

PSP E series

PROSURGE® PSP E series panel SPDs are extra compact UL Type 1 Surge Protective Devices (SPDs) designed to protect single phase and multi-phase electrical distribution systems against the harmful effects of transient surges. These surges are the result of:

- Direct and indirect lightning strikes
- Power company load switching
- Upstream load switching at other facilities

The PSP E is constructed with Prosurge’s patented PTMOV, which has a thermally protected and arc extinguishing technology as the core of Prosurge’s competency. PSP E has a significant advantage in abnormal over-voltage & high fault current safety and thus ensures industry’s highest level of safety and performance.



PSP E is tested and listed as Type 1 SPD in ANSI / UL 1449 4th, CSA C22.2. It is constructed in a NEMA 4X plastic enclosure, with a LED light to demonstrate the protection status of the SPD.

The SPD Types Per ANSI / UL 1449 4th:

Type 1 – Permanently connected SPDs intended for installation between the secondary of the service transformer and the line side of the service equipment overcurrent device, as well as the load side, including watt-hour meter socket enclosures and Molded Case SPDs intended to be installed without an external overcurrent protective device.

■ Typical Applications:

- Outdoor/Indoor and commercial LED lighting
- Telecommunication equipment
- Medical electronics
- Security & Alarm equipment
- Manufacturing Facilities
- Other Critical Electronic Equipment

■ Features:

- UL 1449 4th Type 1 SPDs with SCCR up to 200kArms without external fuse or CB
- Prosurge Patented SCCR 200kArms thermally protected MOV technology(PTMOV) as key component
- Full modes protection
- High surge energy capability with compact size
- Low voltage protection rating
- NEMA 4X enclosure to resist dirt, dust and water
- Degradation failure indication.

Outstanding PTMOV Technology

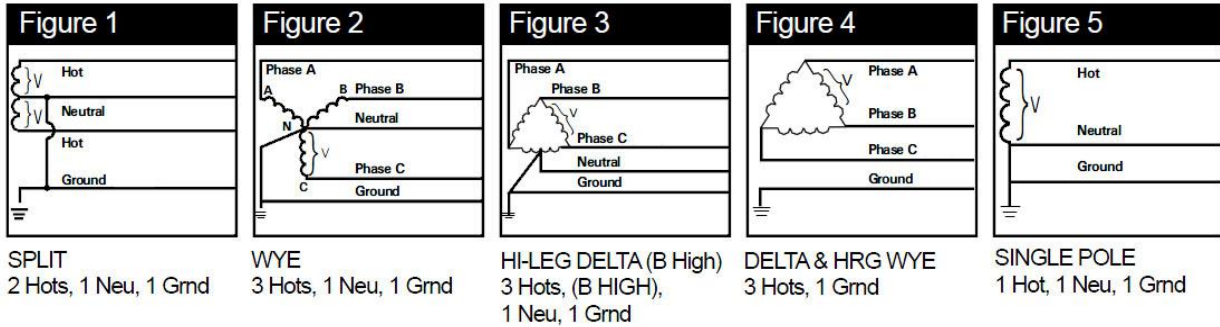
Thermally Protected MOV technology. Fast and safely disconnect in the case of abnormal over-voltage or current fault conditions.



One-port Panel SPDs

■ Voltage code for power distribution system

- 120SP, 240SP= 120/240V;240/480V-----Split-phase three-wire + ground (Figure1)
- 120S,127S,240S,277S,347S =120V,127V, 240V,277V, 347V-----Single-phase two-wire + ground (Figure5)
- 120Y, 127Y, 240Y, 277Y, 347Y = 208Y/120V,220Y/127V, 415Y/240V, 480Y/277V, 600Y/347V-----Three-phase wye (star) four-wire + ground (Figure2)
- 240D, 480D, 600D = 240V,480V,600V-----Three-phase delta three-wire + ground (Figure4)



