

Surge Protective Device

SP Series (Box type)

Product description

The SP series surge protective device is applied to the alternating current 50/60Hz, 220V/380V power system and provides the protection from the surge overvoltage of an electric system. Moreover, the protection module, disconnectable device (fuse), and fastened power and ground wires are organized into the all-in-one steel cabinet with convenient installation and stability. If the protective device is normal, the display becomes green. The display becomes red after operation (abnormal or after an accident).



Product rating

- Single phase 2W+G (SPL)

SPD Type	SPL (AC 110/220V)		SPL (AC 220V)	
	SPL3-20S	SPL2-40S	SPL2-80S	
Class	Class III		Class II	
Rated system	[Pole]	2W+G	2W+G	
Rated voltage, Un	AC [V]	110, 220	220	
Max. continuous operating voltage, Uc	AC [V]	275	385	
Voltage protection level, Up	[kV]	1.5	2.5	3.0
Operation voltage, Uoc	[kV/kA]	20/10	-	-
Nominal discharge current, In (8/20μs)	[kA, per mode]	-	20	40
Maximum discharge current, Imax (8/20μs)	[kA, per mode]	-	40	80
Response time, tA	[ns]	< 5 ns	< 5 ns	
Operating temperature range	[°C]	-40 ~ +70°C	-40 ~ +70°C	
Operating frequency	[Hz]	50/60 Hz	50/60 Hz	
Mounting on		Screw	Screw	
Operation status indication		Normal operation: Green, Abnormal/After an accident: Red		
Protection degree		IP20	IP20	
Protection mode		L-N, N-PE (G), L-PE (G)	L-N, N-PE (G)	
Ground		TN	TN	
Certification		CE	KS, CE	



Product rating

- Three phase 3W+G (SPT) AC 220V

SPD Type	SPT (AC 220V)			
	SPT2-40S	SPT2-80S	SPT1-120S	SPT1-160S
Class		Class II	Class I, Class II	
Rated system	[Pole]		3W+G	
Rated voltage, Un	AC [V]		220	
Max. continuous operating voltage, Uc	AC [V]		385	
Voltage protection level, Up	[kV]	2.5	3.0	2.0
Nominal discharge current, In (8/20μs)	[kA, per mode]	20	40	-
Maximum discharge current, Imax (8/20μs)	[kA, per mode]	40	80	120
Lightning impulse current, limp (10/350μs)	[kA, per mode]	-	-	6.5
Response time, tA	[ns]		< 5 ns	
Operating temperature range	[°C]		-40 ~ +70°C	
Operating frequency	[Hz]		50/60 Hz	
Mounting on			Screw	
Operation status indication		Normal operation: Green, Abnormal/After an accident: Red		
Protection degree			IP20	
Protection mode			L-PE (G)	
Ground			TN	
Certification			KS, CE	

* SPT can not be used in Delta wiring grounding system

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Bản quyền nội dung thuộc **LS Electric**

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Product rating

- Three phase 3W+G (SPT) AC 380V

SPD Type	SPT (AC 380V)						
	SPT2-40S	SPT2-80S	SPT1-120S	SPT1-160S			
Class	Class II		Class I, Class II				
Rated system	[Pole]						
Rated voltage, Un	AC	[V]	380				
Max. continuous operating voltage, Uc	AC	[V]	385				
Voltage protection level, Up	[kV]	2.5	3.0	2.0			
Nominal discharge current, In (8/20μs)	[kA, per mode]	20	40	-			
Maximum discharge current, Imax (8/20μs)	[kA, per mode]	40	80	120			
Lightning impulse current, limp (10/350μs)	[kA, per mode]	-	-	6.5			
Response time, tA	[ns]	< 5 ns					
Operating temperature range	[°C]	-40 ~ +70°C					
Operating frequency	[Hz]	50/60 Hz					
Mounting on	Screw						
Operation status indication	Normal operation: Green, Abnormal/After an accident: Red						
Protection degree	IP20						
Protection mode	L-PE (G)						
Ground	TN						
Certification	KS, CE						

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Product rating

- Three phase 3W+G (SPT) AC 440V

SPD Type	SPT (AC 440V)						
	SPT2-40S	SPT2-80S	SPT1-120S	SPT1-160S			
Class	Class II		Class I, Class II				
Rated system	[Pole]						
Rated voltage, Un	AC	[V]	440				
Max. continuous operating voltage, Uc	AC	[V]	385				
Voltage protection level, Up	[kV]	2.5	3.0	2.0			
Nominal discharge current, In (8/20μs)	[kA, per mode]	20	40	-			
Maximum discharge current, Imax (8/20μs)	[kA, per mode]	40	80	120			
Lightning impulse current, limp (10/350μs)	[kA, per mode]	-	-	6.5			
Response time, tA	[ns]	< 5 ns					
Operating temperature range	[°C]	-40 ~ +70°C					
Operating frequency	[Hz]	50/60 Hz					
Mounting on	Screw						
Operation status indication	Normal operation: Green, Abnormal/After an accident: Red						
Protection degree	IP20						
Protection mode	L-PE (G)						
Ground	TN						
Certification	KS, CE						

