ProSurge®

IEC/EN Standard

Surge Protective Devices (SPDs)

Prosurge Electronics Co.,Ltd

Maximum Safety in Surge Protection

www.Prosurge.com

2023 Edition

Our strengths

- International R&D team
- Global patents protected
- 5+ years warranty
- KEMA, TUV, UL, ETL, CE, ROHS certified
- ISO9001& 6 sigma quality control
- In-house lab performing test according to UL or IEC standards

Global partners

ProSurge® **Prosurge Electronics Co.,Ltd**

Maximum Safety in Surge Protection

To defend your choice with our strength and dignity

In 2006, a group of specialists established Prosurge with the mission to protect millions of businesses, organizations and households from surge damages. By a decade of joint endeavor, Prosurge has transformed itself from a humble start-up to an innovative and reputable brand in surge protection industry and are protecting various critical entities in more than 60 countries.

Made in China is usually a term for inferior quality. But we are doing our share to change this prejudice not only with our well-proven products but also with our precious expertise and profound technical know-how. That's why customers trust us: they are backed by a devoting team in which every member pursue excellence in everything they do.

We have ups and downs during the past 18 years and we deem ourselves progressive rather than successful because we still have intriguing frontier to explore and challenging mountains to climb. What's more, we are exercising our ingenuity to create a better business ecosystem that every stake holder can benefit from. Welcome on board.

Our surge protection products cover a wide range of applications and have been delivered to more than 60 countries.

Railway system

Solar power system

Telecommunication system

Wind energy system

Industrial control system

Electricity

Building

CCTV system

Charger for electric vehicles

LED display

LED street Light

Petrol & Gas Industry

Prosurge strength

ProSurge®
Maximum Safety in Surge Protection

Strict bar code management tracking system

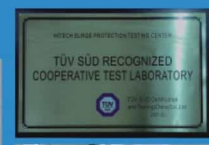
- Bar code management for each part to trace lot #, parameters, materials lot No., materials specification, key process operator etc.

Product approvals & standards:

- UL, ETL (ANSI/UL 1449 5th edition, CSA C22.2, UL 497b, etc.)
- KEMA, TUV (IEC/EN 61643-1/11, IEC/EN 61643-31, EN 50539-11)
- CE (LVD, EMC)

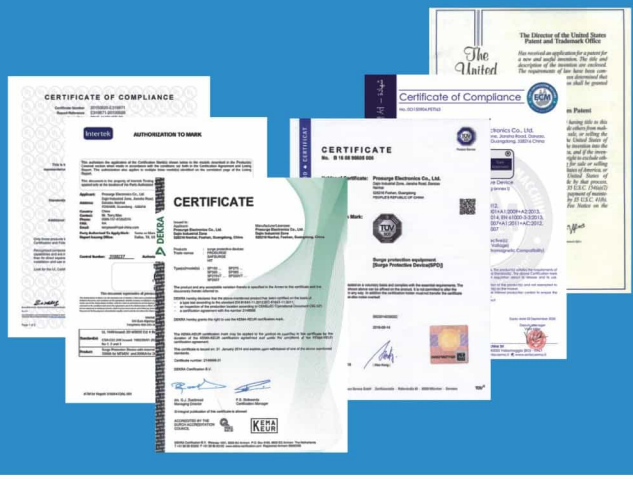
Prosurge's In-house lab

- Prosurge can perform testing according to ANSI/UL 1449, 497a/b/c, IEC/EN 61643-1/11/31, EN 50539-11, EN60730-1, IEC/EN 61643-21,IEEE C62.41 etc. at PROSURGE in-house Lab
- China's leading lightning protection test laboratory
- Strictly follow ISO/IEC 17025 testing and calibration laboratories standards
- TÜV SÜD external test Laboratory (ETL)



R&D

- International R&D team with china & USA experts, senior member of IEC, UL and IEEE.
- Main products are international patents protected to avoid any possible intellectual property risk



Quality assurance

- Global supplier of Fortune 500 enterprises
- ISO 9001 certified Quality Management System
- 6 Sigma Quality Control System
- Inspection by 100% before packing
- 5+ Years Warranty

Production capacity

- Factory size in square meter: 4000
- More than monthly 300K pcs SPDs in one shift

ProSurge®
Maximum Safety in Surge Protection

Lab & testing

Multi-waveform surge generator

- For IEC/EN 61643 Type1, 2, 3 / Class B, C,D SPD, and UL1449 all type testing
- Current capacity: 100kA (10/350μs), 150kA (8/20μs) & combination wave (1.2/50μs voltage - 8/20μs current)

Glow wire tester

- IEC/EN 61643 Resistance to abnormal heat and fire

Online aging tester

- Uc / MCOV compliance 100% online testing before packing

Environment test chamber

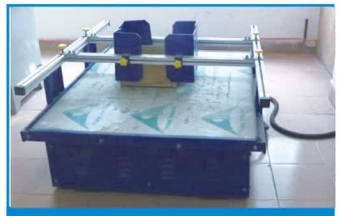
- UL, IEC/EN environment test, aging test

Rated functioning temperature (Tf)

- UI60691 & IEC/EN 60691

1.2/50 Voltage Impulse generator

- UL 1449 & IEC/EN 61643



Vibration tester

- Structural & packaging test

Thermal stability tester

- IEC/EN 61643

Intermediate current tester

- UL 1449

Accelerated aging tester

- UL 1449 & IEC/EN 61643

Handheld SPD tester

- UL 1449 & IEC/EN 61643

Fluke network analysis

- UI497 & IEC/EN 61643-21

Oscilloscope

Digital electric Bridge

SPD component tester

Varistor parameter tester

ProSurge®

Maximum Safety in Surge Protection

Certificates and International patents

CERTIFICATE OF COMPLIANCE

Certificate Number 20150820-E319871
Report Reference E319871-20100929
Issue Date 2015-AUGUST-20

Issued to: PROSURGE ELECTRONICS CO LTD
Dajin Industrial Zone
Jiansha Rd Danzao Nanhai
Foshan
Guangdong 528216 CHINA

This is to certify that representative samples of: COMPONENT - SURGE-PROTECTIVE DEVICES
Refer addendum page for models

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety: UL1449 Surge Protective Devices
CSA C22.2 No. 8 13 Electromagnetic Interference (EMI) Filters, Electrical Notice No. 516 Surge/Transient Voltage Suppressors

Additional Information: See the UL Online Certifications Directory at www.ul.com/database for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's Certification and Follow-Up Service.

Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for use as components of complete equipment submitted for investigation rather than for direct separate installation in the field. The final acceptance of the component is dependent upon its installation and use in complete equipment submitted to UL LLC.

Look for the UL Certification Mark on the product.

Page 1 of 2

UL

Intertek AUTHORIZATION TO MARK

This authorizes the application of the Certification Mark(s) shown below to the models described in the Product(s) Covered section when made in accordance with the conditions set forth in the Certification Agreement and Listing Report. This authorization also applies to multiple listee model(s) identified on the correlation page of the Listing Report.

This document is the property of Intertek Testing Services and is not transferable. The certification mark(s) may be applied only at the location of the Party Authorized To Apply Mark.

Applicant: Prosurge Electronics Co., Ltd. Dajin Industrial Zone, Jiansha Road, Danzao, Nanhai FOSHAN, Guandong - 528216
Country: China
Contact: Mr. Terry Mao
Phone: 0086-757-81262076
FAX: NA
Email: terrymao@spd-china.com

Manufacturer: Prosurge Electronics Co., Ltd. Dajin Industrial Zone, Jiansha Road, Danzao, Nanhai FOSHAN, Guandong - 528216
Country: China
Contact: Mr. Terry Mao
Phone: 0086-757-81262076
FAX: NA
Email: terrymao@spd-china.com

Party Authorized To Apply Mark: Same as Manufacturer
Report Issuing Office: Dallas, TX, USA

Control Number: 3186237 Authorized by: Thomas J. Patterson, Certification Manager

Intertek

This document supersedes all previous Authorizations to Mark for the noted Report Number.

Standard(s): UL 1449 Issued: 2014/08/20 Ed: 4 Rev: 2015/03/26 Surge Protective Devices
CSA C22.2#5 issued: 1982/09/01 (R2008) Electromagnetic Interference (EMI) Filters; General Instruction No 1, 2 and 3

Product: Surge Protection Device with internal thermal device (Type 1 component assemblies) with SCCR of 100KA for MTMOV and 200KA for DIN SPDs

ATM for Report 316044TDAL-001 Page 1 of 2 ATM Issued: 31-Mar-2016

ETL

DEKRA

CERTIFICATE

Issued to:
Applicant: Prosurge Electronics Co., Ltd. Dajin Industrial Zone 528216 Nanhai, Foshan, Guangdong, China
Manufacturer/Licensee: Prosurge Electronics Co., Ltd. Dajin Industrial Zone 528216 Nanhai, Foshan, Guangdong, China

Products: surge protective devices
Trade names: PROSURGE SAFSURGE HIT
Type(s)/model(s): SP150 ... SP275 ... SP320 ... SP355 ... SP270VT ... SP320VT ... SP255T

The product and any acceptable variation thereto is specified in the Annex to this certificate and the documents therein referred to.

DEKRA hereby declares that the above-mentioned product has been certified on the basis of:
- a type test according to the standard EN 61643-11:2012/IEC 61643-11:2011;
- an inspection of the production location according to CENELEC Operational Document CIG 021
- a certification agreement with the number 2146898

DEKRA hereby grants the right to use the KEMA-KEUR certification mark.

The KEMA-KEUR certification mark may be applied to the product as specified in this certificate for the duration of the KEMA-KEUR certification agreement and under the conditions of the KEMA-KEUR certification agreement.

This certificate is issued on: 31 January 2014 and expires upon withdrawal of one of the above mentioned standards.

Certificate number: 2146898.01

DEKRA Certification B.V.

drs. G.J. Zoetbrood, Managing Director
F.S. Strikwerda, Certification Manager

© Integral publication of this certificate is allowed

ACCREDITED BY THE DUTCH ACCREDITATION COUNCIL

KEMA KEUR

DEKRA Certification B.V. Meander 1051, 6825 MJ Arnhem P.O. Box 5185, 6802 ED Arnhem The Netherlands
T +31 88 96 83000 F +31 88 96 83100 www.dekra-certification.com Registered Arnhem 09085396

KEMA

ZERTIFIKAT ◆ CERTIFICATE ◆ 認証書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

CERTIFICATE
No. B 16 08 96605 006

Product Service

Holder of Certificate: Prosurge Electronics Co., Ltd.
Dajin Industrial Zone, Jiansha Road, Danzao Nanhai
528216 Foshan, Guangdong
PEOPLE'S REPUBLIC OF CHINA

Certification Mark:

Product: Surge protection equipment [Surge Protective Device(SPD)]

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition the certification holder must not transfer the certificate to third parties. See also notes overleaf.

