



SPD for AC power supply system

Class I + Class II / Type 1 + Type 2 BPS12.5V

ProSurge®
Maximum Safety in Surge Protection

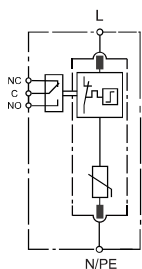


- TUV certified T1+ T2 SPD per IEC/EN 61643-11 standard.
- 18mm narrow model design, pluggable module for easy replacement without the need to remove system wiring
- Unique thermal disconnecter design provides quick thermal response and secure disconnection
- High lightning current discharge capacity 12.5kA 10/350 μ s, surge current capability up to 80kA 8/20 μ s
- High short-circuit current rating up to 50kArms, suitable for most industry and commerce application
- Degradation failure indication and optional remote signal contact.
- 35mm DIN-rail mounting

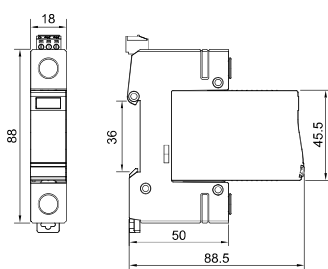
Prosurge's BPS12.5V series are class I and class II pluggable MOV based SPDs, designed for low-voltage power supply system lightning current & surge protection, especially for locations of high risk exposure or LPZ 0B-1 building entrances (IEC 62305-4) to against the damage from direct or close lightning strikes. BPS12.5V features a compact housing design (18 mm narrow) with a high energy MOV employed, which the lightning discharge capacity can be up to 12.5kA (10/350 μ s) and short circuit current rating as 50kArms, the BPS12.5V is an ideal solution for the main distribution board of low-voltage power supply system surge protection. BPS12.5V can be used alone or in combination, the multifunctional terminals offer busbars and conductor connecting, that makes it ideal for use in various low-voltage power distributions.

Part No.	BPS12.5V/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/EN/VDE		I+ II / I+2/ B+C										
Nominal voltage (AC) Un		60V	120V	120V	230V	230V	277V	277V	400V	400V	480V	600V
Max. continuous operating voltage(AC) Uc		75V	150V	180V	275V	320V	350V	385V	440V	480V	600V	750V
Nominal discharge current(8/20) In		25kA										
Max. discharge current(8/20) Imax		80kA	80kA	80kA	80kA	80kA	80kA	80kA	65kA	65kA	65kA	65kA
Lightning impulse current (10/350) Iimp		12.5kA	12.5kA	12.5kA	12.5kA	12.5kA	12.5kA	12.5kA	8kA	6kA	6kA	4kA
Voltage protection level Up		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 Ur withstand mode		90	174V	228V	335V	335V	403V	403V	580V	580V	700V	870V
Short-circuit current rating Isccr		50kArms										
Backup fuse(only required if not already provided in mains)		$\leq 250A$ 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 Un / In		AC: 250V/0.5A DC: 250V/0.1A; 125V/0.2A; 75V/0.5A										

Basic circuit diagram



Dimension drawing (mm)



- TUV certified T1+ T2 SPD per IEC/EN 61643-11 standard
- Designed for separation and protection between the N and PE conductors
- 18mm narrow model design, pluggable module for easy replacement without the need to remove system wiring
- High energy gas discharge tube technology
- High lightning discharge capacity up to I_{imp} 50kA 10/350 μ s
- High surge discharge capacity up to I_{max} 100kA 8/20 μ s
- 35mm DIN-rail mounting
- Wide operating temperature -40°C ~85°C

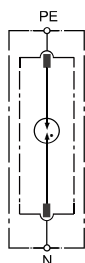


Prosurge's GP25(50) NPE series are class I and class II pluggable gas discharge tube (GDT) based SPDs, designed for low-voltage power supply system lightning current & surge protection, especially for separation and protection between the N and PE conductors .

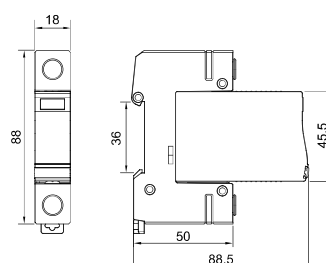
GP25(50) NPE features a compact housing design (18 mm narrow) with discharge capacity up to 25/50kA (10/350 μ s) and surge discharge capacity up 100kA (8/20 μ s), GPE module fulfill the total discharge current requirement for installation in "1+1" or "3+1" circuit according to standards IEC 60364-4-53/IEC 62305.