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Surge Protective Device

SP Series (Box type)



Product rating

- Three phase 4W +G (SPY 127S)

SPD Type	SPY (AC 127/220V)				
	SPY2-40S	SPY2-80S	SPY1-120S	SPY1-160S	SPY1-200S *
Class	Class II			Class I, Class II	
Rated system	[Pole]			4W+G	
Rated voltage, Un	AC [V]			127/220	
Max. continuous operating voltage, Uc	AC [V]			385	
Voltage protection level, Up	[kV]	2.5	3.0	2.0	2.0
Nominal discharge current, In (8/20μs)	[kA, per mode]	20	40	-	-
Maximum discharge current, Imax (8/20μs)	[kA, per mode]	40	80	120	160
Lightning impulse current, limp (10/350μs)	[kA, per mode]	-	-	6.5	6.5
Response time, tA	[ns]			< 5 ns	
Operating temperature range	[°C]			-40 ~ +70°C	
Operating frequency	[Hz]			50/60 Hz	
Mounting on				Screw	
Operation status indication				Normal operation: Green, Abnormal/After an accident: Red	
Protection degree				IP20	
Protection mode				L-N, N-PE (G)	
Ground				TN	
Certification				KS, CE	

* The wiring direction of SPY1-200S is located on the side. (Refer to external dimension)



Product rating

- Three phase 4W+G (SPY 220S)

SPD Type	SPY (AC 220/380V)				
	SPY2-40S	SPY2-80S	SPY1-120S	SPY1-160S	SPY1-200S *
Class	Class II			Class I, Class II	
Rated system	[Pole]			4W+G	
Rated voltage, Un	AC [V]			220/380	
Max. continuous operating voltage, Uc	AC [V]			385	
Voltage protection level, Up	[kV]	2.5	3.0	2.0	2.0
Nominal discharge current, In (8/20μs)	[kA, per mode]	20	40	-	-
Maximum discharge current, Imax (8/20μs)	[kA, per mode]	40	80	120	160
Lightning impulse current, limp (10/350μs)	[kA, per mode]	-	-	6.5	6.5
Response time, tA	[ns]			< 5 ns	
Operating temperature range	[°C]			-40 ~ +70°C	
Operating frequency	[Hz]			50/60 Hz	
Mounting on				Screw	
Operation status indication				Normal operation: Green, Abnormal/After an accident: Red	
Protection degree				IP20	
Protection mode				L-N, N-PE (G)	
Ground				TN	
Certification				KS, CE	

* The wiring direction of SPY1-200S is located on the side. (Refer to external dimension)

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Product rating

- Imp 12.5kA Class I SPD

SPD Type	SPL1-13/50S	SPT1-13S	SPY1-13/50S
Class	Class I		
Rated system [Pole]	2W+G	3W+G	4W+G
Rated voltage, Un AC [V]	220	380	380/220
Max. continuous operating voltage, Uc AC [V]		320	
Voltage protection level, Up [kV]	L-N : 1.2, N-PE : 1.8	L-N : 1.2, N-PE : 1.8	L-N : 1.2, N-PE : 1.8
Nominal discharge current, In (8/20μs) [kA, per mode]	-	-	-
Maximum discharge current, Imax (8/20μs) [kA, per mode]	-	-	-
Lightning impulse current, Imp (10/350μs) [kA, per mode]	12.5/50	12.5	12.5/50
Response time, tA [ns]		< 5 ns	
Operating temperature range [°C]		-40 ~ +70°C	
Operating frequency [Hz]		50/60 Hz	
Mounting on		Screw	
Operation status indication	Normal operation: Green, Abnormal/After an accident: Red		
Protection degree	IP20		
Protection mode	L-N, N-PE (G)	L-PE (G)	L-N, N-PE (G)
Ground		TN/TT/IT	
Certification	KS, CE		

* SPT can not be used in Delta wiring grounding system



Product rating

- Imp 25kA Class I SPD

SPD Type	SPL1-25/50S	SPT1-25S	SPY1-25/100S
Class	Class I		
Rated system [Pole]	2W+G	3W+G	4W+G
Rated voltage, Un AC [V]	220	380	380/220
Max. continuous operating voltage, Uc AC [V]		320	
Voltage protection level, Up [kV]	L-N : 1.3, N-PE : 2.0	L-N : 1.3, N-PE : 2.0	L-N : 1.3, N-PE : 2.0
Nominal discharge current, In (8/20μs) [kA, per mode]	-	-	-
Maximum discharge current, Imax (8/20μs) [kA, per mode]	-	-	-
Lightning impulse current, Imp (10/350μs) [kA, per mode]	25/50	25	25/100
Response time, tA [ns]		< 5 ns	
Operating temperature range [°C]		-40 ~ +70°C	
Operating frequency [Hz]		50/60 Hz	
Mounting on		Screw	
Operation status indication	Normal operation: Green, Abnormal/After an accident: Red		
Protection degree	IP20		
Protection mode	N-PE (G)	L-PE (G)	L-N, N-PE (G)
Ground		TN/TT/IT	
Certification	KS, CE		

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