Test report no.: 68230140380 2C
Valid until: 2019-09-14

Date, 2016-08-18 (Alex Kong)
Page 1 of 2

TÜV SÜD Product Service GmbH · Zertifizierstelle · Ridlerstraße 65 · 80339 München · Germany

TUV

Certificate – Сертификат – 證明書 – Certificat – 증명서 – شهادة

Certificate of Compliance

No. 0O150904.PET163

Certificate's Holder: Prosurge Electronics Co., Ltd.
Dajin Industrial Zone, Jiansha Road, Danzao, Nanhai, Foshan, Guangdong, 528216 China

Certification ECM Mark:

Product: Model(s): Surge Protective Device (see the following annex I)

Verification to: Standard:
EN 61643-11:2012,
EN 61643-21:2001+A1:2009+A2:2013,
EN 61000-3-2:2014, EN 61000-3-3:2013,
EN 61000-6-3:2007+A1:2011+AC:2012,
EN 61000-6-1:2007

related to CE Directive(s):
2014/35/EU (Low Voltage)
2014/30/EU (Electromagnetic Compatibility)

Remark: The product(s) has been verified on a voluntary basis. The product(s) satisfies the requirements of the Certification Mark of ECM, in reference to the above listed Standard(s). The above Certification Mark can be affixed on the product(s) accordingly to the ECM regulation about its release and its use. Regulation can be found of www.enteceroma.it
Whereas the Manufacturer is responsible of the CE certification of the product(s) and not exempted to perform all the necessary activities before placing the product(s) on the market.
The Manufacturer is also responsible to maintain efficient the internal production control to ensure the product(s) are in compliance with the Certification ECM mark.
This certificate can be checked for validity at www.enteceroma.it

Date of issue 04 September 2015 — Chief Manager
Expiry date 03 September 2020 — Deputy Manager

Ente Certificazione Meccnine Srl
Via Cor. Berti, 243 – Loc. Cotrello di Serravalle – 40033 Valsamoggia (BO) - ITALY
+39 051 6705141 +39 051 6705156 info@enteceroma.it www.enteceroma.it

CE

CERTIFICATE

Quality Management Systems Certificate

Certificate Number: 00221Q00322R0M

CQM hereby certifies that

Prosurge Electronic Co., Ltd.

has implemented and maintains a Quality Management System which fulfills the requirements of the following standards

GB/T 19001-2016/ISO 9001:2015

Quality management systems—Requirements

This certificate is valid to the following product(s)/service:

Manufacture and sale of lighting protection electric products

Issued on: 2021-01-13
Effective date: 2021-01-13
Validity date: 2024-01-12
Registration Number: CQM-44-2020-0246-0001

The validity of the certificate can be checked on www.cqm.com.cn, Certificate Confirmation and CQM website

CQM

IAF CNAS

CHINA QUALITY MARK CERTIFICATION GROUP

ISO 9001:2015

The Director of the United States Patent and Trademark Office

Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this

United States Patent

Grants to the person(s) having title to this patent the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States of America or importing the invention into the United States of America, and if the invention is a process, of the right to exclude others from using, offering for sale or selling throughout the United States of America, or importing into the United States of America, products made by that process, for the term set forth in 35 U.S.C. 154(a)(2) or (c)(1), subject to the payment of maintenance fees as provided by 35 U.S.C. 41(b). See the Maintenance Fee Notice on the inside of the cover.

The United States of America

US PATENT

Bundesrepublik Deutschland

Urkunde

über die Erteilung des Patents Nr. 11 2010 005 119

Bezeichnung:
Überspannungsableiter mit thermischer Überlastsicherung

IPC:
H02H 9/04

Inhaberin/Inhaber:
Xiaomao Mao, Foshan, CN

Erfinder/Erfinderin:
Wei, Tianyun, Guangdong, CN; Mao, Xiaomao, Guangdong, CN

Priorität
12.01.2010 CN 201010019307.8

Tag der Anmeldung:
02.02.2010

Tag der Veröffentlichung der Patenterteilung:
12.03.2015

Die Präsidentin des Deutschen Patent- und Markenamts

Cornelia Rudolf-Schäfer

München, 14.07.2015

GERMANY PATENT

KIPO

CERTIFICATE OF PATENT REGISTRATION

Patent Reg. No. : 10-1318852

Application No. : 10-2011-7030783
Application Date : December 22, 2011
Registration Date : Octboer 10, 2013

Title of invention : SURGE SUPPRESSOR WITH THERMAL PROTECTIVE FUNCTION

Owner of Patent Right : Prosurge Electronics Co., Ltd.
Second floor, 30 Gongyedadao, Xiabai, Luocun Town, Nanhai Foshan, Guangdong 528226 China

Inventor(s) : MAO, Xiaomao
Second floor, 30 Gongyedadao, Xiabai, Luocun Town, Nanhai Foshan, Guangdong 528226 China

Inventor(s) : WEI, Tianyun
Second floor, 30 Gongyedadao, Xiabai, Luocun Town, Nanhai Foshan, Guangdong 528226 China

This is to certify that the above invention has been registered in the original Patent register in accordance with the Patent Law.

This 10th day of October, 2013

The Commissioner of the Korean Intellectual Property Office

KOREA PATENT

Prosurge SPDs overview

Maximum Safety in Surge Protection

Prosurge is among the very few companies who can provide the most extensive SPDs applicable for worldwide market. The product details are thoroughly presented in later parts of this catalog.
Before we go into details, we would like to give a brief introduction so that you can have a general idea in the shortest time.

Basically, our SPDs can be classified into 6 categories:

PCB mounting SPDs

Panel SPDs

DIN-rail SPDs for AC & PV / DC

SPDs for information system

Lightning & surge monitoring devices

Intelligent SPDs (iSPDs)

Note: In this catalogue, Prosurge includes (-S) in the model number to indicate the optional remote alarm feature for the SPDs.
A model number with "-S" signifies that the SPD has a remote signal contact;
While a model number without "-S" indicates that the SPD does not have a remote alarm function.

ProSurge®
Maximum Safety in Surge Protection

CONTENTS

ProSurge®
Maximum Safety in Surge Protection

SPD for AC power supply system

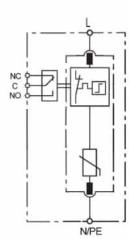
Class I + Class II / Type 1 + Type 2

- **TUV certified T1+ T2 SPD per IEC/EN 61643-11 standard**
- **Unique thermal disconnector design provides quick thermal response and secure disconnection**
- **Dual module redundancy for one pole and dual indication window**
- **High lightning current discharge capacity up to 25kA 10/350μs, surge current capability up to 100kA 8/20μs**
- **High short-circuit current rating up to 50kArms, suitable for most industry and commerce application.**
- **Anti-vibration module locking system with release button**
- **Pluggable module for easy replacement without the need to remove system wiring Degradation failure indication and optional remote signal contact**

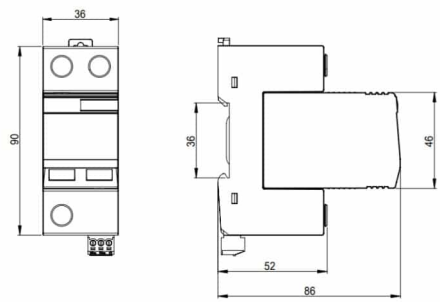
Prosurge's BP25V series are class I and class II pluggable MOV based SPDs, designed for low-voltage power supply system lightning & surge protection, especially for locations of high risk exposure or LPZ 0A-1 building entrances (IEC 62305-4) to against the damage from direct or close lightning strikes.
High energy MOVs are employed to provide stable lightning & surge protection service with no follow current, with a lightning current discharge capacity up to 25kA (10/350μs) and short circuit current rating as 50kArms, the BP25V is suit for the main distribution board of low-voltage power supply system. A notable feature of BP25V is dual module redundancy design, two individual MOV protection modules in parallel in one pole SPD with two indication windows, so that the SPD could keep on working in spite of one protection module fails or one indication windows turns to red. That will help to realize the uninterrupted surge protection, since user can replace the failure models according to the timing and the condition.

Part No.	BP25V/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/EU/VDE	I+ II /1+2/ B+C										
Nominal voltage (AC) Un	60V	120V	120V	230V	230V	277V	277V	400V	400V	480V	690V
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	100kA										
Lightning impulse current (10/350) Iimp	25kA	25kA	25kA	25kA	25kA	25kA	25kA	22kA	22kA	15kA	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-5 sec U_T withstand mode	90V	174V	228V	335V	335V	403V	403V	580V	580V	700V	870V
Short-circuit current rating Isccr	50 kArms										
Leakage current Ipe	<0.1 mA										
Backup fuse(only required if not already provided in mains)	≤315A gL/gG										
Operating temperature range	-40℃ ~ +85℃										
Mounting	35mm DIN-rail										
Degree of protection	IP20										
Thermal disconnector	Internal Green – normal ; red - failure										
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)



SPD for AC power supply system

Class I + Class II / Type 1 + Type 2

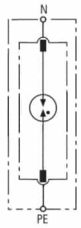
ProSurge®
Maximum Safety in Surge Protection

- **TUV certified T1+ T2 SPD per IEC/EN 61643-11 standard.**
- **Designed for separation and protection between the N and PE conductors**
- **High energy gas discharge tube technology**
- **High lightning current discharge capacity up to 100kA 10/350 μs**
- **High surge current discharge capacity up to 150kA 8/20 μs**
- **35mm DIN-rail mounting**
- **Wide operating temperature-40℃ ~85℃**

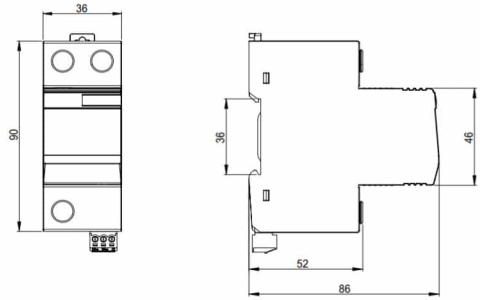
Prosurge's G50(100) NPE series are class I and class II gas discharge tube (GDT) based SPDs, designed for low-voltage power supply system lightning current & surge protection, especially for separation and protection between the N and PE conductors.
With a lightning discharge capacity up to 50/100kA (10/350μs) and surge discharge capacity up 150kA (8/20μs), G50(100) NPE 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.	G50/150NPE	G50/255NPE	G100/150NPE	G100/255NPE
In accordance with	IEC/EN 61643-11:2011; UL1449 5th			
Category IEC/EU/VDE	I+ II /1+2/ B+C			
Max. continuous operating voltage(AC) Uc	150V	255V	150V	255V
Nominal discharge current(8/20) In	50kA		100kA	
Max. discharge current(8/20) Imax	100kA		150kA	
Lightning impulse current (10/350) limp	50kA		100kA	
Voltage protection level Up	1.5kV	1.5kV	1.5kV	1.5kV
Temporary overvoltage TOV-200ms U_T withstand mode	1200V	1200V	1200V	1200V
Follow current & interrupt rating Ifi	100Arms			
Operating temperature range	-40 ℃~ +85 ℃			
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)



