



Basic circuit diagram

Type 3 surge protector is a compact surge protection device (SPD) especially for LED lightning surge protection at the boundaries from lightning protection zone 2-3 and higher.

- Ø Surge arrester comply with IEC 61643-11 and UL 1449-4th
- Ø Designed to protect single phase LED lighting applications.
- Ø Class SPD, Type 4 application with max discharge current 10kA per mode
- Ø Two connection ways to provide different connection application with different function: Type P (parallel type) Type S (series type)
- Ø Offering full mode protection to L-PE, L-N, N-PE
- Ø IP65 waterproof enclosure

Part No.	WS(2V+T)/180-10/#	WS(2V+T)/320-10/#	WS(2V+T)/420-10/#	WS(2V+T)/550-10/#	
In accordance with	IEC61643-11:2011; UL1449-4th				
Category IEC/VDE/UL	III/D/Type 4 CSA				
Rated load Current	3A(series connected only)				
Power system	120V single phase	220-277V single phase	347V single phase	480V single phase	
Max. continuous operating voltage U <sub>c</sub> (VAC/VDC)	180/230	320/420	420/560	550/745	
Connection mode P	parallel connected				
Connection mode S	series connected				
Mode of Protection	Full mode protection				
Nominal discharge current(8/20) I <sub>n</sub>	5kA/Mode				
Max. discharge current(8/20) I <sub>max</sub>	10kA/Mode				
Open Circuit Voltage (U <sub>oc</sub> )	10kV				
Voltage protection level	L/N-PE @In	<0.8kV	<1.5kV	<2.0kV	<2.5kV
	L/N-PE @VPR	<0.6kV	<1.0kV	<1.4kV	<1.8kV
Response time	L-N	25 ns			
	L/N-PE	100 ns			
Follow current	No				
Backup fuse(only required if not already provided in mains)	32A gL/gG				
Thermal disconnecter	internal				
Protect Status Indication	Normal= Blue LED ON ; Failure: Blue LED Off				
Operating temperature range	- 40°C ~ + 70°C				

connection wire	16AWG(L=red; N=blue; PE=y/g)
Mounting	wall or plate
Degree of protection	IP65 (Waterproof)
Dimension	90*53*30mm
Altitude	3000m
Relative Humidity	95% Non Condensing