

2020



COMPETITOR

正意防雷<sup>®</sup>  
Competitor

深圳市正意浪涌防雷器制造有限公司

Competitor SPD Manufacturing (Shenzhen) Co., Ltd.

# Company Profile

Competitor is a professional surge protection device manufacturer, the headquarter is located in Shenzhen, China. Our company dedicated to designing, manufacturing and selling all kinds of SPDs, such as power systems, IoT/AI equipments, communication base stations, construction machinery, Medical instruments, LED lighting and so on.

We are processing the well-known components with the high-quality. We have specialized in customized order for meet clients requirement. Our marketing strategy is flexible enough to adapt to different market situation. We also acquired the UL, TUV and CE certificate for overseas markets. Quality is always our first priority to clients. Therefore we have a lot of clients, including ODM, OEM clients.

Hope that with our efforts, Competitor Inc. will also be your ideal cooperative partner.

## Product Application

Smart City

AI System

Rail Transit

Apparatuses

Equipment

Power System

Control Signal

Ethernet Terminal

Monitor Wiring

Medical Instrument

IoT Supply Power

Electric Appliances

Communication Base Station

Traffic Light System

Please don't hesitate to contact us if you have any needs !

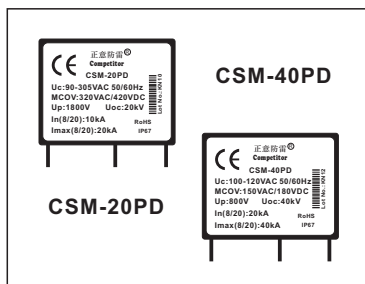
Thanks for your inquiry.

## Catalog Index

1.Communication Base Station SPD	-----	4
2.Power Supply System SPD	-----	10
3.Rail Transit System SPD	-----	30
4.Medical Equipment SPD	-----	38
5.Construction Machinery SPD	-----	42
6.IoT/AI Equipment Terminal SPD	-----	54
7.TMOV Module	-----	58
8.LED Lighting SPD	-----	64
9.Power Surge Protection Box	-----	127
10.Ethernet and Power SPD	-----	139
11.Control Signal SPD	-----	169
12.SPД Circuit Breaker	-----	179
13.Lightning Counter	-----	184
14.Municipal Construction SPD	-----	189
15.Electric Appliances on Board SPD	-----	204
16.DC Power Supply System SPD	-----	210

If you need customized products, please contact us directly.

# Electric Appliances Surge Protection Module



## Description

Competitor's module is based on thermal protection technology and applied to electric product, communication product circuit design on-board for transient overvoltage protection. It is constructed with Epcos varistor technology. It's built-in thermal disconnect function provides additional protection to prevent catastrophic failure and fire hazard even under the extreme circumstances of varistor end-of-life or sustaining over voltage conditions.

## Applications

- \*5G Base Station
- \*Communication Circuit
- \*Product Design On Board
- \*Electric Appliance Product
- \*Telecommunication distribution cabinet
- \*Electric Surge Protect
- \*Household Electric PCBA
- \*Telecommunications room
- \*Power Distribution Cabinet
- \*Column communication cabinet

## Certification Standard

TUV CE	IEC61643-11:2015	CQC	GB/T 18802.1-2011
UL	UL1449 <sup>4th</sup>	CSA	C22.2 No.269.5-17

