One-port Panel SPDs

HPSP series
HPSP240Y42/T1CTA

PROSURGE® HPSP series panel SPDs are defined as high performance surge protection solution for most commercial and industrial environments with critical operations. They include Type 1 and Type 2 Surge Protective Devices (SPDs) that protect 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 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.*

Type 2 *– Permanently connected SPDs intended for installation on the load side of the service equipment overcurrent device; including SPDs located at the branch panel and Molded Case SPDs.*

HPSP is constructed with Prosurge's patented PTMOVs, which has a thermally protected and arc extinguishing technology as the core of Prosurge's competency. HPSP has a significant advantage in abnormal over-voltage & high fault current safety and thus ensures industry's highest level of safety and performance. The parallel redundancy modules design makes the SPDs extremely robust and reliable, and thus may handle great impulse current up to 600kA (8/20 μs) and multiple impulse current at its highest rated level.

Outstanding PTMOV Technology

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

The Prosurge HPSP series are tested and listed as UL1449 4th Type 1 and Type 2 SPD (UL1283 listed with sine wave tracking function). Their front panels integrate functionality of SPD working status monitor and self-diagnosis to enhance the performance and usability. They feature with indicator and colored LEDs to demonstrate the power & protection status of each protected power phase. They are constructed with NEMA 4/4X enclosures to ensure that dirt, dust and water are resisted for either indoor or outdoor usage.

■ Typical Applications:

In high exposure locations, be ideal for primary service or building entrances protection applications.

- Commercial
- Industrial
- Communications
- Renewable energy
- Critical power (hospitals, data centers, etc)

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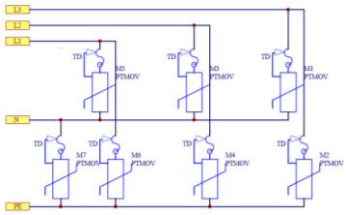
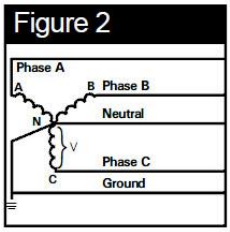
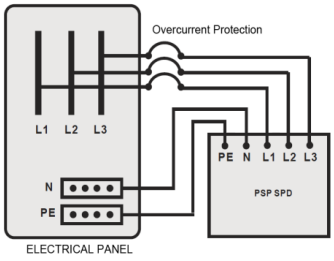
- **Features:**
  - UL1449 4th and CSA C22.2 No. 269.1-17 listed Type 1 SPD
  - Class I / T1 SPD per IEC/EN 61643-11
  - Max surge current 8/20 up to 400kA per phase, 200kA per mode
  - Lightning impulse current 10/350 up to 40kA per phase
  - Short circuit current rating (SCCR): 200 kArms - tested without external CB or fuse
  - Prosurge Patented SCCR 200kArms thermally protected MOV technology(**PTMOV**) as core component
  - Full modes protection
  - High surge energy capability with compact size
  - Low voltage protection rating
  - Degradation failure indication
  - Surge event counter
  - NEMA 4 metal enclosure to resist dirt, dust and water
  - Audible alarm, beep while SPD fail
  - Remote Alarm optional
  - Threaded NPT