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	Isccr	
BP25V/75(-S)/2P	2	2+0	75Vac	25kA	100kA	25kA	0.6kV	50kA	1
BP25V/150(-S)/2P	2	2+0	150Vac	25kA	100kA	25kA	0.8kV	50kA	1
BP25V/180(-S)/2P	2	2+0	180Vac	25kA	100kA	25kA	1.0kV	50kA	1
BP25V/275(-S)/2P	2	2+0	275Vac	25kA	100kA	25kA	1.2kV	50kA	1
BP25V/320(-S)/2P	2	2+0	320Vac	25kA	100kA	25kA	1.4kV	50kA	1
BP25V/350(-S)/2P	2	2+0	350Vac	25kA	100kA	25kA	1.5kV	50kA	1
BP25V/385(-S)/2P	2	2+0	385Vac	25kA	100kA	25kA	1.8kV	50kA	1
BP25V/440(-S)/2P	2	2+0	440Vac	22kA	100kA	25kA	2.0kV	50kA	1
BP25V/480(-S)/2P	2	2+0	480Vac	22kA	100kA	25kA	2.2kV	50kA	1
BP25V/600(-S)/2P	2	2+0	600Vac	15kA	100kA	25kA	2.5kV	50kA	1
BP25V/750(-S)/2P	2	2+0	750Vac	4kA	100kA	25kA	2.8kV	50kA	1
BP25V/150(-S)/PN50	2	1+1	L-N:150Vac N-PE:150Vac	L-N:25kA N-PE:50kA	L-N:100kA N-PE:100kA	L-N:25kA N-PE:50kA	L-N: 0.8kV N-PE:1.5kV	50kA	2
BP25V/180(-S)/PN50	2	1+1	L-N:180Vac N-PE:150Vac	L-N:25kA N-PE:50kA	L-N:100kA N-PE:100kA	L-N:25kA N-PE:50kA	L-N: 1.0kV N-PE:1.5kV	50kA	2
BP25V/275(-S)/PN50	2	1+1	L-N:275Vac N-PE:255Vac	L-N:25kA N-PE:50kA	L-N:100kA N-PE:100kA	L-N:25kA N-PE:50kA	L-N: 1.2kV N-PE:1.5kV	50kA	2
BP25V/320(-S)/PN50	2	1+1	L-N:320Vac N-PE:255Vac	L-N:25kA N-PE:50kA	L-N:100kA N-PE:100kA	L-N:25kA N-PE:50kA	L-N: 1.4kV N-PE:1.5kV	50kA	2
BP25V/350(-S)/PN50	2	1+1	L-N:350Vac N-PE:255Vac	L-N:25kA N-PE:50kA	L-N:100kA N-PE:100kA	L-N:25kA N-PE:50kA	L-N: 1.5kV N-PE:1.5kV	50kA	2
BP25V/385(-S)/PN50	2	1+1	L-N:385Vac N-PE:255Vac	L-N:25kA N-PE:50kA	L-N:100kA N-PE:100kA	L-N:25kA N-PE:50kA	L-N: 1.8kV N-PE:1.5kV	50kA	2
BP25V/75(-S)/3P	3	3+0	75Vac	25kA	100kA	25kA	0.6kV	50kA	3
BP25V/150(-S)/3P	3	3+0	150Vac	25kA	100kA	25kA	0.8kV	50kA	3
BP25V/180(-S)/3P	3	3+0	180Vac	25kA	100kA	25kA	1.0kV	50kA	3
BP25V/275(-S)/3P	3	3+0	275Vac	25kA	100kA	25kA	1.2kV	50kA	3
BP25V/320(-S)/3P	3	3+0	320Vac	25kA	100kA	25kA	1.4kV	50kA	3
BP25V/350(-S)/3P	3	3+0	350Vac	25kA	100kA	25kA	1.5kV	50kA	3
BP25V/385(-S)/3P	3	3+0	385Vac	25kA	100kA	25kA	1.8kV	50kA	3
BP25V/440(-S)/3P	3	3+0	440Vac	22kA	100kA	25kA	2.0kV	50kA	3
BP25V/480(-S)/3P	3	3+0	480Vac	22kA	100kA	25kA	2.2kV	50kA	3
BP25V/600(-S)/3P	3	3+0	600Vac	15kA	100kA	25kA	2.5kV	50kA	3
BP25V/750(-S)/3P	3	3+0	750Vac	4kA	100kA	25kA	2.8kV	50kA	3
BP25V/75(-S)/4P	4	4+0	75Vac	25kA	100kA	25kA	0.6kV	50kA	4
BP25V/150(-S)/4P	4	4+0	150Vac	25kA	100kA	25kA	0.8kV	50kA	4
BP25V/180(-S)/4P	4	4+0	180Vac	25kA	100kA	25kA	1.0kV	50kA	4
BP25V/275(-S)/4P	4	4+0	275Vac	25kA	100kA	25kA	1.2kV	50kA	4
BP25V/320(-S)/4P	4	4+0	320Vac	25kA	100kA	25kA	1.4kV	50kA	4
BP25V/350(-S)/4P	4	4+0	350Vac	25kA	100kA	25kA	1.5kV	50kA	4
BP25V/385(-S)/4P	4	4+0	385Vac	25kA	100kA	25kA	1.8kV	50kA	4
BP25V/440(-S)/4P	4	4+0	440Vac	22kA	100kA	25kA	2.0kV	50kA	4
BP25V/480(-S)/4P	4	4+0	480Vac	22kA	100kA	25kA	2.2kV	50kA	4
BP25V/600(-S)/4P	4	4+0	600Vac	15kA	100kA	25kA	2.5kV	50kA	4
BP25V/750(-S)/4P	4	4+0	750Vac	4kA	100kA	25kA	2.8kV	50kA	4
BP25V/150(-S)/3PN100	4	3+1	L-N:150Vac N-PE:150Vac	L-N:25kA N-PE:100kA	L-N:100kA N-PE:150kA	L-N:25kA N-PE:100kA	L-N: 0.8kV N-PE:1.5kV	50kA	5

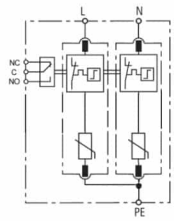
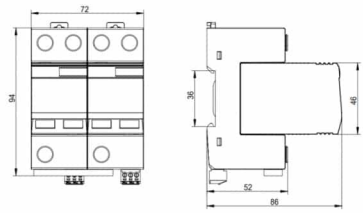
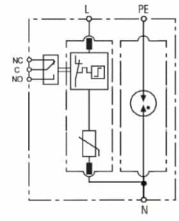
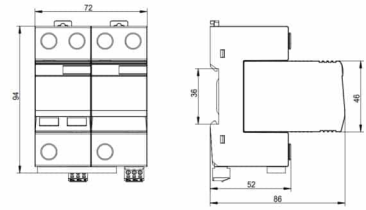
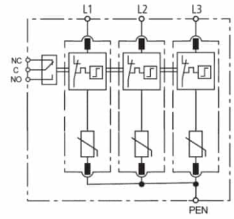
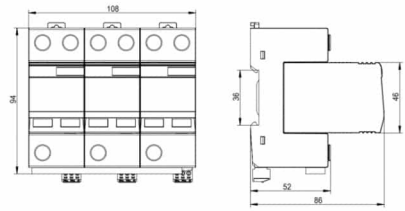
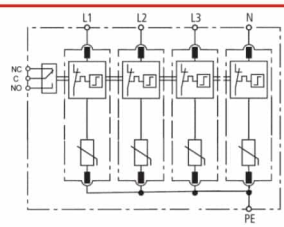
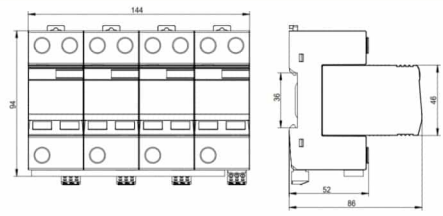
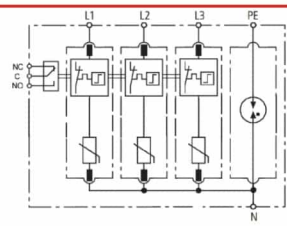
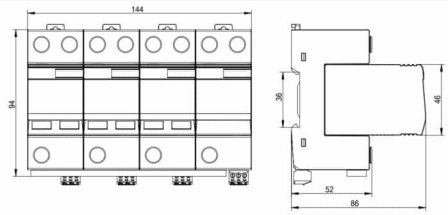
SPD for AC power supply system

Class I + Class II / Type 1 + Type 2

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	limp	Imax	In	Up	Isccr	
BP25V/180(-S)/3PN100	4	3+1	L-N:180Vac N-PE:150Vac	L-N:25kA N-PE:100kA	L-N:100kA N-PE:150kA	L-N:25kA N-PE:100kA	L-N: 1.0kV N-PE:1.5kV	50kA	5
BP25V/275(-S)/3PN100	4	3+1	L-N:275Vac N-PE:255Vac	L-N:25kA N-PE:100kA	L-N:100kA N-PE:150kA	L-N:25kA N-PE:100kA	L-N: 1.2kV N-PE:1.5kV	50kA	5
BP25V/320(-S)/3PN100	4	3+1	L-N:320Vac N-PE:255Vac	L-N:25kA N-PE:100kA	L-N:100kA N-PE:150kA	L-N:25kA N-PE:100kA	L-N: 1.4kV N-PE:1.5kV	50kA	5
BP25V/350(-S)/3PN100	4	3+1	L-N:350Vac N-PE:255Vac	L-N:25kA N-PE:100kA	L-N:100kA N-PE:150kA	L-N:25kA N-PE:100kA	L-N: 1.5kV N-PE:1.5kV	50kA	5
BP25V/385(-S)/3PN100	4	3+1	L-N:385Vac N-PE:255Vac	L-N:25kA N-PE:100kA	L-N:100kA N-PE:150kA	L-N:25kA N-PE:100kA	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 		

ProSurge®
Maximum Safety in Surge Protection

SPD for AC Power Supply System

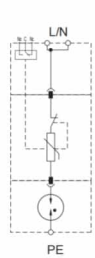
Class I + Class II / Type 1 + Type 2

- **TUV certified T1+ T2 SPD per IEC/EN 61643-11 standard**
- **Unique thermal disconnector design provides quick thermal response and secure disconnection**
- **Dual module redundancy for one pole and dual failure indication window**
- **Lightning current capacity up to 25 kA10/350μs, surge current capability up to 100kA 8/20μs**
- **High short-circuit current rating up to 50kArms, suitable for most industry and commerce application**
- **Long service life because of no leakage current and follow current**
- **Better reliability and robustness, Higher TOV (Temporary Over-Voltage) withstanding performance**
- **Anti-vibration module locking system with release button**
- **Pluggable module for easy replacement without the need to remove system wiring**

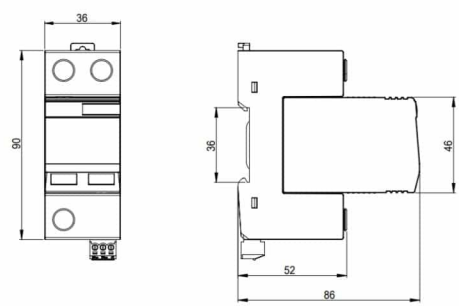
Prosurge's BP25VT series are class I and class II pluggable SPDs, designed for low-voltage power supply system lightning current & surge protection, especially for locations of high risk exposure or LPZ 0A-1 building entrances (IEC 62305-4) to against the damage from direct or close lightning strikes.
With built in PROSURGE VT technology, BP25VT features No leakage current and No follow current. It can be applied in most electrical installation to provide better reliability and safety protection, and particularly suitable for system with permanent insulation monitoring. Another prominent feature of BP25VT is higher TOV (temporary over-voltage) resistibility, which makes it can withstand high mains voltage fluctuation, expanded the scope of its application.
BP25VT is designed as dual module redundancy, two individual MOV protection modules in parallel in one pole SPD with two indication windows, so that the SPD could keep on working in spite of one protection module fails or one indication windows turns to red. That will help to realize the uninterrupted surge protection, since user can replace the failure models according to the timing and the condition.

