



SPD for AC power supply system

Class I + Class II / Type 1 + Type 2

ProSurge®
Maximum Safety in Surge Protection

- TUV certified T1+ T2 SPD per IEC/EN 61643-11 standard.
- Unique thermal disconnecter design provides quick thermal response and secure disconnection
- Prewired 1~4 poles SPD application for various power grids.
- Pluggable module for easy replacement without the need to remove system wiring.
- High lightning current discharge capacity 7.5kA and 12.5kA (NPE mode) 10/350 μ s
- High surge current discharge capacity up to I_{max} 50kA 8/20 μ s
- Short circuit withstand capability 25kArms
- Degradation failure indication and optional remote signal contact.
- Wide operating temperature -40°C ~85°C



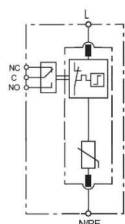
Prosurge's V50/DS50/DT50 series are class I and class II pluggable MOV and GDT based SPDs, designed for low-voltage power supply system protection against the damage from transient surge and spikes caused by lightning and other electrical source.

V50/DS50/DT50 features a compact housing design (18 mm narrow) with a high energy MOV employed, which the lightning current discharge capacity can be up to 7.5kA (10/350 μ s) and 12.5kA (NPE mode) and short circuit current rating as 25kArms, this is an ideal solution for the sub distribution board of low-voltage power supply system surge protection.

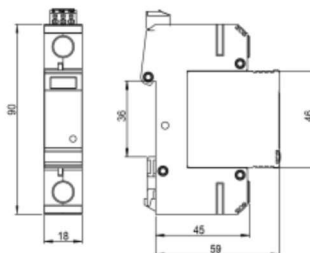
V50/DS50/DT50 are prewired 1~4 poles SPD, users can select from either type depending on requirements.

Part No.	V50/xxx(-S)										
	75	150	180	275	320	350	385	440	480	600	750
In accordance with	IEC/EN 61643-11:2011; UL1449 5th										
Category IEC/EU/VDE	I+ II /1+2/ B+C										
Nominal voltage (AC) U _n	60V	120V	120V	230V	230V	277V	277V	400V	400V	480V	600V
Max. continuous operating voltage(AC) U _c	75V	150V	180V	275V	320V	350V	385V	440V	480V	600V	750V
Nominal discharge current(8/20) I _n	20kA										
Max. discharge current(8/20) I _{max}	50kA	50kA	50kA	50kA	50kA	50kA	50kA	50kA	50kA	50kA	50kA
Lightning impulse current (10/350) I _{imp}	7.5kA	7.5kA	7.5kA	7.5kA	7.5kA	7.5kA	7.5kA	6.0kA	4.5kA	4.5kA	3.5kA
Voltage protection level U _p	0.6kV	0.8kV	1.0kV	1.2kV	1.4kV	1.5kV	1.8kV	2.0kV	2.2kV	2.5kV	2.8kV
Temporary overvoltage TOV-5sec U _T withstand mode	90V	174V	228V	335V	335V	403V	403V	580V	580V	700V	870V
Short-circuit current rating I _{sc}	25kArms										
Leakage current I _{pe}	0.1 mA										
Backup fuse(only required if not already provided in mains)	≤ 125A gL/gG										
Operating temperature range	-40°C ~ +85°C										
Mounting	35mm DIN-rail										
Degree of protection	IP20										
Thermal disconnecter	Internal Green - normal ; red - failure										
Approvals, Certifications	TUV, CE										
Remote alarm contact type	Isolated form C										
Switching capability U _n / I _n	AC: 250V/0.5A DC: 250V/0.1A; 125V/0.2A; 75V/0.5A										

Basic circuit diagram



Dimension drawing (mm)