## Absolute Maximum Rating

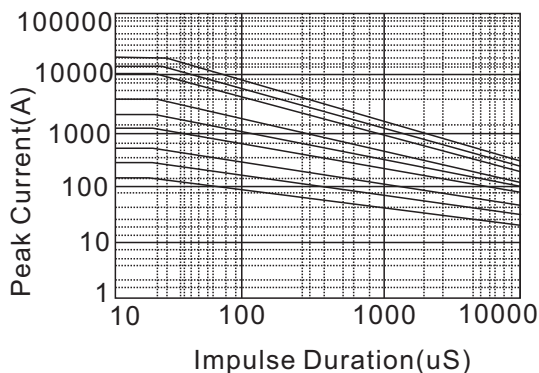
Continous:	CSM-PD/SD Series	Units
Max AC Voltage Range(V <sub>rms</sub> )	12 to 510	V
Max DC Voltage Range(V <sub>rms</sub> )	5 to 670	V
Transient		
Maximum Discharge Current 8/20uS Waveform(I <sub>max</sub> )	10000	A
Norminal Discharge Current 8/20uS Waveform(I <sub>n</sub> )	5000	A
Operating Ambient Temperature Range(T <sub>a</sub> )	-45 to +85	°C
Storage Temperature Range(T <sub>STG</sub> )	-45 to +125	°C
Isolation Voltage Capability	600	V
Insulation Resistance	>1000	MΩ

©2020 Competitor Inc.

Specifications are subject to change without notice.

Revised:02.18.2020

# Repetitive Surge Capability for Module



Pulse Rating(8/20uS)

Strikes	Surge
1	10000A
2	6000A
15	5000A
100	1200A
1000	600A
10000	280A
100000	120A

## Module Series Specifications

Part Number	Operating Voltage	MCOV	In	I <sub>max</sub>	Up
CSM-10PD*	DC5-24V	DC14-38V	2kA	5kA	36-100V
CSM-15PD*	DC24-72V	DC65-125V	5kA	10kA	100-300V
CSM-20PD*	AC100-480V	AC140-510V	5kA	10kA	360-2000V
CSM-30PD*	AC100-480V	AC140-510V	8kA	15kA	360-2100V
CSM-40PD*	AC100-480V	AC140-510V	10kA	20kA	360-2500V
CSM-10SD*	DC12-80V	DC18-150V	5kA	10kA	100-500V
CSM-15SD*	AC100-480V	AC140-510V	15kA	30kA	360-3500V
CSM-20SD*	AC100-480V	AC140-510V	20kA	40kA	360-4000V
CSM-30SD*	AC100-480V	AC140-510V	20kA	40kA	360-4000V
CSM-40SD*	DC12-80V	DC18-150V	20kA	40kA	300-500V

### Notes:

- \*=XXX,005=DC5V,012=DC12V;Part number with "RS"-Remote Signal only.
- Up-IEC 61643-11voltage protection level;the highest value of residual voltage measurements during the application of impulses of 8/20uS nominal discharge current (In); an rounding voltage value of maximum measurement.
- MCOV/Uc:Maximum Continuous Operating Voltage-maximum r.m.s voltage that could be continuously applied to the surege module.

©2020 Competitor Inc.

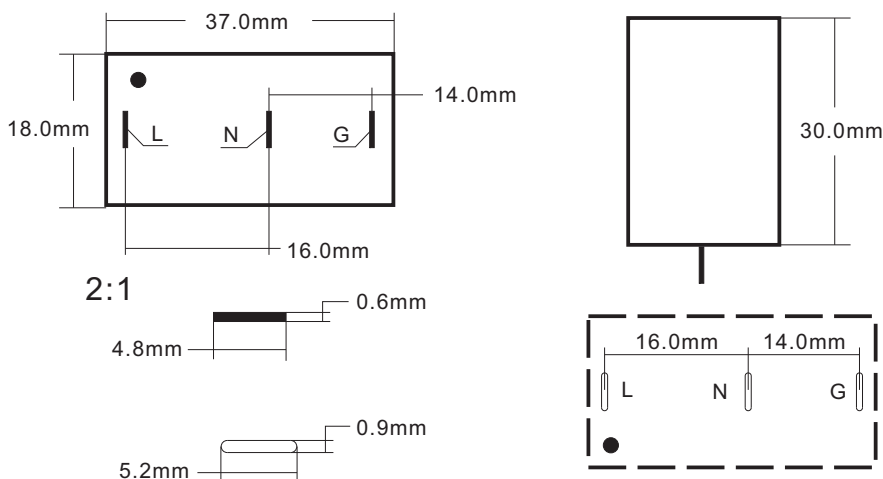
Specifications are subject to change without notice.