Part No.	BP25VT/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/EU/VDE	I+ II /1+2/ B+C										
Nominal voltage (AC) Un	60V	120V	120V	230V	230V	277V	277V	400V	400V	480V	690V
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	100kA										
Lightning impulse current (10/350) Iimp	25kA	25kA	25kA	25kA	25kA	25kA	25kA	22kA	22kA	15kA	4kA
Voltage protection level Up	0.6kV	0.7kV	0.8kV	1.0kV	1.2kV	1.4kV	1.6kV	1.8kV	2.0kV	2.2kV	2.5kV
Temporary overvoltage TOV-120 min U_T withstand mode	115V	228V	242V	442V	442V	528V	528V	763V	763V	915V	1145V
Short-circuit current rating Isccr	50 kArms										
Leakage current Ipe	0 mA										
Backup fuse(only required if not already provided in mains)	⩽315A gL/gG										
Operating temperature range	-40℃ ~ +85℃										
Mounting	35mm DIN-rail										
Degree of protection	IP20										
Thermal disconnector	Internal green - normal ; red - failure										
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 circui



■ Dimension drawing (mm)



SPD for AC power supply system

Class I + Class II / Type 1 + Type 2

ProSurge®
Maximum Safety in Surge Protection

Prewired multi-pole SPDs

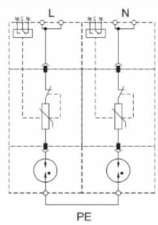
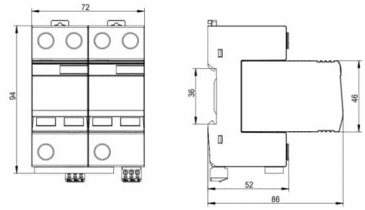
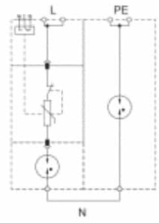
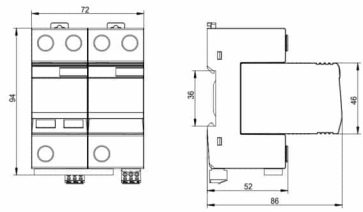
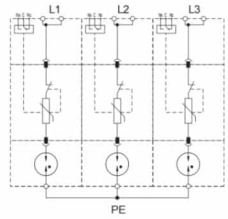
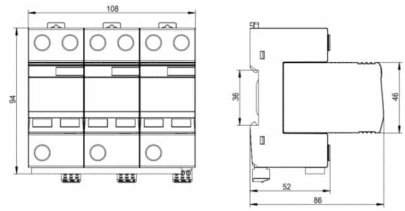
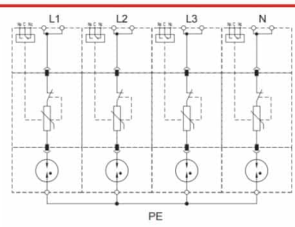
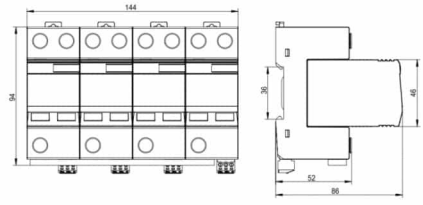
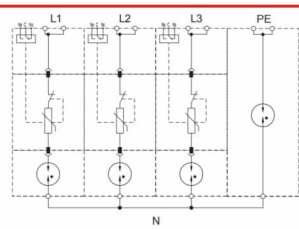
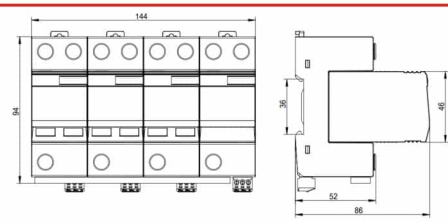
Part No.	Pole	Protection circuit	Max. operating Voltage	Lightning impulse current(10/350us)	Max.discharge current(8/20 us)	Nominal discharge current(8/20 us)	Voltage protection level	Short-circuit current rating	Diagram
			Uc	Iimp	Imax	In	Up	Isccr	
BP25VT/75(-S)/2P	2	2+0	75Vac	25kA	100kA	25kA	0.6kV	50kA	1
BP25VT/150(-S)/2P	2	2+0	150Vac	25kA	100kA	25kA	0.7kV	50kA	1
BP25VT/180(-S)/2P	2	2+0	180Vac	25kA	100kA	25kA	0.8kV	50kA	1
BP25VT/275(-S)/2P	2	2+0	275Vac	25kA	100kA	25kA	1.0kV	50kA	1
BP25VT/320(-S)/2P	2	2+0	320Vac	25kA	100kA	25kA	1.2kV	50kA	1
BP25VT/350(-S)/2P	2	2+0	350Vac	25kA	100kA	25kA	1.4kV	50kA	1
BP25VT/385(-S)/2P	2	2+0	385Vac	25kA	100kA	25kA	1.6kV	50kA	1
BP25VT/440(-S)/2P	2	2+0	440Vac	22kA	100kA	25kA	1.8kV	50kA	1
BP25VT/480(-S)/2P	2	2+0	480Vac	22kA	100kA	25kA	2.0kV	50kA	1
BP25VT/600(-S)/2P	2	2+0	600Vac	15kA	100kA	25kA	2.2kV	50kA	1
BP25VT/750(-S)/2P	2	2+0	750Vac	4kA	100kA	25kA	2.5kV	50kA	1
BP25VT/150(-S)/PN50	2	1+1	L-N:150Vac N-PE:150Vac	L-N:25kA N-PE:50kA	L-N:100kA N-PE:100kA	L-N:25kA N-PE:50kA	L-N: 0.7kV N-PE:1.5kV	50kA	2
BP25VT/180(-S)/PN50	2	1+1	L-N:180Vac N-PE:150Vac	L-N:25kA N-PE:50kA	L-N:100kA N-PE:100kA	L-N:25kA N-PE:50kA	L-N: 0.8kV N-PE:1.5kV	50kA	2
BP25VT/275(-S)/PN50	2	1+1	L-N:275Vac N-PE:255Vac	L-N:25kA N-PE:50kA	L-N:100kA N-PE:100kA	L-N:25kA N-PE:50kA	L-N: 1.0kV N-PE:1.5kV	50kA	2
BP25VT/320(-S)/PN50	2	1+1	L-N:320Vac N-PE:255Vac	L-N:25kA N-PE:50kA	L-N:100kA N-PE:100kA	L-N:25kA N-PE:50kA	L-N: 1.2kV N-PE:1.5kV	50kA	2
BP25VT/350(-S)/PN50	2	1+1	L-N:350Vac N-PE:255Vac	L-N:25kA N-PE:50kA	L-N:100kA N-PE:100kA	L-N:25kA N-PE:50kA	L-N: 1.4kV N-PE:1.5kV	50kA	2
BP25VT/385(-S)/PN50	2	1+1	L-N:385Vac N-PE:255Vac	L-N:25kA N-PE:50kA	L-N:100kA N-PE:100kA	L-N:25kA N-PE:50kA	L-N: 1.6kV N-PE:1.5kV	50kA	2
BP25VT/75(-S)/3P	3	3+0	75Vac	25kA	100kA	25kA	0.6kV	50kA	3
BP25VT/150(-S)/3P	3	3+0	150Vac	25kA	100kA	25kA	0.7kV	50kA	3
BP25VT/180(-S)/3P	3	3+0	180Vac	25kA	100kA	25kA	0.8kV	50kA	3
BP25VT/275(-S)/3P	3	3+0	275Vac	25kA	100kA	25kA	1.0kV	50kA	3
BP25VT/320(-S)/3P	3	3+0	320Vac	25kA	100kA	25kA	1.2kV	50kA	3
BP25VT/350(-S)/3P	3	3+0	350Vac	25kA	100kA	25kA	1.4kV	50kA	3
BP25VT/385(-S)/3P	3	3+0	385Vac	25kA	100kA	25kA	1.6kV	50kA	3
BP25VT/440(-S)/3P	3	3+0	440Vac	22kA	100kA	25kA	1.8kV	50kA	3
BP25VT/480(-S)/3P	3	3+0	480Vac	22kA	100kA	25kA	2.0kV	50kA	3
BP25VT/600(-S)/3P	3	3+0	600Vac	15kA	100kA	25kA	2.2kV	50kA	3
BP25VT/750(-S)/3P	3	3+0	750Vac	4kA	100kA	25kA	2.5kV	50kA	3
BP25VT/75(-S)/4P	4	4+0	75Vac	25kA	100kA	25kA	0.6kV	50kA	4
BP25VT/150(-S)/4P	4	4+0	150Vac	25kA	100kA	25kA	0.7kV	50kA	4
BP25VT/180(-S)/4P	4	4+0	180Vac	25kA	100kA	25kA	0.8kV	50kA	4
BP25VT/275(-S)/4P	4	4+0	275Vac	25kA	100kA	25kA	1.0kV	50kA	4
BP25VT/320(-S)/4P	4	4+0	320Vac	25kA	100kA	25kA	1.2kV	50kA	4
BP25VT/350(-S)/4P	4	4+0	350Vac	25kA	100kA	25kA	1.4kV	50kA	4
BP25VT/385(-S)/4P	4	4+0	385Vac	25kA	100kA	25kA	1.6kV	50kA	4
BP25VT/440(-S)/4P	4	4+0	440Vac	22kA	100kA	25kA	1.8kV	50kA	4
BP25VT/480(-S)/4P	4	4+0	480Vac	22kA	100kA	25kA	2.0kV	50kA	4
BP25VT/600(-S)/4P	4	4+0	600Vac	15kA	100kA	25kA	2.2kV	50kA	4
BP25VT/750(-S)/4P	4	4+0	750Vac	4kA	100kA	25kA	2.5kV	50kA	4
BP25VT/150(-S)/3PN100	4	3+1	L-N:150Vac N-PE:150Vac	L-N:25kA N-PE:100kA	L-N:100kA N-PE:150kA	L-N:25kA N-PE:100kA	L-N: 0.7kV N-PE:1.5kV	50kA	5

