

# SPA105/T1

Three Phase T1/2/3 Lightning and surge arrester for LPL III and IV



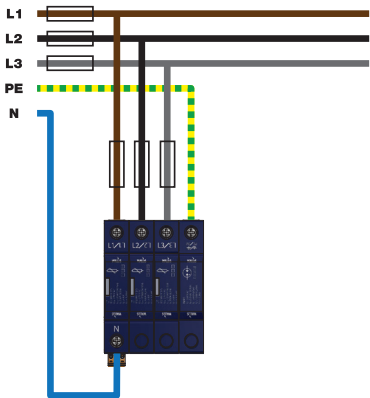
This range of lightning and surge arresters are configured in 3+1 and 1+1 (CT2 according to BS 7671), allowing for installation in TN-S, TN-C-S and TT earthing systems. This configuration is required for TT earthing systems where an RCD is not used, or the surge arrester is installed on the supply side of the RCD. These arresters are designed for use at the boundary of LPZ 0 to LPZ 1 in structures of LPL III and LPL IV (Class III and IV Lightning Protection System) as a Type 1 lightning arrester. They are also Type 2 and Type 3 tested for use in sub-distribution boards and local equipment protection.



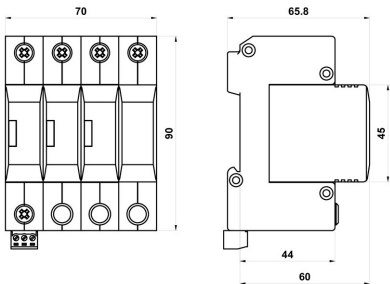
Characteristics		
Test class according to EN 61643-11	T1, T2, T3	
Earth type	TT; TN-S; TN-C-S	
Number of poles		4
Nominal operating voltage, L to N	$U_N$	230V~
Maximum continuous operating voltage, L to N	$U_C$	275V~
Maximum continuous operating voltage, N to PE	$U_C$	255V~
Maximum discharge current, 8/20µs	$I_{max}$	50kA
Impulse discharge current, Class I, L to N, 10/350µs	$I_{imp}$	12.5kA
- Charge	Q	6.25As
- Specific energy	W/R	39kJ/Ω
Impulse discharge current, Class I, N to PE, 10/350µs	$I_{imp}$	50kA
- Charge	Q	25As
- Specific energy	W/R	625kJ/Ω
Total discharge current, 10/350µs (L1+L2+L3+N to PE)	$I_{total}$	50kA
Total discharge current, 8/20µs (L1+L2+L3+N to PE)	$I_{total}$	100kA
Nominal discharge current, Class II, L to N, 8/20µs	$I_n$	25kA
Nominal discharge current, Class II, N to PE, 8/20µs	$I_n$	50kA
Open circuit voltage of combination wave generator	$U_{oc}$	6kV
Voltage protection level at $I_n$ , L to N	$U_p$	<1.25kV
Voltage protection level at $I_n$ , N to PE	$U_p$	<1.3kV
Temporary overvoltage, 5s, L to N	$U_T$	337V~
Temporary overvoltage, 120min, L to N	$U_T$	440V~
Temporary overvoltage, 0.2s, N to PE	$U_T$	1200V~
Response time, L to N	$t_A$	25ns

Characteristics		
Response time, N to PE	t <sub>A</sub>	100ns
Maximum backup fuse		160A gG/gL
Residual current	I <sub>PE</sub>	≤5µA
Short-circuit current rating at max. backup fuse	I <sub>SCCR</sub>	60kA rms
Lightning protection zone (LPZ)		0 to 3
Housing material		PA6, VL94-V0
Ingress Protection rating	IP	20
Operating temperature		-40 to +70°C
Operating Humidity		5 to 95%
Recommended cable size for T1, L and N		6 to 16mm <sup>2</sup>
Recommended cable size for T1, PE		16 to 25mm <sup>2</sup>
Recommended cable size for T2, L and N		2.5 to 16mm <sup>2</sup>
Recommended cable size for T2, PE		6 to 16mm <sup>2</sup>
Cable size range, Stranded		1.5 to 16mm <sup>2</sup>
Cable size range, Solid		1.5 to 25mm <sup>2</sup>
Torque for main terminals		3Nm
Mounting method		35mm DIN rail
Modular width		4
Mounting orientation		Any
Location		Indoor
Status Indication		
Local status indication	Mechanical Flag Switching contacts AC: 250V, 1.5A; DC: 250V, 0.1A	
Remote status indication		
Contact rating		
Parts and Accessories		

## Wiring Diagram



## Dimensions (mm)



## Internal Configuration