Part No.	GP25/150NPE	GP25/255NPE	GP50/150NPE	GP50/255NPE
In accordance with	IEC/EN 61643-11:2011; UL1449 5th			
Category IEC/EN/VDE	I+ II /1+2/ B+C			
Max. continuous operating voltage(AC) U_c	150V	255V	150V	255V
Nominal discharge current(8/20) I_n	25kA	25kA	50kA	50kA
Max. discharge current(8/20) I_{max}	50kA	50kA	100kA	100kA
Lightning impulse current (10/350) I_{imp}	25kA	25kA	50kA	50kA
Voltage protection level U_p	1.5kV	1.5kV	1.5kV	1.5kV
Temporary overvoltage TOV-200ms U_T withstand mode	1200V	1200V	1200V	1200V
Follow current & interrupt rating I_{fi} I_{scrr}	100Arms			
Operating temperature range	-40°C ~ +85°C			
Mounting	35mm DIN-rail			
Enclosure material	Thermoplastic; extinguishing degree UL94 V-0			
Degree of protection	IP20			
Approvals, Certifications	TUV, CE			

■ Basic circuit diagram



■ Dimension drawing (mm)





SPD for AC power supply system

Class I + Class II / Type 1 + Type 2

BPS12.5V

ProSurge®
Maximum Safety in Surge Protection

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}	
BPS12.5V/75(-S)/2P	2	2+0	75Vac	12.5kA	80kA	25kA	0.6kV	50kA	1
BPS12.5V/150(-S)/2P	2	2+0	150Vac	12.5kA	80kA	25kA	0.8kV	50kA	1
BPS12.5V/180(-S)/2P	2	2+0	180Vac	12.5kA	80kA	25kA	1.0kV	50kA	1
BPS12.5V/275(-S)/2P	2	2+0	275Vac	12.5kA	80kA	25kA	1.2kV	50kA	1
BPS12.5V/320(-S)/2P	2	2+0	320Vac	12.5kA	80kA	25kA	1.4kV	50kA	1
BPS12.5V/350(-S)/2P	2	2+0	350Vac	12.5kA	80kA	25kA	1.5kV	50kA	1
BPS12.5V/385(-S)/2P	2	2+0	385Vac	12.5kA	80kA	25kA	1.8kV	50kA	1
BPS12.5V/440(-S)/2P	2	2+0	440Vac	8kA	65kA	25kA	2.0kV	50kA	1
BPS12.5V/480(-S)/2P	2	2+0	480Vac	6kA	65kA	25kA	2.2kV	50kA	1
BPS12.5V/600(-S)/2P	2	2+0	600Vac	6kA	65kA	25kA	2.5kV	50kA	1
BPS12.5V/750(-S)/2P	2	2+0	750Vac	4kA	65kA	25kA	2.8kV	50kA	1
BPS12.5V/75(-S)/PN25	2	1+1	L-N:75Vac N-PE:150Vac	L-N:12.5kA N-PE:25kA	L-N:80kA N-PE:50kA	L-N:25kA N-PE:25kA	L-N: 0.6kV N-PE:1.5kV	50kA	2
BPS12.5V/150(-S)/PN25	2	1+1	L-N:150Vac N-PE:150Vac	L-N:12.5kA N-PE:25kA	L-N:80kA N-PE:50kA	L-N:25kA N-PE:25kA	L-N: 0.8kV N-PE:1.5kV	50kA	2
BPS12.5V /180(-S)/PN25	2	1+1	L-N:180Vac N-PE:150Vac	L-N:12.5kA N-PE:25kA	L-N:80kA N-PE:50kA	L-N:25kA N-PE:25kA	L-N: 1.0kV N-PE:1.5kV	50kA	2
BPS12.5V/275(-S)/PN25	2	1+1	L-N:275Vac N-PE:255Vac	L-N:12.5kA N-PE:25kA	L-N:80kA N-PE:50kA	L-N:25kA N-PE:25kA	L-N: 1.2kV N-PE:1.5kV	50kA	2
BPS12.5V/320(-S)/PN25	2	1+1	L-N:320Vac N-PE:255Vac	L-N:12.5kA N-PE:25kA	L-N:80kA N-PE:50kA	L-N:25kA N-PE:25kA	L-N: 1.4kV N-PE:1.5kV	50kA	2
BPS12.5V/350(-S)/PN25	2	1+1	L-N:350Vac N-PE:255Vac	L-N:12.5kA N-PE:25kA	L-N:80kA N-PE:50kA	L-N:25kA N-PE:25kA	L-N: 1.5kV N-PE:1.5kV	50kA	2