SPD for AC power supply system

Class I + Class II / Type 1 + Type 2

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	Isccr	
BP25VT/180(-S)/3PN100	4	3+1	L-N:180Vac N-PE:150Vac	L-N:25kA N-PE:100kA	L-N:100kA N-PE:150kA	L-N:25kA N-PE:100kA	L-N: 0.8kV N-PE:1.5kV	50kA	5
BP25VT/275(-S)/3PN100	4	3+1	L-N:275Vac N-PE:255Vac	L-N:25kA N-PE:100kA	L-N:100kA N-PE:150kA	L-N:25kA N-PE:100kA	L-N: 1.0kV N-PE:1.5kV	50kA	5
BP25VT/320(-S)/3PN100	4	3+1	L-N:320Vac N-PE:255Vac	L-N:25kA N-PE:100kA	L-N:100kA N-PE:150kA	L-N:25kA N-PE:100kA	L-N: 1.2kV N-PE:1.5kV	50kA	5
BP25VT/350(-S)/3PN100	4	3+1	L-N:350Vac N-PE:255Vac	L-N:25kA N-PE:100kA	L-N:100kA N-PE:150kA	L-N:25kA N-PE:100kA	L-N: 1.4kV N-PE:1.5kV	50kA	5
BP25VT/385(-S)/3PN100	4	3+1	L-N:385Vac N-PE:255Vac	L-N:25kA N-PE:100kA	L-N:100kA N-PE:150kA	L-N:25kA N-PE:100kA	L-N: 1.6kV 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		

SPD for AC power supply system

Class I + Class II / Type 1 + Type 2

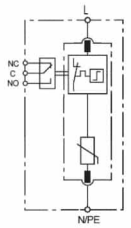
ProSurge®
Maximum Safety in Surge Protection

- **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 disconnector design provides quick thermal response and secure disconnection**
- **High lightning current discharge capacity 12.5kA 10/350μs, surge current capability up to 80kA 8/20μs**
- **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**

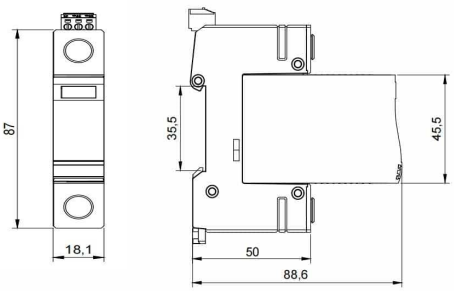
Prosurge's BPS12.5V series are class I and class II pluggable MOV based SPDs, designed for low-voltage power supply system lightning current & surge protection, especially for locations of high risk exposure or LPZ 0B-1 building entrances (IEC 62305-4) to against the damage from direct or close lightning 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 (10/350μs) 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/EU/VDE	I+ II /1+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 U_T withstand mode	90	174V	228V	335V	335V	403V	403V	580V	580V	700V	870V
Short-circuit current rating Isccr	50kArms										
Leakage current Ipe	0.1 mA										
Backup fuse(only required if not already provided in mains)	≤250A gL/gG										
Operating temperature range	-40℃ ~ +85℃										
Mounting	35mm DIN-rail										
Degree of protection	IP20										
Thermal disconnector	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)



ProSurge®
Maximum Safety in Surge Protection

SPD for AC power supply system

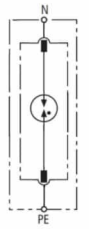
Class I + Class II / Type 1 + Type 2

- **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 lighting discharge capacity up to limp 50kA 10/350μs**
- **High surge discharge capacity up to Imax 100kA 8/20μs**
- **35mm DIN-rail mounting**
- **Wide operating temperature -40°C ~85°C**

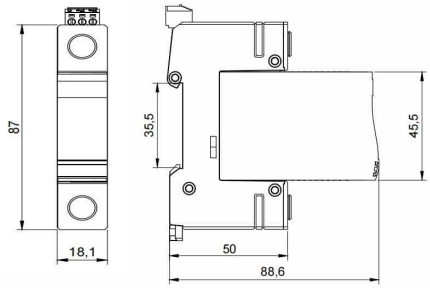
Prosurge's GP25(50) NPE series are class I and class II pluggable gas discharge tube (GDT) based SPDs, designed for low-voltage power supply system lightning current & surge protection, especially for separation and protection between the N and PE conductors .
GP25(50) NPE features a compact housing design (18 mm narrow) with discharge capacity up to 25/50kA (10/350μs) and surge discharge capacity up 100kA (8/20μs), 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/EU/VDE	I+ II /1+2/ B+C			
Max. continuous operating voltage(AC) Uc	150V	255V	150V	255V
Nominal discharge current(8/20) In	25kA		50kA	
Max. discharge current(8/20) Imax	50kA		100kA	
Lightning impulse current (10/350) Iimp	25kA		50kA	
Voltage protection level Up	1.5kV	1.5kV	1.5kV	1.5kV
Temporary overvoltage TOV-200ms U_T withstand mode	1200V	1200V	1200V	1200V
Follow current & interrupt rating Ifi Isccr	100Arms			
Operating temperature range	-40℃ ~ +85℃			
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

ProSurge®
Maximum Safety in Surge Protection

Prewired multi-pole SPDs

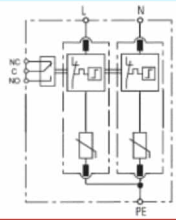
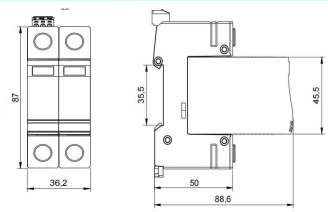
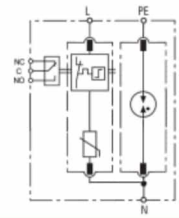
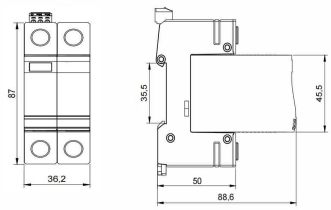
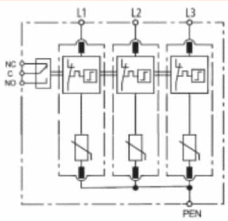
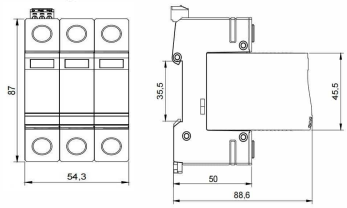
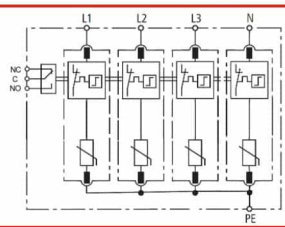
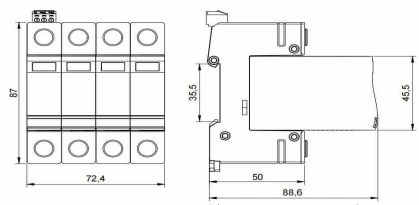
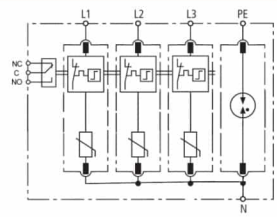
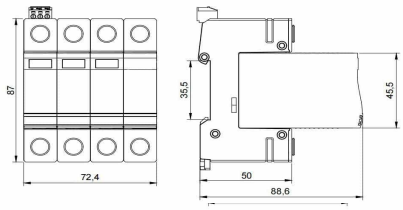
Part No.	Pole	Protection circuit	Max. operating Voltage	Lightning impulse current(10/350us)	Max.discharge current(8/20 us)	Nominal discharge current(8/20 us)	Voltage protection level	Short-circuit current rating	Diagram
			Uc	Iimp	Imax	In	Up	Isccr	
BPS12.5V/75(-S)/2P	2	2+0	75Vac	12.5kA	80kA	25kA	0.6kV	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/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/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

SPD for AC power supply system

Class I + Class II / Type 1 + Type 2

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	Isccr	
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/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		

SPD for AC power supply system

Class I + Class II / Type 1 + Type 2

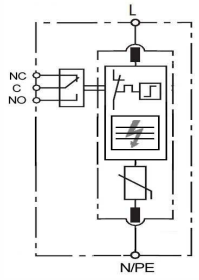
ProSurge®
Maximum Safety in Surge Protection

- **TUV certified T1+ T2 SPD per IEC/EN 61643-11 standard.**
- **Unique thermal disconnector design provides quick thermal response and secure disconnection**
- **Prewired 1~4 poles SPD application for various power grids.**
- **Pluggable module for easy replacement without the need to remove system wiring.**
- **High lightning current discharge capacity 7.5kA and 12.5kA (NPE mode) 10/350 μs**
- **High surge current discharge capacity up to Imax 50kA 8/20 μs**
- **Short circuit withstand capability 25kArms**
- **Degradation failure indication and optional remote signal contact.**
- **Wide operating temperature -40°C ~85°C**

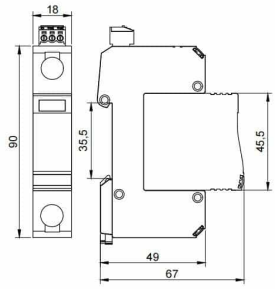
Prosurge's V50/DS50/DT50 series are class I and class II pluggable MOV and GDT based SPDs, designed for low-voltage power supply system protection against the damage from transient surge and spikes caused by lightning and other electrical source.
V50/DS50/DT50 features a compact housing design (18 mm narrow) with a high energy MOV employed, which the lightning current discharge capacity can be up to 7.5kA (10/350μs) and 12.5kA (NPE mode) and short circuit current rating as 25kArms, this is an ideal solution for the sub distribution board of low-voltage power supply system surge protection.
V50/DS50/DT50 are prewired 1~4 poles SPD, users can select from either type depending on requirements.