Revised:02.18.2020

# Module Features

- \*Maximum Discharge Current(I<sub>max</sub>) 10kA/15kA/20kA/30kA/40kA, 8/20uS
- \*Meets ANSI C136.2 Enhanced Level 10kV/5kA, IEEE C62.41.2 Location Category C Low Exposure and US Dept. of Energy MSSLC Model Spec.
- \*Thermally Protected Varistor Technology
- \*Parallel Connected Surge Protection Module
- \*IP67 Water-proof and Dust-proof
- \*Design in UL1449<sup>4th</sup> (120VAC and 240VAC voltage ratings)
- \*Parallel for 240VAC and 480VAC is IEC61643-11 Test Class III and EN61643-11 Type 3 compliant
- \*IEC CB Scheme Certificate NL-37684 available for 240VAC and NL-40516 for 480VAC
- \*Compact form factor with mounting tabs
- \*240VAC and 480VAC are CE compliant and available for Class II and Class III installation based on IEC protection classes
- \*Series connected Varistor thermal protection indication by removal of power to luminaire
- \*High line to earth/ground resistance
- \*RoHS compliant
- \*Compact Size SPD

# CSM-PD Module Dimensions



## PCB Layout

### Notes:

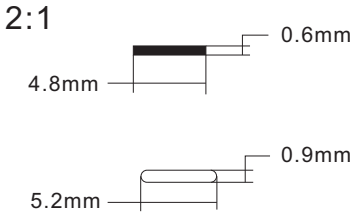
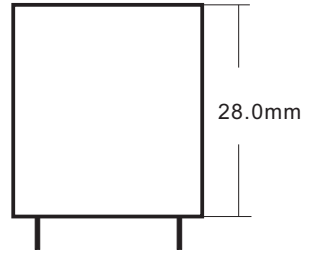
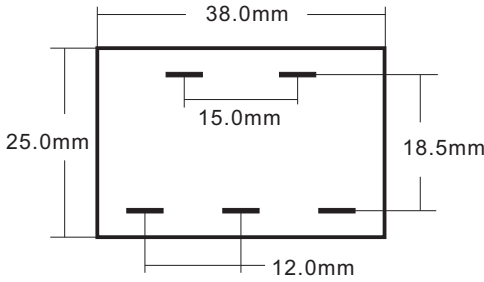
1. PIN are 4.8mm wide 0.6mm thick PCB terminals
2. Remote signal output is optional active and passive output

©2020 Competitor Inc.

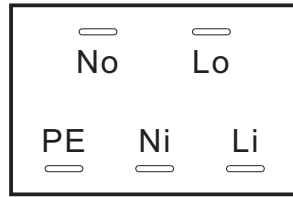
Specifications are subject to change without notice.

Revised:02.18.2020

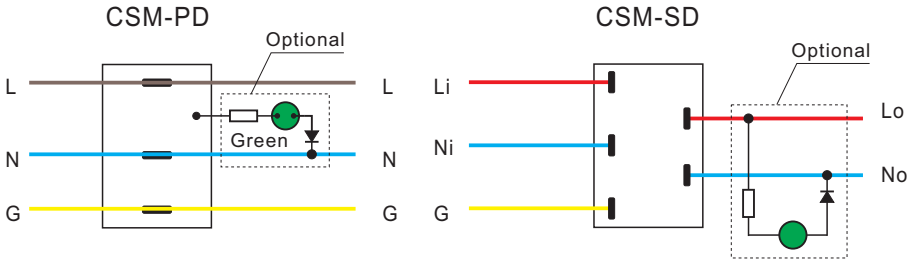
# CSM-SD Module Dimensions



## PCB Layout



# Application Installation Schematic



With LED indicating Module status  
 -ON (Green):SPD is online  
 -OFF(Red):SPD needs replacement

