

Overview

Surge arresters type 2 are used after lightning arresters type 1 in main distribution boards or sub-distribution boards. They protect low-voltage systems against transient overvoltages.

The type 2 surge arrester lowers the protection level from 1.4 to 1.5 kV. A remote signaling contact shows whether a protective module has been disconnected from the network by the thermal arrester disconnector or whether it is just not plugged in.

Benefits

- Type 2 surge arresters do not require decoupling reactors to be fitted in the system. This simplifies plant configuration and reduces space requirements - and no time is wasted on planning the installation of decoupling reactors. This considerably cuts costs.
- The rated arrester voltage is a uniform 350 V AC. This increases safety in systems with extended voltage overshoots.
- All type 2 surge arresters are fitted with a mechanical fault indication, which does not require an extra power supply.
- A thermal isolating arrester installed in each device offers a high degree of protection during runtime. In the event of overload, the surge arrester is disconnected from the mains - the plant continues running.
- The protective modules are plug-in versions. No mounting work required when replacing the protective modules. When taking insulation measurements, the protective modules are simply removed, no need to disconnect the surge arrester from the power supply.
- Type 2 surge arresters are available with a remote signaling contact, which is integrated in the device and does not require any further space in the distribution board.

Technical specifications

		Surge arresters, wide design				
		N/PE Plug-in 5SD7 481-0	Single-pole Compact 5SD7 466-.	Plug-in 5SD7 461-.	Multipole 3P 5SD7 463-.	4P 5SD7 464-.
Standards		IEC 61643-11; EN 61643-11			KEMA	
Approved acc. to					KEMA (available soon)	
Rated voltage U_N	V AC	240	240	240	240/415	230/400
Rated arrester voltage U_C						
• L/N	V AC	--	350	350	--	--
• L/N or L/PEN		--	--	--	350	350
• N/PE	V AC	260	--	--	--	260
Rated discharge surge current I_n (8/20 μ s)						
• L/N	kA	--	20	20	--	--
• L/N or L/PEN, 1P		--	--	--	20	20
• N/PE	kA	20	--	--	--	20
Discharge surge current I_{max} (8/20 μ s)						
• L/N	kA	--	40	40	--	--
• L/N or L/PEN, 1P		--	--	--	40	40
• L/N or L/PEN, 1P/multipole		--	--	--	--	--
• N/PE	kA	40	--	--	--	40
Lightning test current I_{imp} (10/350 μ s)	kA	12	--	--	--	--
Protection level U_p						
• L/N	kV	--	≤ 1.4	--	--	--
• L/N or L/PEN		--	--	≤ 1.4	≤ 1.4	≤ 1.4
• N/PE	kV	≤ 1	--	--	--	≤ 1.5
Response time t_A						
• L/N or L/PEN	ns	--	≤ 25	≤ 25	≤ 25	≤ 25
• N/PE	ns	≤ 100	--	--	--	≤ 100
Required back-up fuse, max.	A	125 gL				
Short-circuit strength with max. back-up fuse	kA _{rms}	25				
Temperature range	°C	-40 ... +80				
Degree of protection		IP20, with connected conductors				
Conductor cross-section						
• Finely stranded	mm ²	0.5 ... 25				
• Solid	mm ²	0.5 ... 35				
Mounting width according to DIN 43880	MW	1	1	1	3	4
Visual function/fault indication		Yes				

Surge arresters, type 2

		Surge arresters with remote signaling						
		Single-pole, wide design		Multipole, wide design		Multipole, narrow design		
		Compact	Plug-in	3P	4P	2P	3P	4P
		5SD7 466-1	5SD7 461-1	5SD7 463-1	5SD7 464-1	5SD7 422-1	5SD7 423-1	5SD7 424-1
Remote signaling • Contact type • Operational voltage, max. • Operational current, max. - resistive/inductive load - resistive/inductive load • Conductor cross-section - finely stranded - solid		Yes						
		Floating CO contact (plug-in)						
	V AC	250						
	V DC	125						
	A AC	1/1						
	DC mA	200/30						
	mm ²	1.5						
	mm ²	1.5						