Part No.	V50/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/EU/VDE	I+ II /1+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	20kA										
Max. discharge current(8/20) Imax	50kA	50kA	50kA	50kA	50kA	50kA	50kA	50kA	50kA	50kA	50kA
Lightning impulse current (10/350) Iimp	7.5kA	7.5kA	7.5kA	7.5kA	7.5kA	7.5kA	7.5kA	6.0kA	4.5kA	4.5kA	3.5kA
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 U_T withstand mode	90V	174V	228V	335V	335V	403V	403V	580V	580V	700V	870V
Short-circuit current rating Isccr	25kArms										
Leakage current Ipe	0.1 mA										
Backup fuse(only required if not already provided in mains)	⩽125A gL/gG										
Operating temperature range	-40℃ ~ +85℃										
Mounting	35mm DIN-rail										
Degree of protection	IP20										
Thermal disconnector	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)



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	Isccr	
DS50/75-2V(-S)	2	2+0	75Vac	7.5kA	50kA	20kA	0.6kV	25kA	1
DS50/150-2V(-S)	2	2+0	150Vac	7.5kA	50kA	20kA	0.8kV	25kA	1
DS50/180-2V(-S)	2	2+0	180Vac	7.5kA	50kA	20kA	1.0kV	25kA	1
DS50/275-2V(-S)	2	2+0	275Vac	7.5kA	50kA	20kA	1.2kV	25kA	1
DS50/320-2V(-S)	2	2+0	320Vac	7.5kA	50kA	20kA	1.4kV	25kA	1
DS50/350-2V(-S)	2	2+0	350Vac	7.5kA	50kA	20kA	1.5kV	25kA	1
DS50/385-2V(-S)	2	2+0	385Vac	7.5kA	50kA	20kA	1.8kV	25kA	1
DS50/440-2V(-S)	2	2+0	440Vac	6.0kA	50kA	20kA	2.0kV	25kA	1
DS50/480-2V(-S)	2	2+0	480Vac	4.5kA	50kA	20kA	2.2kV	25kA	1
DS50/600-2V(-S)	2	2+0	600Vac	4.5kA	50kA	20kA	2.5kV	25kA	1
DS50/750-2V(-S)	2	2+0	750Vac	3.5kA	50kA	20kA	2.8kV	25kA	1
DS50/150-(V+T)(-S)	2	1+1	L-N:150Vac N-PE:150Vac	L-N:7.5kA N-PE:12.5kA	L-N:50kA N-PE:50kA	L-N:20kA N-PE:20kA	L-N: 0.8kV N-PE:1.5kV	25kA	2
DS50/180-(V+T)(-S)	2	1+1	L-N:180Vac N-PE:150Vac	L-N:7.5kA N-PE:12.5kA	L-N:50kA N-PE:50kA	L-N:20kA N-PE:20kA	L-N: 1.0kV N-PE:1.5kV	25kA	2
DS50/275-(V+T)(-S)	2	1+1	L-N:275Vac N-PE:255Vac	L-N:7.5kA N-PE:12.5kA	L-N:50kA N-PE:50kA	L-N:20kA N-PE:20kA	L-N: 1.2kV N-PE:1.5kV	25kA	2
DS50/320-(V+T)(-S)	2	1+1	L-N:320Vac N-PE:255Vac	L-N:7.5kA N-PE:12.5kA	L-N:50kA N-PE:50kA	L-N:20kA N-PE:20kA	L-N: 1.4kV N-PE:1.5kV	25kA	2
DS50/350-(V+T)(-S)	2	1+1	L-N:350Vac N-PE:255Vac	L-N:7.5kA N-PE:12.5kA	L-N:50kA N-PE:50kA	L-N:20kA N-PE:20kA	L-N: 1.5kV N-PE:1.5kV	25kA	2
DS50/385-(V+T)(-S)	2	1+1	L-N:385Vac N-PE:255Vac	L-N:7.5kA N-PE:12.5kA	L-N:50kA N-PE:50kA	L-N:20kA N-PE:20kA	L-N: 1.8kV N-PE:1.5kV	25kA	2
DT50/75-3V(-S)	3	3+0	75Vac	7.5kA	50kA	20kA	0.6kV	25kA	3
DT50/150-3V(-S)	3	3+0	150Vac	7.5kA	50kA	20kA	0.8kV	25kA	3
DT50/180-3V(-S)	3	3+0	180Vac	7.5kA	50kA	20kA	1.0kV	25kA	3
DT50/275-3V(-S)	3	3+0	275Vac	7.5kA	50kA	20kA	1.2kV	25kA	3
DT50/320-3V(-S)	3	3+0	320Vac	7.5kA	50kA	20kA	1.4kV	25kA	3
DT50/350-3V(-S)	3	3+0	350Vac	7.5kA	50kA	20kA	1.5kV	25kA	3
DT50/385-3V(-S)	3	3+0	385Vac	7.5kA	50kA	20kA	1.8kV	25kA	3
DT50/440-3V(-S)	3	3+0	440Vac	6.0kA	50kA	20kA	2.0kV	25kA	3
DT50/480-3V(-S)	3	3+0	480Vac	4.5kA	50kA	20kA	2.2kV	25kA	3
DT50/600-3V(-S)	3	3+0	600Vac	4.5kA	50kA	20kA	2.5kV	25kA	3
DT50/750-3V(-S)	3	3+0	750Vac	3.5kA	50kA	20kA	2.8kV	25kA	3
DT50/75-4V(-S)	4	4+0	75Vac	7.5kA	50kA	20kA	0.6kV	25kA	4
DT50/150-4V(-S)	4	4+0	150Vac	7.5kA	50kA	20kA	0.8kV	25kA	4
DT50/180-4V(-S)	4	4+0	180Vac	7.5kA	50kA	20kA	1.0kV	25kA	4
DT50/275-4V(-S)	4	4+0	275Vac	7.5kA	50kA	20kA	1.2kV	25kA	4
DT50/320-4V(-S)	4	4+0	320Vac	7.5kA	50kA	20kA	1.4kV	25kA	4
DT50/350-4V(-S)	4	4+0	350Vac	7.5kA	50kA	20kA	1.5kV	25kA	4
DT50/385-4V(-S)	4	4+0	385Vac	7.5kA	50kA	20kA	1.8kV	25kA	4
DT50/440-4V(-S)	4	4+0	440Vac	6.0kA	50kA	20kA	2.0kV	25kA	4
DT50/480-4V(-S)	4	4+0	480Vac	4.5kA	50kA	20kA	2.2kV	25kA	4
DT50/600-4V(-S)	4	4+0	600Vac	4.5kA	50kA	20kA	2.5kV	25kA	4
DT50/750-4V(-S)	4	4+0	750Vac	3.5kA	50kA	20kA	2.8kV	25kA	4
DT50/150-(3V+T)(-S)	4	3+1	L-N:150Vac N-PE:150Vac	L-N:7.5kA N-PE:12.5kA	L-N:50kA N-PE:50kA	L-N:20kA N-PE:20kA	L-N: 0.8kV N-PE:1.5kV	25kA	5

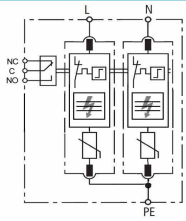
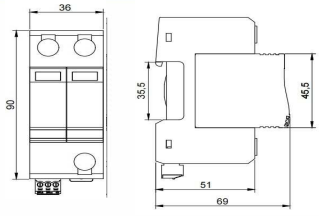
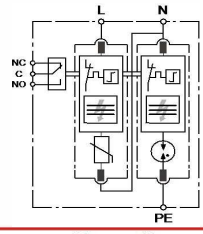
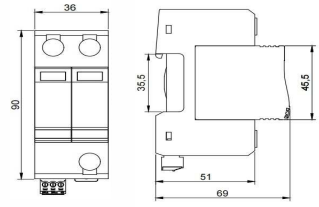
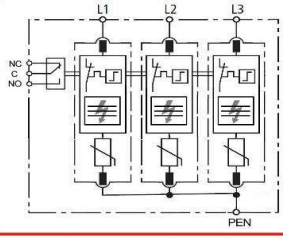
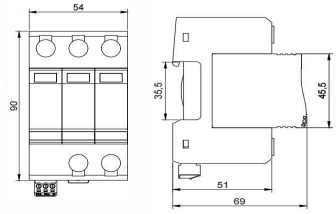
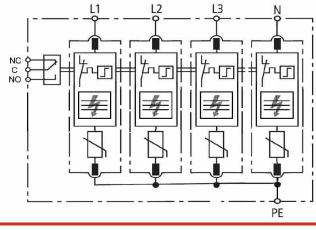
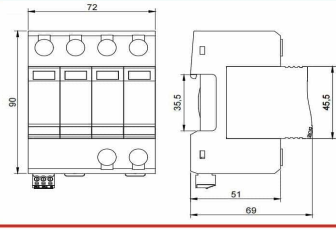
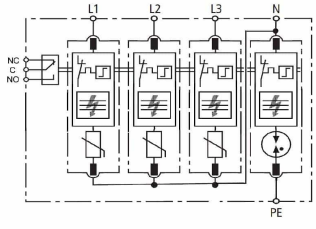
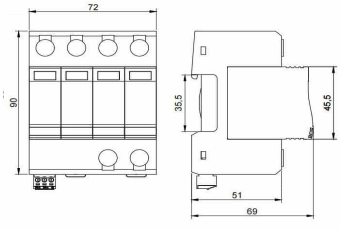
SPD for AC power supply system

Class I + Class II / Type 1 + Type 2

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	Imax	In	Up	Isccr	
DT50/180-(3V+T)(-S)	4	3+1	L-N:180Vac N-PE:150Vac	L-N:7.5kA N-PE:12.5kA	L-N:50kA N-PE:50kA	L-N:20kA N-PE:20kA	L-N: 1.0kV N-PE:1.5kV	25kA	5
DT50/275-(3V+T)(-S)	4	3+1	L-N:275Vac N-PE:255Vac	L-N:7.5kA N-PE:12.5kA	L-N:50kA N-PE:50kA	L-N:20kA N-PE:20kA	L-N: 1.2kV N-PE:1.5kV	25kA	5
DT50/320-(3V+T)(-S)	4	3+1	L-N:320Vac N-PE:255Vac	L-N:7.5kA N-PE:12.5kA	L-N:50kA N-PE:50kA	L-N:20kA N-PE:20kA	L-N: 1.4kV N-PE:1.5kV	25kA	5
DT50/350-(3V+T)(-S)	4	3+1	L-N:350Vac N-PE:255Vac	L-N:7.5kA N-PE:12.5kA	L-N:50kA N-PE:50kA	L-N:20kA N-PE:20kA	L-N: 1.5kV N-PE:1.5kV	25kA	5
DT50/385-(3V+T)(-S)	4	3+1	L-N:385Vac N-PE:255Vac	L-N:7.5kA N-PE:12.5kA	L-N:50kA N-PE:50kA	L-N:20kA N-PE:20kA	L-N: 1.8kV N-PE:1.5kV	25kA	5

Diagram	Basic circuit diagram	Dimension drawing
1)2+0 		
2)1+1 		
3)3+0 		
4)4+0 		
5)3+1 		

ProSurge®
Maximum Safety in Surge Protection

SPD for AC power supply system

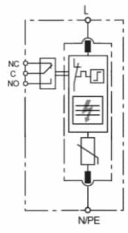
Class II / Type 2

- **KEMA certified Class II / T2 SPD per IEC/EN 61643-11, UL recognized Type 1CA SPD**
- **Global patented thermal disconnector design with arc extinguishing device, fail-safe & self-protected, quick thermal response and perfect circuit cutoff function**
- **High surge current discharge capacity up to 40kA 8/20 μs**
- **Pluggable module for easy replacement without the need to remove system wiring.**
- **Degradation failure indication and optional remote signal contact.**
- **35 mm DIN-rail mounting**
- **Wide operating temperature -40°C ~85°C**

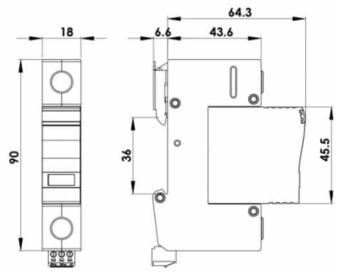
Prosurge SP series are class II pluggable SPD, designed for low-voltage power supply system protection against the damage from surges and spikes caused by lightning and other electrical sources.
It is a DIN-rail SPD featuring Prosurge's global patented fail-safe & self-protected technology, offering quick thermal response and perfect circuit cutoff function and providing fast and reliable protection for various power supply systems.
Built with window fault indication and optional remote alarm contact, it can monitor the operating status of the SPD itself.

