

20PSP series



PROSURGE® 20PSP series panel SPDs are compact Surge Protective Devices (SPDs) designed to protect single 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 20PSP is constructed with Prosurge’s patented PTMOV (20PTMOV), which has a thermally protected and arc extinguishing technology as the core of Prosurge’s competency. 20PSP has a significant advantage in abnormal over-voltage & high fault current safety and thus ensure industry’s highest level of safety and performance.

20PSP is tested and listed as UL1449 5th Type 1 and Type 2 SPD (with sine wave tracking function). It is constructed in a waterproof plastic enclosure to ensure that dirt, dust and water are resisted, with remote alarm and a LED light to demonstrate the protection status of the SPD.

**The SPD Types Per ANSI / UL 1449 5th:**

**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.

■ **Typical Applications:**

In low & medium exposure locations

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

**Outstanding PTMOV Technology**

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



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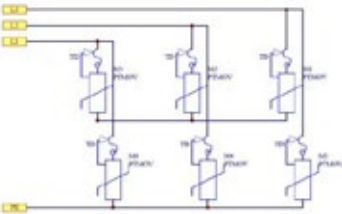
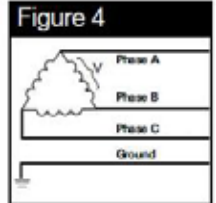
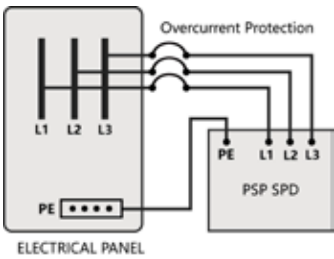


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■ **Features:**

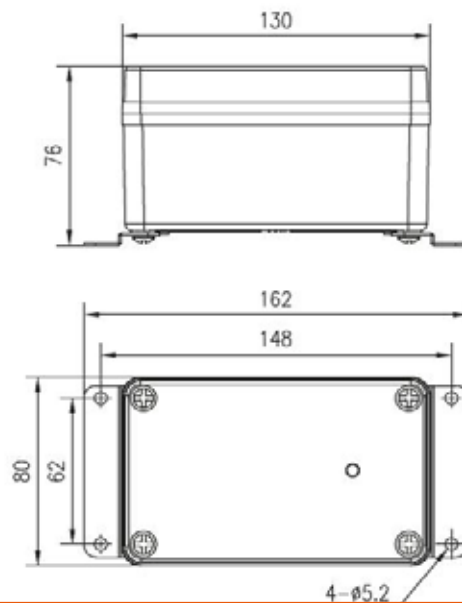
- UL 1449 5<sup>th</sup> & CSA C22.2 Type 1 SPD
- Up to 200kArms SCCR tested without external CB or fuse
- Prosurge Patented SCCR 200kArms thermally protected MOV technology (20PTMOV) as key component
- Application for 480Vac three phase Delta
- Nominal discharge current 20kA 8/20
- Max surge current 8/20 up to 100kA per phase with compact size
- Full modes protection (L-N, L-G, L-L, N-G)
- With sine wave tracking function
- Low voltage protection rating
- Degradation failure indication.
- Remote alarm
- Threaded NPT
- Waterproof plastic enclosure to resist dirt, dust and water

■ **Basic circuit diagram**

Basic circuit diagram of surge protection circuit	Un/ Power system (50/60 HZ)	Power distribution applied	Wire connection
<p><b>20PSP480D12/T1A</b></p> 	<p>480VAC Three phase Delta 3W+G</p>	<p><b>Figure 4</b></p>  <p>DELTA &amp; HRG WYE 3 Hots, 1 Gnd</p>	 <p>Overcurrent Protection</p> <p>ELECTRICAL PANEL</p> <p>PSP SPD</p>

■ **Dimensions (unit: mm)**

20PSP series can be fixed with bolts. The dimension of the devices and bolt holes as below:



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■ **General Specification:**

PSP Part No.	<b>20PSP480D12/T1A</b>
Voltage configuration	480VAC Three phase Delta 3W+G
Operating frequency range	47 - 63 Hz
SPD category per UL1449 5th	Type 1
Connection Type	Parallel Connected
Protection mode	L-G,L-L, Full mode protection
Max. continuous operating voltage (MCOV)	550 VAC
Voltage protection level (VPR )	L-G:1800V, L-L:2000V
Nominal discharge current (In,8/20 μs)	20kA
Surge capacity (8/20 μs)	100kA (per phase)
Short circuit current rating (SCCR)	200kArms
Response time	≤ 25 ns
Power Status Indication	Normal=Green LED ON
Working Status Indication	Normal= Green LED ON; Fail= Red LED ON
Power Connecting	12 AWG, 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°C~+75°C, Humidity relative 5~95% (25°C)
Dimensions (W x D x H)	162 x 80 x 76 mm
Threaded NPT	1/2"NPT
Enclosure	Waterproof plastic enclosure
Storage	Temperature -10°C~+45°C, Humidity relative ≤75% (25°C)
Certification	ANSI/UL1449 5th edition, CSA C22.2

(end)