11; EN 61643-11	IEC 61643-11; EN 61643-11	IEC 61643-11; EN 61643-11	IEC 61643-11; EN 61643-11	IEC 61643-11; EN 61643-11	IEC 61643-11; EN 61643-11
Approvals	KEMA	KEMA	KEMA	KEMA	KEMA	–	–	KEMA, UL/cUL
Voltage								
Protection level U_p	L-N and L-PEN	–	≤1.50 kV	≤5 kV	≤1.50 kV	≤1.60 kV	≤2.50 kV	≤2.90 kV
	L-PE	–	–	–	–	≤1.90 kV	–	–
	N-PE	≤1.50 kV	–	–	–	≤1.50 kV	–	–
Current								
Rated discharge surge current I_n (8/20 μs)	L-N and L-PEN	–	20 kA	15 kA	20 kA	20 kA	15 kA	15 kA
	N-PE	20 kA	–	–	–	20 kA	–	–
Max. discharge surge current I_{max} (8/20 μs)	L-N	–	40 kA	30 kA	40 kA	40 kA	30 kA	30 kA
	N-PE	40 kA	–	–	–	40 kA	–	–
Function								
Response time t_A	L-N and L-PEN	–	≤25 ns	≤100 ns	≤25 ns	≤25 ns	≤25 ns	≤25 ns
	L-N and N-PE	≤100 ns	–	–	–	≤100 ns	–	–
Connections								
Conductor cross-section	Finely stranded	1.5 ... 25 mm ²						
	Solid	1.5 ... 35 mm ²						
Protection devices								
Max. back-up fuse acc. to IEC 61643-1	For stub wiring (gL/gG)	–	125 A	100 A	125 A	125 A	125 A	100 A
	For V wiring (gL/gG)	–	–	80 A	80 A	80 A	80 A	80 A
Short-circuit withstand current	With max. back-up fuse	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA
Environmental conditions								
Degree of protection	IP20, with connected conductors							
Temperature range	–40 ... +80 °C							

Accessories

Replacement plugs



Protection paths	Basic units	Article No.
N-PE	5SD7481-0, 5SD7464-0 and 5SD7464-1	5SD7488-0
L-N and L-PEN	5SD7461-0, 5SD7461-1, 5SD7463-0, 5SD7463-1, 5SD7464-0 and 5SD7464-1	5SD7468-1
L-PEN	5SD7481-1 and 5SD7483-5	5SD7488-2
	5SD7481-1	5SD7488-4

5SD74 surge arresters, type 2

Narrow design

	For TN-S and TT systems	
Protection paths	L-N and N-PE	L-N and N-PE
Rated voltage U_n	240 V AC	240/415 V AC
Rated arrester voltage U_c ; L-N, N-PE, L-(PE)N	350 V AC	350 V AC
Rated arrester voltage U_c ; N-PE	264 V AC	264 V AC



Circuit	Mounting width	Rated discharge surge current I_n (8/20 μ s)			
		L-N or L-(PE)N	N-PE		
With remote signaling					
1 + 1	24 mm (1 1/3 MW)	20 kA	20 kA	5SD7422-1	–
3 + 1	48 mm (2 2/3 MW)	20 kA	20 kA	–	5SD7424-1
		20 kA	40 kA	–	–
Without remote signaling					
1 + 1	24 mm (1 1/3 MW)	20 kA	20 kA	5SD7422-0	–
3 + 1	48 mm (2 2/3 MW)	20 kA	20 kA	–	5SD7424-0
		20 kA	40 kA	–	–

Further technical specifications

		5SD7422-0 5SD7422-1	5SD7424-0 5SD7424-1
Standards			
Standards		IEC 61643-11, EN 61643-11	IEC 61643-11, EN 61643-11
Approvals		KEMA/UL/cUL	KEMA/UL/cUL
Voltage			
Protection level U_p	L-N and L-PEN	≤ 1.50 kV	≤ 1.50 kV
	L-PE	≤ 1.90 kV	≤ 1.90 kV
	N-PE	≤ 1.50 kV	≤ 1.50 kV
Current			
Rated discharge surge current I_n (8/20 μ s)	L-N and L-PEN	20 kA	20 kA
	N-PE	20 kA	20 kA
Max. discharge surge current $I_{max.}$ (8/20 μ s)	L-N	40 kA	40 kA
	N-PE	40 kA	40 kA
Function			
Response time t_A	L-N and L-PEN	≤ 25 ns	
	L-N and N-PE	≤ 100 ns	
Connections			
Conductor cross-section	Finely stranded	1.5 ... 25 mm ²	
	Solid	1.5 ... 35 mm ²	
Protection devices			
Max. back-up fuse acc. to IEC 61643-1	For stub wiring (gL/gG)	315 A	
	For V wiring (gL/gG)	63 A	
Short-circuit withstand current	With max. back-up fuse	25 kA	
Environmental conditions			
Degree of protection		IP20, with connected conductors	
Temperature range		–40 ... +80 °C	

Accessories




Replacement plugs



Protection paths	Basic units	Article No.
N-PE	5SD7422-0, 5SD7422-1, 5SD7424-0 and 5SD7424-1	5SD7428-0
L-N and L-PEN	5SD7422-0, 5SD7422-1, 5SD7424-0 and 5SD7424-1	5SD7428-1

5SD74 surge arresters, type 3

	For TN-S and TT systems		
Protection paths	L-N, L-PE, N-PE, (L+) – (L–) and (L+ / L–) – PE	L-N, L-PE, N-PE, (L+) – (L–) and (L+ / L–) – PE	L-N, L-PE, N-PE, (L+) – (L–) and (L+ / L–) – PE
Rated voltage U_n	24 V AC	120 V AC	230 V AC
Rated arrester voltage U_c	34 V AC	150 V AC	264 V AC

Circuit	Mounting width			
With remote signaling				
1 + 0	1 MW	5SD7432-4	5SD7432-2	5SD7432-1

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Further technical specifications		5SD7432-4	5SD7432-2	5SD7432-1
Standards				
Standards		IEC 61643-11; EN 61643-11	IEC 61643-11; EN 61643-11	IEC 61643-11; EN 61643-11
Approvals		KEMA/UL/cUL	KEMA/UL/cUL	KEMA/UL/cUL
Voltage				
Protection level U_p	L-N, L-PE and N-PE	$\leq 250 / \leq 650$ V	$\leq 850 / \leq 950$ V	$\leq 1350 / \leq 1500$ V
Current				
Rated load current I_L (at 30 °C)		26 A	26 A	26 A
Rated discharge surge current I_n (8/20 μ s)		1 kA	3 kA	3 kA
Combined surge $U_{open collector}$		2 kV	6 kV	6 kV
Function				
Response time t_A		≤ 100 ns		
Connections				
Conductor cross-section	Finely stranded	0.2 ... 2.5 mm ²		
	Solid	0.2 ... 4 mm ²		
Protection devices				
Required back-up fuse, max.	(gG/B/C)	25 A		
Environmental conditions				
Degree of protection		IP20, with connected conductors		
Temperature range		-40 ... +80 °C		
Display				
Visual function/fault indication		Yes		