Part No.	SP150(-S)	SP275(-S)	SP/320(-S)	SP/385(-S)
In accordance with	IEC/EN 61643-11:2011; UL1449 5th			
Category IEC/EU/VDE	I+ II /1+2/ B+C			
Nominal Voltage (AC) Un	120V	230V	230V	230V
Max. continuous operating voltage(AC) Uc	150V	275V	320V	385V
Nominal discharge current(8/20) In	20kA			
Max. discharge current(8/20) Imax	40kA	40kA	40kA	40kA
Voltage protection level Up	0.8kV	1.4kV	1.5kV	1.8kV
Temporary overvoltage TOV–5 sec U_T withstand mode	174V	335V	335V	403V
Short-circuit current rating Isccr	10 kArms			
Leakage current Ipe	0.1 mA			
Backup fuse(only required if not already provided in mains)	⩽125A gL/gG			
Operating temperature range	-40℃ ~ +85℃			
Mounting	35mm DIN-rail			
Degree of protection	IP20			
Thermal disconnector	Internal green–normal ; red–failure			
Approvals, Certifications	KEMA, UL,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)



SPD for AC power supply system

Class II / Type 2

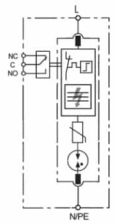
ProSurge®
Maximum Safety in Surge Protection

- **KEMA certified Class II / T2 SPD per IEC/EN 61643-11**
- **Global patented thermal disconnector design with arc extinguishing device, fail-safe & self-protected, quick thermal response and perfect circuit cutoff function**
- **High surge current discharge capacity up to 40kA 8/20 μs**
- **Long service life because of no leakage current and follow current**
- **Better reliability and robustness, Higher TOV (Temporary Over-Voltage) withstanding performance**
- **Pluggable module for easy replacement without the need to remove system wiring.**
- **Degradation failure indication and optional remote signal contact.**
- **Wide operating temperature -40°C ~85°C**

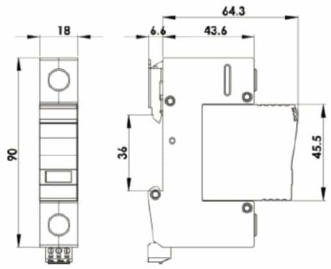
Prosurge SP VT series are class II pluggable SPD, designed for low-voltage power supply system protection against the damage from surges and spikes caused by lightning and other electrical sources.
It is a DIN-rail SPD featuring Prosurge's global patented fail-safe & self-protected technology, offering quick thermal response and perfect circuit cutoff function and providing fast and reliable protection for various power supply systems.
With built in PROSURGE VT technology, it features No leakage current and No follow current. It can be applied in most electrical installation and provide better reliability and safety protection, and particularly suitable for system with permanent insulation monitoring. Another prominent feature of SP VT is higher TOV (temporary over-voltage) resistibility, which makes it can withstand high mains voltage fluctuation, expanded the scope of its application.
Built with window fault indication and optional remote alarm contact, it can monitor the operating status of the SPD itself.

Part No.	SP275VT(-S)	SP320VT(-S)
In accordance with	IEC/EN 61643-11:2011; UL1449 5th	
Category IEC/EU/VDE	I+ II /1+2/ B+C	
Nominal Voltage (AC) Un	230V	230V
Max. continuous operating voltage(AC) Uc	275V	320V
Nominal discharge current(8/20) In	20kA	
Max. discharge current(8/20) Imax	40kA	40kA
Voltage protection level Up	1.4kV	1.5kV
Temporary overvoltage TOV-120 min U_T Withstand mode	442V	442V
Short-circuit current rating Isccr	10 kArms	
Leakage current Ipe	0 mA	
Backup fuse(only required if not already provided in mains)	⩽125A gL/gG	
Operating temperature range	-40℃ ~ +85℃	
Mounting	35mm DIN-rail	
Degree of protection	IP20	
Thermal disconnector	Internal Green – normal ; red - failure	
Approvals, Certifications	KEMA,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)



ProSurge®
Maximum Safety in Surge Protection

SPD for AC power supply system

Class II / Type 2

Prewired multi-pole SPDs

Part No.	Pole	Protection circuit	Max. operating Voltage	Max.discharge current(8/20 us)	Nominal discharge current(8/20 us)	Voltage protection level	Short-circuit current rating	Diagram
			Uc	Imax	In	Up	Isccr	
SP150/2P(-S)	2	2+0	150Vac	40kA	20kA	0.8kV	10kA	1a
SP275/2P(-S)	2	2+0	275Vac	40kA	20kA	1.4kV	10kA	1a
SP320/2P(-S)	2	2+0	320Vac	40kA	20kA	1.5kV	10kA	1a
SP385/2P(-S)	2	2+0	385Vac	40kA	20kA	1.8kV	10kA	1a
SP275VT/2P(-S)	2	2+0	275Vac	40kA	20kA	1.4kV	10kA	1b
SP320VT/2P(-S)	2	2+0	320Vac	40kA	20kA	1.5kV	10kA	1b
SP150/PN(-S)	2	1+1	L-N:150Vac N-PE:255Vac	40kA	20kA	L-N: 0.8kV N-PE:1.5kV	10kA	2a
SP275/PN(-S)	2	1+1	L-N:275Vac N-PE:255Vac	40kA	20kA	L-N: 1.4kV N-PE:1.5kV	10kA	2a
SP320/PN(-S)	2	1+1	L-N:320Vac N-PE:255Vac	40kA	20kA	L-N: 1.5kV N-PE:1.5kV	10kA	2a
SP385/PN(-S)	2	1+1	L-N:385Vac N-PE:255Vac	40kA	20kA	L-N: 1.8kV N-PE:1.5kV	10kA	2a
SP275VT/PN(-S)	2	1+1	L-N:275Vac N-PE:255Vac	40kA	20kA	L-N: 1.4kV N-PE:1.5kV	10kA	2b
SP320VT/PN(-S)	2	1+1	L-N:320Vac N-PE:255Vac	40kA	20kA	L-N: 1.5kV N-PE:1.5kV	10kA	2b
SP150/3P(-S)	3	3+0	150Vac	40kA	20kA	0.8kV	10kA	3a
SP275/3P(-S)	3	3+0	275Vac	40kA	20kA	1.4kV	10kA	3a
SP320/3P(-S)	3	3+0	320Vac	40kA	20kA	1.5kV	10kA	3a
SP385/3P(-S)	3	3+0	385Vac	40kA	20kA	1.8kV	10kA	3a
SP275VT/3P(-S)	3	3+0	275Vac	40kA	20kA	1.4kV	10kA	3b
SP320VT/3P(-S)	3	3+0	320Vac	40kA	20kA	1.5kV	10kA	3b
SP150/4P(-S)	4	4+0	150Vac	40kA	20kA	0.8kV	10kA	4a
Sp275/4P(-S)	4	4+0	275Vac	40kA	20kA	1.4kV	10kA	4a
Sp320/4P(-S)	4	4+0	320Vac	40kA	20kA	1.5kV	10kA	4a
Sp385/4P(-S)	4	4+0	385Vac	40kA	20kA	1.8kV	10kA	4a
SP275VT/4P(-S)	4	4+0	275Vac	40kA	20kA	1.4kV	10kA	4b
SP320VT/4P(-S)	4	4+0	320Vac	40kA	20kA	1.5kV	10kA	4b
SP150/3PN(-S)	4	3+1	L-N:150Vac N-PE:255Vac	40kA	20kA	L-N: 0.8kV N-PE:1.5kV	10kA	5a
SP275/3PN(-S)	4	3+1	L-N:275Vac N-PE:255Vac	40kA	20kA	L-N: 1.4kV N-PE:1.5kV	10kA	5a
SP320/3PN(-S)	4	3+1	L-N:320Vac N-PE:255Vac	40kA	20kA	L-N: 1.5kV N-PE:1.5kV	10kA	5a
SP385/3PN(-S)	4	3+1	L-N:385Vac N-PE:255Vac	40kA	20kA	L-N: 1.8kV N-PE:1.5kV	10kA	5a
SP275VT/3PN(-S)	4	3+1	L-N:275Vac N-PE:255Vac	40kA	20kA	L-N: 1.4kV N-PE:1.5kV	10kA	5b
SP320VT/3PN(-S)	4	3+1	L-N:320Vac N-PE:255Vac	40kA	20kA	L-N: 1.5kV N-PE:1.5kV	10kA	5b

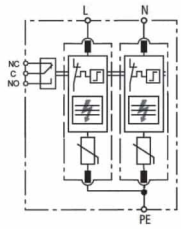
SPD for AC power supply system

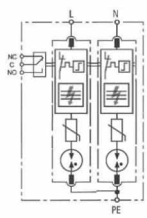
Class II / Type 2

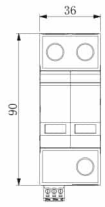
ProSurge®
Maximum Safety in Surge Protection

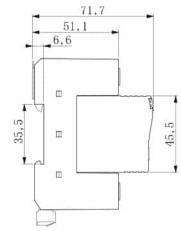
Diagram	Basic circuit diagram		Dimension drawing
	a.MOV & GDT technology	b.VT technology	

1)2+0









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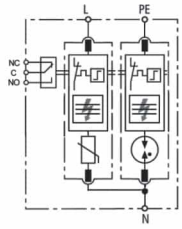

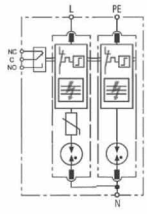

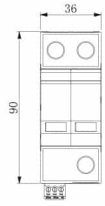

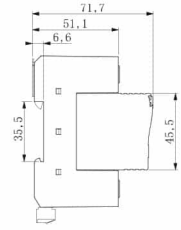

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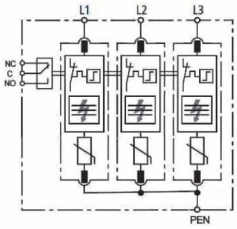

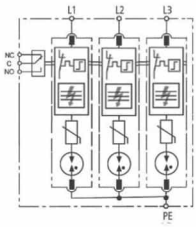

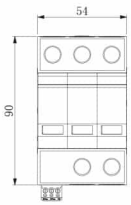

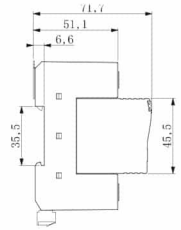

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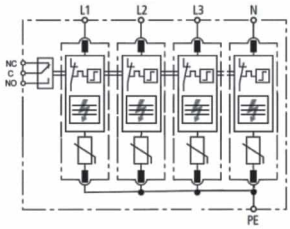
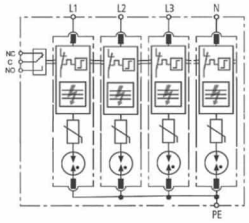
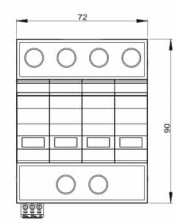
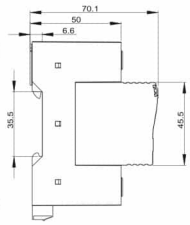
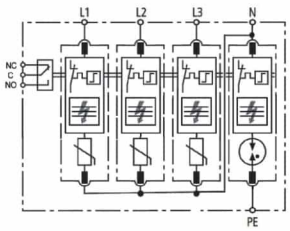