BPS12.5V/385(-S)/PN25	2	1+1	L-N:385Vac N-PE:255Vac	L-N:12.5kA N-PE:25kA	L-N:80kA N-PE:50kA	L-N:25kA N-PE:25kA	L-N: 1.8kV N-PE:1.5kV	50kA	2
BPS12.5V/75(-S)/PN50	2	1+1	L-N:75Vac N-PE:150Vac	L-N:12.5kA N-PE:50kA	L-N:80kA N-PE:100kA	L-N:25kA N-PE:50kA	L-N: 0.6kV N-PE:1.5kV	50kA	2
BPS12.5V/150(-S)/PN50	2	1+1	L-N:150Vac N-PE:150Vac	L-N:12.5kA N-PE:50kA	L-N:80kA N-PE:100kA	L-N:25kA N-PE:50kA	L-N: 0.8kV N-PE:1.5kV	50kA	2
BPS12.5V /180(-S)/PN50	2	1+1	L-N:180Vac N-PE:150Vac	L-N:12.5kA N-PE:50kA	L-N:80kA N-PE:100kA	L-N:25kA N-PE:50kA	L-N: 1.0kV N-PE:1.5kV	50kA	2
BPS12.5V/275(-S)/PN50	2	1+1	L-N:275Vac N-PE:255Vac	L-N:12.5kA N-PE:50kA	L-N:80kA N-PE:100kA	L-N:25kA N-PE:50kA	L-N: 1.2kV N-PE:1.5kV	50kA	2
BPS12.5V/320(-S)/PN50	2	1+1	L-N:320Vac N-PE:255Vac	L-N:12.5kA N-PE:50kA	L-N:80kA N-PE:100kA	L-N:25kA N-PE:50kA	L-N: 1.4kV N-PE:1.5kV	50kA	2
BPS12.5V/350(-S)/PN50	2	1+1	L-N:350Vac N-PE:255Vac	L-N:12.5kA N-PE:50kA	L-N:80kA N-PE:100kA	L-N:25kA N-PE:50kA	L-N: 1.5kV N-PE:1.5kV	50kA	2
BPS12.5V/385(-S)/PN50	2	1+1	L-N:385Vac N-PE:255Vac	L-N:12.5kA N-PE:50kA	L-N:80kA N-PE:100kA	L-N:25kA N-PE:50kA	L-N: 1.8kV N-PE:1.5kV	50kA	2
BPS12.5V/75(-S)/3P	3	3+0	75Vac	12.5kA	80kA	25kA	0.6kV	50kA	3
BPS12.5V/150(-S)/3P	3	3+0	150Vac	12.5kA	80kA	25kA	0.8kV	50kA	3
BPS12.5V/180(-S)/3P	3	3+0	180Vac	12.5kA	80kA	25kA	1.0kV	50kA	3
BPS12.5V/275(-S)/3P	3	3+0	275Vac	12.5kA	80kA	25kA	1.2kV	50kA	3
BPS12.5V/320(-S)/3P	3	3+0	320Vac	12.5kA	80kA	25kA	1.4kV	50kA	3
BPS12.5V/350(-S)/3P	3	3+0	350Vac	12.5kA	80kA	25kA	1.5kV	50kA	3
BPS12.5V/385(-S)/3P	3	3+0	385Vac	12.5kA	80kA	25kA	1.8kV	50kA	3
BPS12.5V/440(-S)/3P	3	3+0	440Vac	8kA	65kA	25kA	2.0kV	50kA	3
BPS12.5V/480(-S)/3P	3	3+0	480Vac	6kA	65kA	25kA	2.2kV	50kA	3
BPS12.5V/600(-S)/3P	3	3+0	600Vac	6kA	65kA	25kA	2.5kV	50kA	3
BPS12.5V/750(-S)/3P	3	3+0	750Vac	4kA	65kA	25kA	2.8kV	50kA	3
BPS12.5V/75(-S)/4P	4	4+0	75Vac	12.5kA	80kA	25kA	0.6kV	50kA	4
BPS12.5V/150(-S)/4P	4	4+0	150Vac	12.5kA	80kA	25kA	0.8kV	50kA	4
BPS12.5V/180(-S)/4P	4	4+0	180Vac	12.5kA	80kA	25kA	1.0kV	50kA	4
BPS12.5V/275(-S)/4P	4	4+0	275Vac	12.5kA	80kA	25kA	1.2kV	50kA	4
BPS12.5V/320(-S)/4P	4	4+0	320Vac	12.5kA	80kA	25kA	1.4kV	50kA	4
BPS12.5V/350(-S)/4P	4	4+0	350Vac	12.5kA	80kA	25kA	1.5kV	50kA	4
BPS12.5V/385(-S)/4P	4	4+0	385Vac	12.5kA	80kA	25kA	1.8kV	50kA	4
BPS12.5V/440(-S)/4P	4	4+0	440Vac	8kA	65kA	25kA	2.0kV	50kA	4
BPS12.5V/480(-S)/4P	4	4+0	480Vac	6kA	65kA	25kA	2.2kV	50kA	4
BPS12.5V/600(-S)/4P	4	4+0	600Vac	6kA	65kA	25kA	2.5kV	50kA	4
BPS12.5V/750(-S)/4P	4	4+0	750Vac	4kA	65kA	25kA	2.8kV	50kA	4
BPS12.5V/75(-S)/3PN50	4	3+1	L-N:75Vac N-PE:150Vac	L-N:12.5kA N-PE:50kA	L-N:80kA N-PE:100kA	L-N:25kA N-PE:50kA	L-N: 0.6kV N-PE:1.5kV	50kA	5