■ Basic circuit diagram

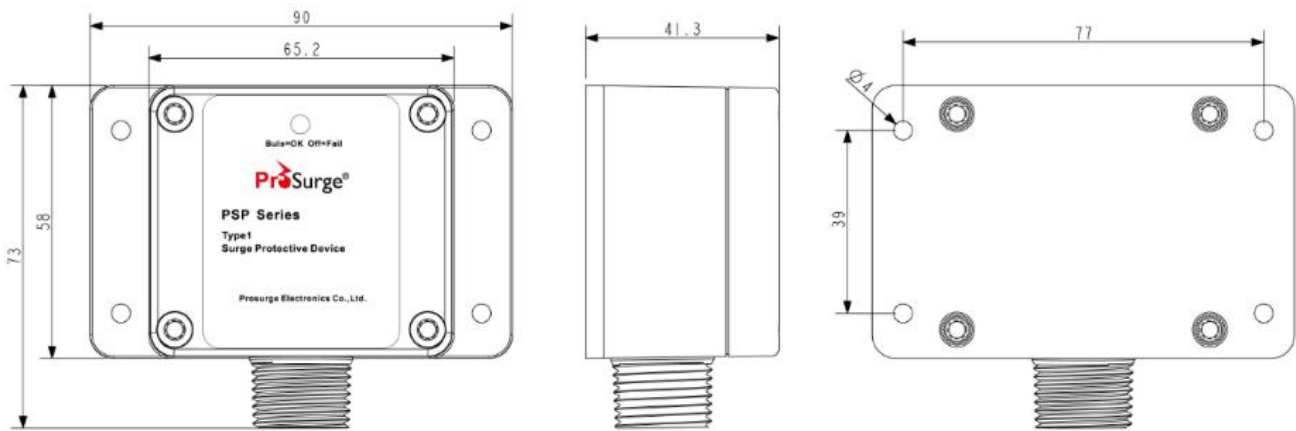
PSPE...	Un/ Power system (50/60 HZ)	Basic circuit diagram of surge protection circuit
PSPE... SP11 ...	120/240 VAC Split phase 240/480 VAC Split phase ...	
PSPE... SPN11 ...	120/240 VAC Split phase 240/480 VAC Split phase ...	
PSPE... SP12 ...	120/240 VAC Split phase 240/480 VAC Split phase ...	
PSPE... SPN12 ...	120/240 VAC Split phase 240/480 VAC Split phase ...	

One-port Panel SPDs

<p>PSPE...S11...</p>	<p>120 VAC single phase 127 VAC single phase 220 VAC single phase 230 VAC single phase 240 VAC single phase 277 VAC single phase 347 VAC single phase ...</p>	
<p>PSPE...S12...</p>	<p>120 VAC single phase 127 VAC single phase 220 VAC single phase 230 VAC single phase 240 VAC single phase 277 VAC single phase 347 VAC single phase ...</p>	
<p>PSPE...SPNG11...</p>	<p>120/240 VAC Split phase 240/480 VAC Split phase ...</p>	
<p>PSPE...D11...</p>	<p>240 VAC 3-phase Delta 480 VAC 3-phase Delta 6000 VAC 3-phase Delta</p>	
<p>PSPE...YC11...</p>	<p>120/208 VAC 3-phase WYE 127/220 VAC 3-phase WYE 240/415 VAC 3-phase WYE 277/480 VAC 3-phase WYE 347/600 VAC 3-phase WYE ...</p>	

■ Dimensions (unit: mm)

PSPE series can be fixed with bolts. The dimension of the devices and bolt holes as below diagram:



■ General Specification:

PSP Category	PSPE
Certification	ANSI / UL1449 4 th , CSA C22.2, Type 1 (some models pending)
Connection Type	Parallel Connected
Surge Capacity	25-50kA per Phase
Nominal discharge current In	10kA
SCCR	200kArms
Power Status Indication	Normal= LED ON
Working Status Indication	Fail= LED OFF
Power Connecting	12AWG, 762mm (30") length
Working environments	Temperature -40°C ~ +80°C, Humidity relative 5~95% (25°C), Altitudes ≤ 3km
Dimensions (W x D x H)	90 x 58 x 41 mm
Enclosure	Plastic enclosure, NEMA 4X
Threaded NPT	1/2"NPT
Net Weight (typical value)	0.18 kg

■ Technical Data:

Model No.	System Voltage(50/60Hz)	In (kA)	protected mode				Voltage Protection Ratings (VPR @6KV/ 3kA)				Surge Capability	MCOV (Vac)
			L-N	L-G	N-G	L-L	L-N	L-G	N-G	L-L		
PSPE120SP11/T1	120/240V split-phase	10	x	✓	x	✓	-	700	-	1500	25kA/phase	150/300*
PSPE120SP12/T1			x	✓	x	✓	-	700	-	1200	50kA/phase	150/320*
PSPE120SPN11/T1	120/240V split-phase	10	✓	x	x	✓	700	-	-	1500	25kA/phase	150/300*
PSPE120SPN12/T1			✓	x	x	✓	700	-	-	1200	50kA/phase	150/320*
PSPE240SP11/T1	240/480V split-phase	10	x	✓	x	✓	-	1200	-	2500	25kA/phase	320/640*
PSPE240SP12/T1			x	✓	x	✓	-	1200	-	1800	50kA/phase	320/550*
PSPE240SPN11/T1	240/480V split-phase	10	✓	x	x	✓	1200	-	-	2500	25kA/phase	320/640*
PSPE240SPN12/T1			✓	x	x	✓	1200	-	-	1800	50kA/phase	320/550*
PSPE120SPNG11/T1	120/240V split-phase	10	✓	✓	✓	✓	700	1500	700	1500	25kA/phase	150/300*
PSPE240SPNG11/T1	240/480V split-phase	10	✓	✓	✓	✓	1200	2500	1200	2500	25kA/phase	320/640*
PSPE240D11/T1	240V 3P Delta	10	x	✓	x	✓	-	1200	-	2500	25kA/phase	320
PSPE480D11/T1	240V 3P Delta	10	x	✓	x	✓	-	1800	-	4000	25kA/phase	550
PSPE600D11/T1	240V 3P Delta	10	x	✓	x	✓	-	2000	-	4000	25kA/phase	690
PSPE120YC11/T1	120/208Y 3P WYE 3W+G	10	x	✓	x	✓	-	700	-	1500	25kA/phase	150
PSPE127YC11/T1	127/220Y 3P WYE 3W+G	10	x	✓	x	✓	-	700	-	1500	25kA/phase	150
PSPE240YC11/T1	240/415Y 3P WYE 3W+G	10	x	✓	x	✓	-	1200	-	2500	25kA/phase	320
PSPE277YC11/T1	277/480Y 3P WYE 3W+G	10	x	✓	x	✓	-	1200	-	2500	25kA/phase	320
PSPE347YC11/T1	347/600Y 3P WYE 3W+G	10	x	✓	x	✓	-	1500	-	3000	25kA/phase	420
PSPE120YN11/T1	120/208Y 3P WYE 4W	10	✓	x	x	✓	700	-	-	1500	25kA/phase	150
PSPE127YN11/T1	127/220Y 3P WYE 4W	10	✓	x	x	✓	700	-	-	1500	25kA/phase	150
PSPE240YN11/T1	240/415Y 3P WYE 4W	10	✓	x	x	✓	1200	-	-	2500	25kA/phase	320
PSPE277YN11/T1	277/480Y 3P WYE 4W	10	✓	x	x	✓	1200	-	-	2500	25kA/phase	320
PSPE347YN11/T1	347/600Y 3P WYE 4W	10	✓	x	x	✓	1500	-	-	3000	25kA/phase	420
PSPE127S11/T1	127V Single-phase	10	✓	✓	✓	x	1500	700	700	-	25kA/phase	150
PSPE127S12/T1			✓	✓	✓	x	700	700	700	-	50kA/phase	150
PSPE277S11/T1	277V Single-phase	10	✓	✓	✓	x	2500	1200	1200	-	25kA/phase	320
PSPE277S12/T1			✓	✓	✓	x	1200	1200	1200	-	50kA/phase	320
PSPE347S11/T1	347V Single-phase	10	✓	✓	✓	x	3000	1500	1500	-	25kA/phase	420
PSPE347S12/T1			✓	✓	✓	x	1500	1500	1500	-	50kA/phase	420

Note: “* “ MCOV for L1-L2