- **Basic circuit diagram**

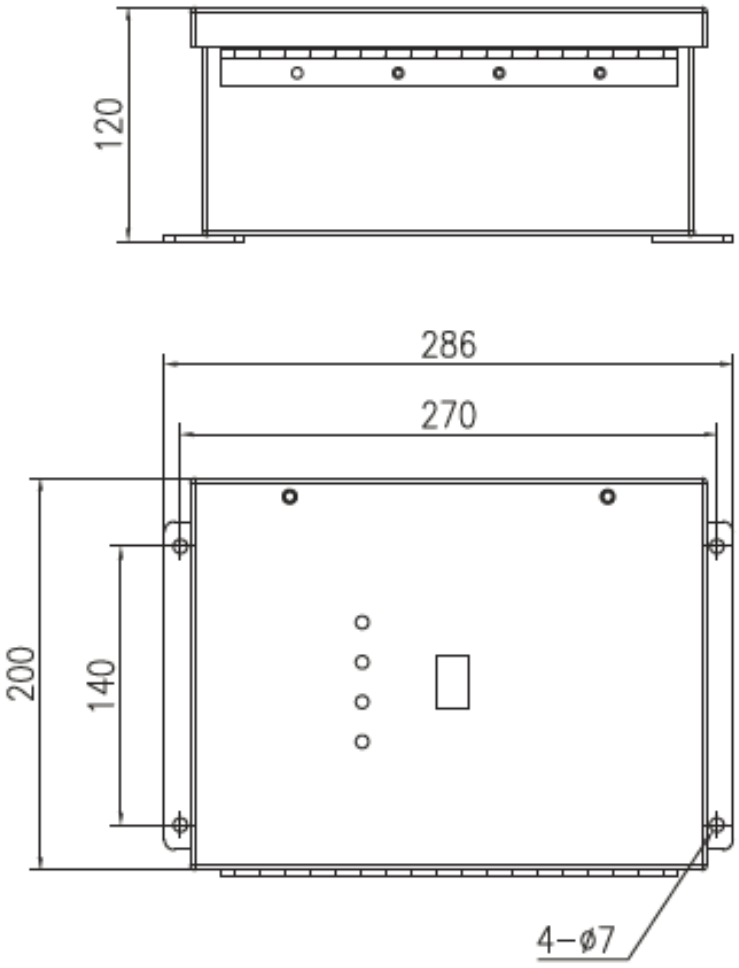
Basic circuit diagram of surge protection circuit	Un/ Power system (50/60 HZ)	Power distribution applied	Wire connection
HPSP240Y42/T1CTA 	220/380 VAC WYE,4W+G 230/400 VAC WYE,4W+G 240/415VAC WYE, 4W+G	 WYE 3 Hots, 1 Neu, 1 Grnd	

■ **General Specification:**

PSP Part No.	**HPSP240Y42/T1CTA**
Voltage configuration	220/380VAC WYE 4W+G (TN/TT)
Operating frequency range	47 - 63 Hz
SPD category per UL/IEC/EN	Type1 / Class I / T1
Connection Type	Parallel Connected
Protection mode	L-N,L-G,N-G,L-L, Full mode protection
Max. continuous operating voltage (MCOV)	320VAC
Voltage protection level (VPR)	L-N:1200V, L-G:1200V,N-G:1200V, L-L:2000V
Nominal discharge current (In,8/20 μs)	20kA
Surge capacity (8/20 μs)	200kA (per mode); 400kA (per phase)
Lightning impulse current (10/350 μs)	40kA (per phase)
Short circuit current rating (SCCR)	200kArms
EMI/RFI filter	≥-30dB@1MHz
Response time	≤ 25 ns
Lightning counter Current	≥ 200A (with Reset button)
Failure pre-test	Press 2S (test button)
Power Status Indication	Normal=Blue LED ON
Working Status Indication	Normal= Blue LED ON; Fail= Blue LED turn to Red Buzzer inside, beep while SPD fail
Power Connecting	10AWG, 762mm (30") length, (L1=black; L2=red; L3=blue; N=white; PE=green)
Signal cable	16AWG, 762mm (30") length,(C=red; NC=blue; NO=brown)
Working environments	Temperature –40℃～+75℃, Humidity relative 5~95% (25℃) Altitude≤3km
Dimensions (W x D x H)	286 x 200 x 120 mm
Threaded NPT	3/4"NPT
Enclosure	Metal enclosure, NEMA 4
Storage	Temperature -10℃～+45℃, Humidity relative ≤75% (25℃)
Certification	ANSI/UL1449 4th edition, CSA C22.2 No. 269.1-17

■ **Dimensions (unit: mm)**

HPSP series can be fixed with bolts. The dimension of the devices and bolt holes is as below diagrams.



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