## Notes:

- 1.Module used in parallel connection for indication curcuit connection.
- 2.LED indicator and associated circuitry are not included in the module.
- 3.L terminal is AC line voltage;N terminal is AC neutral voltage;G terminal is ground.
- 4.Series connection module L(AC) line voltage is cut off when SPD needs replacement.
- 5.R is current limiting resistor,it resistance/wattage is determined by AC line voltage and desired current driving LED. Example:AC line voltage 240VAC,LED :1.6mA.
- 6.External indicator must be current limiting resistor.

©2020 Competitor Inc.

Specifications are subject to change without notice.

Revised:02.18.2020

# Part Number Code System

**CSM-10 T I 277 P D 1**

Competitor Inc.  
Surge Protection Module

10kA(Maximum  
Discharge Current)

Thermal Protection

Remote Signal

Operating Voltage

P:Parallel  
S:Series

D:Terminal  
W:Wires

Other Options:

**1:**With  $\phi$  1mm lead pin,  
tinned copper,length  
15-20mm.

**4:**With 4.8mm terminal,  
tinned copper,length  
5mm,pins thickness  
0.6mm.

**X:**Module wire length  
and colors can be  
customized.

## Notes

1. "I":with failure indication PIN .
- 2.W:wires connection type ,It's a customized product.
3. Series type and parallel type are optional,please ask us when you place an order.
4. Some contents in the model will not appear on the label, which is the recessive material code.

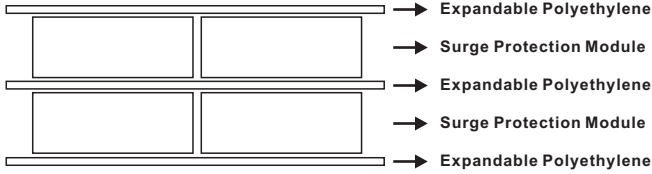
©2020 Competitor Inc.

Specifications are subject to change without notice.

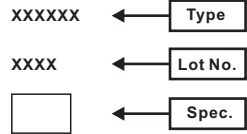
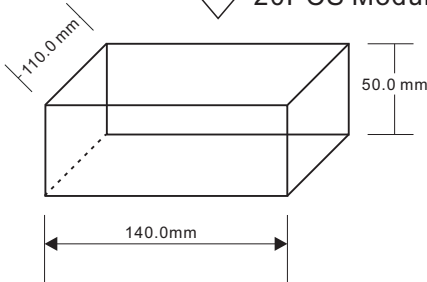
Revised:02.18.2020



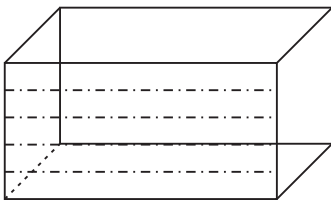
# Products Packing



↓ 20PCS Module



↓ 20 Boxes Module



CSM-10PD/SD	52g
CSM-15PD/SD	52g
CSM-20PD/SD	55g
CSM-40PD/SD .....	.....

Box	20PCS SPM
Carton	400PCS SPM

## Shipping Mark

Customer:	_____
Products:	_____
Order Code:	_____
Part No.:	_____
Quantity:	_____
QC:	_____
Date:	_____
Made in China	

## Carton

©2020 Competitor Inc.  
Specifications are subject to change without notice.

Revised:02.18.2020



深圳市正意浪涌防雷器制造有限公司  
Shenzhen Competitor SPD Manufacturing Co., Ltd.

---

TEL:+86-755-89587560

FAX:+86-755-28504421

E-mail:sale@ledspd.cn

Http://www.ledspd.cn

Add:2 Floors Six Buildings TongYi Industrial District

No.351 JiHua Road LongGang SZ City GD P.R.C.