

Description	Type Designation	Article No.	Units per package
Accessories			
Auxiliary switch for SPBT12-280	ASAXSC-SPM	131785	4/120
Busbar	ZV-KSBI...		

Impulse current I_{imp} (10/350) μ s	Type Designation	Article No.	Units per package
Lightning current arrester - surge arrester SPBT12			
Complete			
12.5 kA L - (PE) N	SPBT12-280/1	158306	12/120
50 kA N-PE	SPBT12-NPE50	184749	1/60
100 kA N-PE	SPBT12-NPE100	158307	1/60

Insert			
12.5 kA Insert	SPBT12-280	167341	2/120



Description Surge Protective Class T1&T2

- Field of application:
For the protection of low voltage distribution systems against transient overvoltage caused by direct and indirect lightning stroke and switching operations
- Application according to IEC 60364-5-53 Clause 534
- Test class I, II according to IEC 61643-11
- SPD-type T1, T2 according to EN 61643-11
- Lightning protection classes III and IV according to IEC 62305
- Busbars ZV-KSBI are available for all customary applications

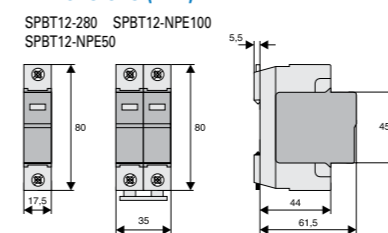
Technical Data

	SPBT12-280...	SPBT12-NPE50	SPBT12-NPE100
Electrical			
	per pole		
Responding time (rate of voltage rise 5 kV/ μ s)	< 25 ns	< 100 ns	< 100 ns
Voltage protection level	$U_p \leq 1.5$ kV	< 1.4 kV	< 1.5 kV
Voltage protection level at 5 kA (8/20) μ s	$U_p = 950$ V	–	–
Max. continuous operating voltage	$U_c = 280$ VAC	260 VAC	255 VAC
TOV test value	$U_T = 335$ VAC (5 s)	1200 VAC (200 ms)	1200 VAC (200 ms)
Rated frequency	50 Hz	50 Hz	50 Hz
Open circuit voltage	$U_{oc} = 10$ kV	–	20 kV
Nominal discharge current (8/20) μ s	$I_n = 25$ kA	50 kA	100 kA
Max. discharge current	$I_{max} = 50$ kA	100 kA	100 kA
Impulse current (10/350) μ s			
Peak current	12.5 kA	50 kA	100 kA
Follow current interrupt rating	I_{fi} –	100 $A_{r.m.s.}$	100 $A_{r.m.s.}$
Maximum back-up fuse	160 AgL/gG	–	–
Maximum short-circuit current	50 kA $A_{r.m.s.}$	–	–
Connection diagram			

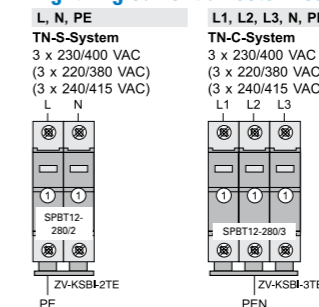
Mechanical

Frame size	45 mm	45 mm	45 mm
Device height	80 mm	80 mm	80 mm
Device width	17.5 mm	17.5 mm	35 mm
Weight	121 g	93 g	250 g
Permitted ambient temperature	-40°C to +70°C	-40°C to +70°C	-40°C to +70°C
Degree of protection	IP20	IP20	IP20
Upper and lower lift terminal capacity	4 - 25 mm ²	top 4 - 50 mm ² , bottom 4 - 35 mm ²	4 - 35 mm ²
Upper and lower open mouthed terminals for busbar thickness up to	1.5 mm	top - / bottom 1.5 mm	1.5 mm
Tightening torque of terminal screws	2.4 - 3 Nm	2.4 - 3 Nm	2.4 - 3 Nm
Quick fastening on DIN rail according to	IEC/EN 60715	IEC/EN 60715	IEC/EN 60715
Accessories: busbars 16 mm ²	Type ZV-KSBI ...	Type ZV-KSBI ...	Type ZV-KSBI ...

Dimensions (mm)



Lightning current arrester - surge arrester sets, Lightning protection classes III, IV