Prewired multi-pole SPDs

Part No.	Pole	Protection circuit	Max. operating Voltage	Lightning impulse current(10/350us)	Max.discharge current(8/20 us)	Nominal discharge current(8/20 us)	Voltage protection level	Short-circuit current rating	Diagram
			Uc	Iimp	I _{max}	I _n	Up	I _{sc}	
DS50/75-2V(-S)	2	2+0	75Vac	7.5kA	50kA	20kA	0.6kV	25kA	1
DS50/150-2V(-S)	2	2+0	150Vac	7.5kA	50kA	20kA	0.8kV	25kA	1
DS50/180-2V(-S)	2	2+0	180Vac	7.5kA	50kA	20kA	1.0kV	25kA	1
DS50/275-2V(-S)	2	2+0	275Vac	7.5kA	50kA	20kA	1.2kV	25kA	1
DS50/320-2V(-S)	2	2+0	320Vac	7.5kA	50kA	20kA	1.4kV	25kA	1
DS50/350-2V(-S)	2	2+0	350Vac	7.5kA	50kA	20kA	1.5kV	25kA	1
DS50/385-2V(-S)	2	2+0	385Vac	7.5kA	50kA	20kA	1.8kV	25kA	1
DS50/440-2V(-S)	2	2+0	440Vac	6.0kA	50kA	20kA	2.0kV	25kA	1
DS50/480-2V(-S)	2	2+0	480Vac	4.5kA	50kA	20kA	2.2kV	25kA	1
DS50/600-2V(-S)	2	2+0	600Vac	4.5kA	50kA	20kA	2.5kV	25kA	1
DS50/750-2V(-S)	2	2+0	750Vac	3.5kA	50kA	20kA	2.8kV	25kA	1
DS50/150-(V+T)(-S)	2	1+1	L-N:150Vac N-PE:150Vac	L-N:7.5kA N-PE:12.5kA	L-N:50kA N-PE:50kA	L-N:20kA N-PE:20kA	L-N: 0.8kV N-PE:1.5kV	25kA	2
DS50/180-(V+T)(-S)	2	1+1	L-N:180Vac N-PE:150Vac	L-N:7.5kA N-PE:12.5kA	L-N:50kA N-PE:50kA	L-N:20kA N-PE:20kA	L-N: 1.0kV N-PE:1.5kV	25kA	2
DS50/275-(V+T)(-S)	2	1+1	L-N:275Vac N-PE:255Vac	L-N:7.5kA N-PE:12.5kA	L-N:50kA N-PE:50kA	L-N:20kA N-PE:20kA	L-N: 1.2kV N-PE:1.5kV	25kA	2
DS50/320-(V+T)(-S)	2	1+1	L-N:320Vac N-PE:255Vac	L-N:7.5kA N-PE:12.5kA	L-N:50kA N-PE:50kA	L-N:20kA N-PE:20kA	L-N: 1.4kV N-PE:1.5kV	25kA	2
DS50/350-(V+T)(-S)	2	1+1	L-N:350Vac N-PE:255Vac	L-N:7.5kA N-PE:12.5kA	L-N:50kA N-PE:50kA	L-N:20kA N-PE:20kA	L-N: 1.5kV N-PE:1.5kV	25kA	2
DS50/385-(V+T)(-S)	2	1+1	L-N:385Vac N-PE:255Vac	L-N:7.5kA N-PE:12.5kA	L-N:50kA N-PE:50kA	L-N:20kA N-PE:20kA	L-N: 1.8kV N-PE:1.5kV	25kA	2
DT50/75-3V(-S)	3	3+0	75Vac	7.5kA	50kA	20kA	0.6kV	25kA	3
DT50/150-3V(-S)	3	3+0	150Vac	7.5kA	50kA	20kA	0.8kV	25kA	3
DT50/180-3V(-S)	3	3+0	180Vac	7.5kA	50kA	20kA	1.0kV	25kA	3
DT50/275-3V(-S)	3	3+0	275Vac	7.5kA	50kA	20kA	1.2kV	25kA	3
DT50/320-3V(-S)	3	3+0	320Vac	7.5kA	50kA	20kA	1.4kV	25kA	3
DT50/350-3V(-S)	3	3+0	350Vac	7.5kA	50kA	20kA	1.5kV	25kA	3
DT50/385-3V(-S)	3	3+0	385Vac	7.5kA	50kA	20kA	1.8kV	25kA	3
DT50/440-3V(-S)	3	3+0	440Vac	6.0kA	50kA	20kA	2.0kV	25kA	3
DT50/480-3V(-S)	3	3+0	480Vac	4.5kA	50kA	20kA	2.2kV	25kA	3
DT50/600-3V(-S)	3	3+0	600Vac	4.5kA	50kA	20kA	2.5kV	25kA	3
DT50/750-3V(-S)	3	3+0	750Vac	3.5kA	50kA	20kA	2.8kV	25kA	3
DT50/75-4V(-S)	4	4+0	75Vac	7.5kA	50kA	20kA	0.6kV	25kA	4
DT50/150-4V(-S)	4	4+0	150Vac	7.5kA	50kA	20kA	0.8kV	25kA	4
DT50/180-4V(-S)	4	4+0	180Vac	7.5kA	50kA	20kA	1.0kV	25kA	4
DT50/275-4V(-S)	4	4+0	275Vac	7.5kA	50kA	20kA	1.2kV	25kA	4
DT50/320-4V(-S)	4	4+0	320Vac	7.5kA	50kA	20kA	1.4kV	25kA	4
DT50/350-4V(-S)	4	4+0	350Vac	7.5kA	50kA	20kA	1.5kV	25kA	4
DT50/385-4V(-S)	4	4+0	385Vac	7.5kA	50kA	20kA	1.8kV	25kA	4
DT50/440-4V(-S)	4	4+0	440Vac	6.0kA	50kA	20kA	2.0kV	25kA	4
DT50/480-4V(-S)	4	4+0	480Vac	4.5kA	50kA	20kA	2.2kV	25kA	4
DT50/600-4V(-S)	4	4+0	600Vac	4.5kA	50kA	20kA	2.5kV	25kA	4
DT50/750-4V(-S)	4	4+0	750Vac	3.5kA	50kA	20kA	2.8kV	25kA	4
DT50/150-(3V+T)(-S)	4	3+1	L-N:150Vac N-PE:150Vac	L-N:7.5kA N-PE:12.5kA	L-N:50kA N-PE:50kA	L-N:20kA N-PE:20kA	L-N: 0.8kV N-PE:1.5kV	25kA	5