Prewired multi-pole SPDs

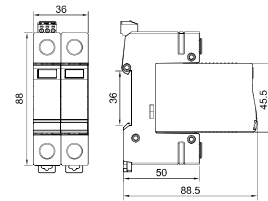
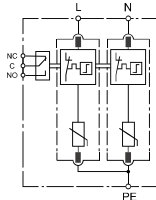
Part No.	Pole	Protection circuit	Max. operating Voltage	Lightning impulse current(10/350us)	Max.discharge current(8/20 us)	Nominal discharge current(8/20 us)	Voltage protection level	Short-circuit current rating	Diagram
			Uc	Iimp	Imax	In	Up	Iscrr	
BPS12.5V/150(-S)/3PN50	4	3+1	L-N:150Vac N-PE:150Vac	L-N:12.5kA N-PE:50kA	L-N:80kA N-PE:100kA	L-N:25kA N-PE:50kA	L-N: 0.8kV N-PE:1.5kV	50kA	5
BPS12.5V /180(-S)/3PN50	4	3+1	L-N:180Vac N-PE:150Vac	L-N:12.5kA N-PE:50kA	L-N:80kA N-PE:100kA	L-N:25kA N-PE:50kA	L-N: 1.0kV N-PE:1.5kV	50kA	5
BPS12.5V/275(-S)/3PN50	4	3+1	L-N:275Vac N-PE:255Vac	L-N:12.5kA N-PE:50kA	L-N:80kA N-PE:100kA	L-N:25kA N-PE:50kA	L-N: 1.2kV N-PE:1.5kV	50kA	5
BPS12.5V/320(-S)/3PN50	4	3+1	L-N:320Vac N-PE:255Vac	L-N:12.5kA N-PE:50kA	L-N:80kA N-PE:100kA	L-N:25kA N-PE:50kA	L-N: 1.4kV N-PE:1.5kV	50kA	5
BPS12.5V/350(-S)/3PN50	4	3+1	L-N:350Vac N-PE:255Vac	L-N:12.5kA N-PE:50kA	L-N:80kA N-PE:100kA	L-N:25kA N-PE:50kA	L-N: 1.5kV N-PE:1.5kV	50kA	5
BPS12.5V/385(-S)/3PN50	4	3+1	L-N:385Vac N-PE:255Vac	L-N:12.5kA N-PE:50kA	L-N:80kA N-PE:100kA	L-N:25kA N-PE:50kA	L-N: 1.8kV N-PE:1.5kV	50kA	5

Diagram

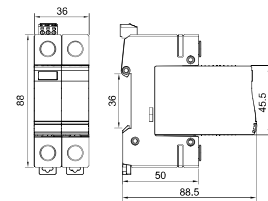
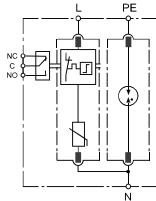
Basic circuit diagram

Dimension drawing

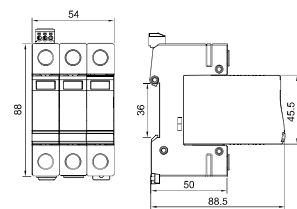
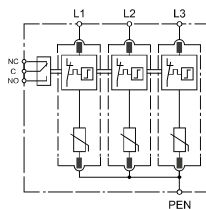
1)2+0



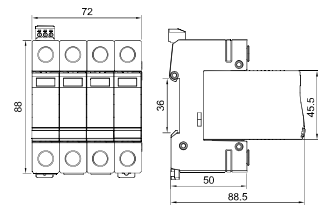
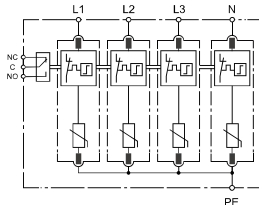
2)1+1



3)3+0



4)4+0



5)3+1