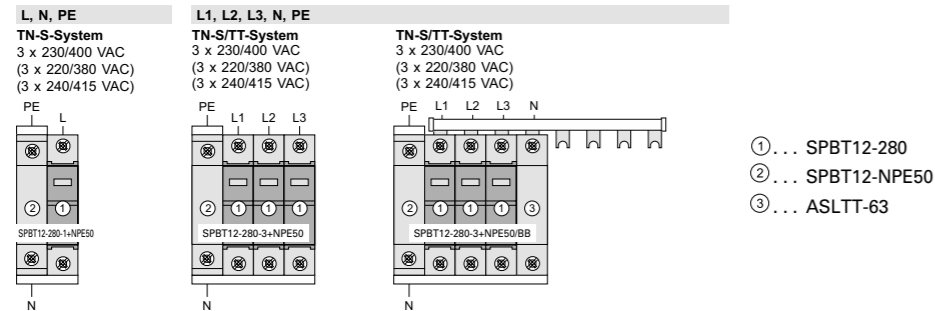


①... SPBT12-280

Technical Data

			SPBT12-280-1+NPE50	SPBT12-280-3+NPE50
Electrical				
per pole				
Responding time (rate of voltage rise 5 kV/μs)	L-N / N-PE		< 25 ns / < 100 ns	< 25 ns / < 100 ns
Voltage protection level	L-N / L-PE / N-PE	U_p	< 1.5 kV	< 1.5 kV
Max. continuous operating voltage	L-N / N-PE	U_c	280 VAC / 260 VAC	280 VAC / 260 VAC
TOV test value		U_T		
5 s	L-N / L-PE		348 VAC / 370 VAC	348 VAC / 370 VAC
200 ms	N-PE		1200 VAC	1200 VAC
Rated frequency			50/60 Hz	50/60 Hz
Open circuit voltage		U_{oc}	10 kV	20 kV
Nominal discharge current (8/20) μs	L-N / N-PE	I_n	25 kA / 50 kA	3x25 kA / 50 kA
Max. discharge current	L-N / N-PE	I_{max}	50 kA / 100 kA	3x50 kA / 100 kA
Impulse current (10/350) μs		I_{imp}		
Peak current	L-N / N-PE		12.5 kA / 50 kA	3x12.5 kA / 50 kA
Follow current interrupt rating	N-PE	I_{fi}	100 A _{r.m.s.}	100 A _{r.m.s.}
Maximum back-up fuse			–	–
Maximum short-circuit current			–	–
Connection diagram				
Mechanical				
Frame size			45 mm	45 mm
Device height			80 mm	80 mm
Device width			35 mm	70 mm
Weight			218 g	470 g
Permitted ambient temperature			-40°C to +70°C	-40°C to +70°C
Degree of protection (built-in)			IP40	IP40
Upper and lower lift terminal capacity				
L, N			4 - 25 mm ²	4 - 25 mm ²
N, PE			4 - 50 mm ²	4 - 50 mm ²
Upper and lower open mouthed terminals for busbar thickness up to			1.5 mm	1.5 mm
Tightening torque of terminal screws			2.4 - 3 Nm	2.4 - 3 Nm
Quick fastening on DIN rail according to			IEC/EN 60715	IEC/EN 60715
Accessories: busbars 16 mm ²			Type ZV-KSBI ...	Type ZV-KSBI ...

Lightning current arrester - surge arrester sets, Lightning protection classes III, IV



Technical Data

			SPBT12-280-1+NPE	SPBT12-280-3+NPE
Electrical				
per pole				
Responding time (rate of voltage rise 5 kV/μs)	L-N / N-PE		< 25 ns / < 100 ns	< 25 ns / < 100 ns
Voltage protection level	L-N / L-PE / N-PE	U_p	< 1.5 kV	< 1.5 kV
Max. continuous operating voltage	L-N / N-PE	U_c	280 VAC / 255 VAC	280 VAC / 255 VAC
TOV test value		U_T		
5 s	L-N / L-PE		348 VAC / 370 VAC	348 VAC / 370 VAC
200 ms	N-PE		1200 VAC	1200 VAC
Rated frequency			50 Hz	50 Hz
Open circuit voltage		U_{oc}	10 kV	20 kV
Nominal discharge current (8/20) μs	L-N / N-PE	I_n	25 kA / 100 kA	3x25 kA / 100 kA
Max. discharge current	L-N / N-PE	I_{max}	50 kA / 100 kA	3x50 kA / 100 kA
Impulse current (10/350) μs		I_{imp}		
Peak current	L-N / N-PE		12.5 kA / 100 kA	3x12.5 kA / 100 kA
Follow current interrupt rating	N-PE	I_{fi}	100 A _{r.m.s.}	100 A _{r.m.s.}
Maximum back-up fuse			160 AgL/gG	160 AgL/gG
Maximum short-circuit current			50 kA _{r.m.s.}	50 kA _{r.m.s.}
Connection diagram				
Mechanical				
Frame size			45 mm	45 mm
Device height			80 mm	80 mm
Device width			52.5 mm	87.5 mm
Weight			375 g	626 g
Permitted ambient temperature			-40°C to +70°C	-40°C to +70°C
Degree of protection (built-in)			IP40	IP40
Upper and lower lift terminal capacity				
L, N			4 - 25 mm ²	4 - 25 mm ²
N, PE			4 - 35 mm ²	4 - 35 mm ²
Upper and lower open mouthed terminals for busbar thickness up to			1.5 mm	1.5 mm
Tightening torque of terminal screws			2.4 - 3 Nm	2.4 - 3 Nm
Quick fastening on DIN rail according to			IEC/EN 60715	IEC/EN 60715
Accessories: busbars 16 mm ²			Type ZV-KSBI ...	Type ZV-KSBI ...

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