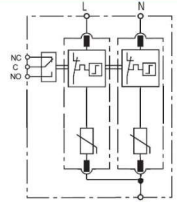
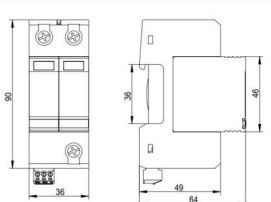
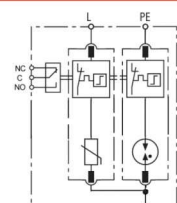
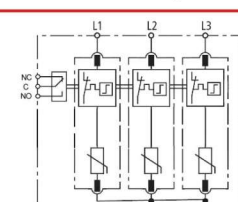
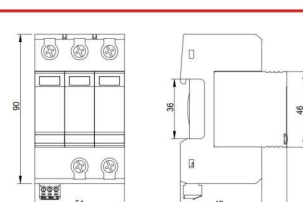
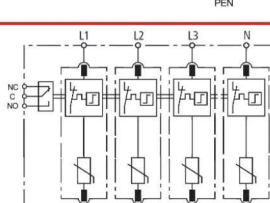
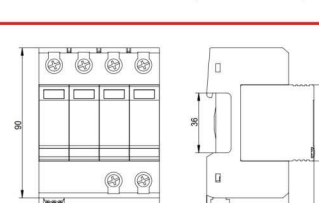
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Part No.	Pole	Protection circuit	Max. operating Voltage	Lightning impulse current(10/350us)	Max.discharge current(8/20 us)	Nominal discharge current(8/20 us)	Voltage protection level	Short-circuit current rating	Diagram
			Uc	Iimp	I _{max}	I _n	Up	I _{sc}	
DT50/180-(3V+T)(-S)	4	3+1	L-N:180Vac N-PE:150Vac	L-N:7.5kA N-PE:12.5kA	L-N:50kA N-PE:50kA	L-N:20kA N-PE:20kA	L-N: 1.0kV N-PE:1.5kV	25kA	5
DT50/275-(3V+T)(-S)	4	3+1	L-N:275Vac N-PE:255Vac	L-N:7.5kA N-PE:12.5kA	L-N:50kA N-PE:50kA	L-N:20kA N-PE:20kA	L-N: 1.2kV N-PE:1.5kV	25kA	5
DT50/320-(3V+T)(-S)	4	3+1	L-N:320Vac N-PE:255Vac	L-N:7.5kA N-PE:12.5kA	L-N:50kA N-PE:50kA	L-N:20kA N-PE:20kA	L-N: 1.4kV N-PE:1.5kV	25kA	5
DT50/350-(3V+T)(-S)	4	3+1	L-N:350Vac N-PE:255Vac	L-N:7.5kA N-PE:12.5kA	L-N:50kA N-PE:50kA	L-N:20kA N-PE:20kA	L-N: 1.5kV N-PE:1.5kV	25kA	5
DT50/385-(3V+T)(-S)	4	3+1	L-N:385Vac N-PE:255Vac	L-N:7.5kA N-PE:12.5kA	L-N:50kA N-PE:50kA	L-N:20kA N-PE:20kA	L-N: 1.8kV N-PE:1.5kV	25kA	5

Diagram	Basic circuit diagram	Dimension drawing
1)2+0 		
2)1+1 		
3)3+0 		
4)4+0 		
5)3+1 	