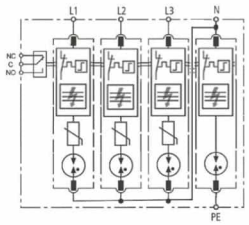


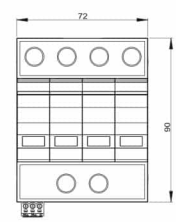


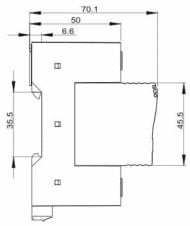


5)3+1









ProSurge®
Maximum Safety in Surge Protection

SPDs for DC / PV system

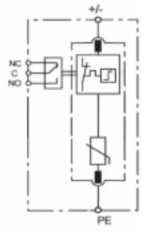
Class I + Class II / Type 1 + Type 2

- **TUV certified T1+ T2 PV DC SPD per IEC/EN 61643-31 standard.**
- **Application in Photovoltaic (PV) system and DC charging system for electric vehicles etc.**
- **18mm narrow model design, pluggable module for easy replacement without the need to remove system wiring**
- **Unique thermal disconnector design provides quick thermal response and secure disconnection**
- **High lightning current discharge capacity up to 12.5kA 10/350μs and surge current discharge capacity to 80kA 8/20μs**
- **Degradation failure indication and optional remote signal contact.**
- **35mm DIN-rail mounting**
- **Wide operating temperature -40°C ~85°C**

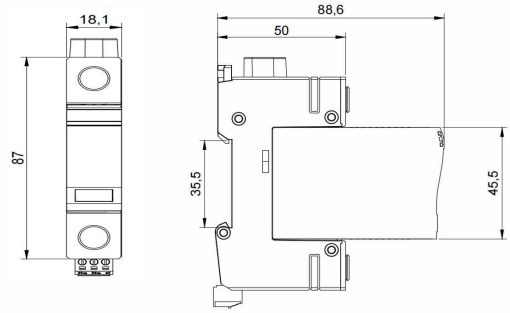
The PVB12.5 is class I & class II (or T1+T2) PV DC SPD designed for DC application such as PV (Photovoltaic) system, EV (electric vehicle) charging station dc-side protection, especially for location of high risk exposure or LPZ 0-2 (IEC 62305-4) to against the damage from direct or close lightning strikes.
In the photovoltaic power plant, the PV installation with external LPS when separation distance is not kept, the T1 PV SPD should be installed as close as possible to the inverter and the PV generator.
With built in PROSURGE high energy MOV, PVB12.5 ensures remarkable lightning current discharge capacity up to 12.5 kA 10/350μs and high reliability. The unique design of thermal protection provides quick thermal response and secure disconnection.

Part No.	PVB12.5/xxx-V(-S)									
	48	75	100	150	200	300	400	500	600	750
In accordance with	IEC/EN 61643-31; UL1449 5th; EN 50539-11									
Category IEC/EU/VDE	I+ II /1+2/ B+C									
Nominal voltage (DC) Un	48V	75V	100V	150V	200V	300V	400V	500V	600V	750V
Max. continuous operating voltage (DC) Ucpv	55V	100V	125V	170V	225V	350V	460V	560V	670V	800V
Nominal discharge current(8/20) In	25kA	25kA	25kA	25kA	25kA	25kA	25kA	25kA	25kA	25kA
Max. discharge current(8/20) Imax	80kA	80kA	80kA	80kA	80kA	80kA	80kA	80kA	80kA	65kA
Lightning impulse current (10/350) Iimp	12.5kA	12.5kA	12.5kA	12.5kA	12.5kA	12.5kA	12.5kA	12.5kA	12.5kA	8kA
Voltage protection level Up	0.6kV	0.7kV	0.7kV	0.8kV	1.0kV	1.4kV	1.6kV	1.8kV	2.2kV	2.5kV
Leakage current Ipe	<0.1mA									
Short-circuit current Iscpv	1000A									
Operating temperature range	-40℃ ~ +85℃									
Mounting	35mm DIN-rail									
Degree of protection	IP20									
Thermal disconnector	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)



SPDs for DC / PV system

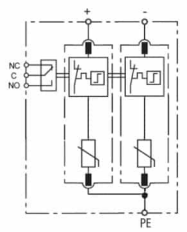
Class I + Class II / Type 1 + Type 2

ProSurge®
Maximum Safety in Surge Protection

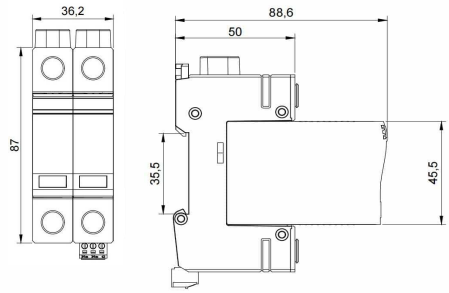
Prewired V configuration protection circuit

Part No.		PVB12.5/xxx-V-C (-S)								
		48	75	100	150	200	300	400	500	600
In accordance with		IEC/EN 61643-31; UL1449 5th; EN 50539-11								
Category IEC/EU/VDE		I+ II /1+2/ B+C								
Nominal coltage (DC) Un		48V	75V	100V	150V	200V	300V	400V	500V	600V
Max. continuous operating voltage (DC) Ucpv		55V	100V	125V	170V	225V	350V	460V	560V	670V
Nominal discharge current(8/20) In		25kA	25kA	25kA	25kA	25kA	25kA	25kA	25kA	25kA
Max. discharge current(8/20) Imax		80kA	80kA	80kA	80kA	80kA	80kA	80kA	80kA	80kA
Lightning impulse current (10/350) Iimp		12.5kA	12.5kA	12.5kA	12.5kA	12.5kA	12.5kA	12.5kA	12.5kA	12.5kA
Voltage protection level Up	DC+/- to PE	0.6 kV	0.7kV	0.7kV	0.8kV	1.0kV	1.4kV	1.6kV	1.8kV	2.2kV
	DC + to DC -	1.0kV	1.2kV	1.2kV	1.5kV	2.0kV	2.5kV	3.0kV	3.5kV	4.0kV
Leakage current Ipe		<0.1mA								
Short-circuit current Iscpv		1000A								
Approvals, certifications		TUV, CE								

■ Basic circuit diagram



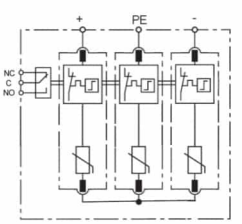
■ Dimension drawing (mm)



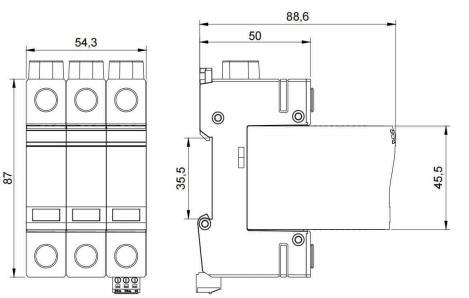
Prewired Y configuration protection circuit

Part No.		PVB12.5/xxx-V-CD (-S)								
		100	200	300	400	600	800	1000	1200	1500
In accordance with		IEC/EN 61643-31; UL1449 5th; EN 50539-11								
Category IEC/EU/VDE		I+ II /1+2/ B+C								
Nominal voltage (DC) un		100V	200V	300V	400V	600V	800V	1000V	1200V	1500V
Max. continuous operating voltage (DC) Ucpv		110V	250V	340V	450V	700V	920V	1120V	1340V	1500V
Nominal discharge current(8/20) In		25kA	25kA	25kA	25kA	25kA	25kA	25kA	25kA	25kA
Max. discharge current(8/20) Imax		80kA	80kA	80kA	80kA	80kA	80kA	80kA	80kA	65kA
Lightning impulse current (10/350) Iimp		12.5kA	12.5kA	12.5kA	12.5kA	12.5kA	12.5kA	12.5kA	12.5kA	8kA
Voltage protection level Up	DC+/- to PE	1.0kV	1.2kV	1.5kV	2.0kV	2.5kV	3.0kV	3.5kV	4.0kV	4.5kV
	DC + to DC -	1.0kV	1.2kV	1.5kV	2.0kV	2.5kV	3.0kV	3.5kV	4.0kV	4.5kV
Leakage current Ipe		<0.1mA								
Short-circuit current Iscpv		1000A								
Approvals, certifications		TUV, CE								

■ Basic circuit diagram



■ Dimension drawing (mm)



ProSurge®
Maximum Safety in Surge Protection

SPDs for DC / PV system

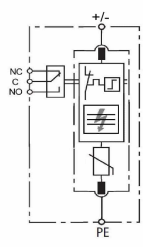
Class I + Class II / Type 1 + Type 2

- **TUV certified T1+ T2 PV DC SPD per IEC/EN 61643-31 standard.**
- **Application in Photovoltaic (PV) system and DC charging system for electric vehicles etc.**
- **18mm narrow model design, pluggable module for easy replacement without the need to remove system wiring**
- **Unique thermal disconnector design provides quick thermal response and secure disconnection**
- **High lightning current discharge capacity up to 7.5kA 10/350μs and surge current discharge capacity to 50kA 8/20μs**
- **Degradation failure indication and optional remote signal contact.**
- **35mm DIN-rail mounting**
- **Wide operating temperature -40°C ~85°C**

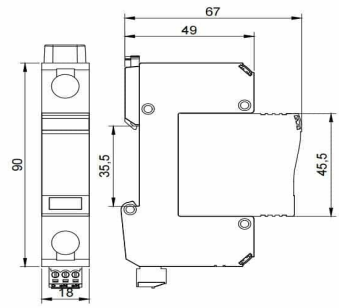
The PV50 is Class I + Class II (or T1+T2) PV DC SPD designed for DC application such as PV (Photovoltaic) system, EV (electric vehicle) charging station dc-side protection to against the damage from direct or close lightning strikes.
A high energy MOV employed ensures the surge current discharge capacity up to 50kA (8/20μs) and lightning current discharge capacity 7.5kA(10/350μS), makes it as an ideal solution for the sub distribution board of DC power supply system surge protection.
Built with window fault indication and optional remote alarm contact, it can monitor the operating status of the SPD itself.

Part No.	PV50/xxx-V(-S)									
	48	75	100	150	200	300	400	500	600	750
In accordance with	IEC/EN 61643-31; UL1449 5th; EN 50539-11									
Category IEC/EU/VDE	I+ II /1+2/ B+C									
Nominal voltage (DC) un	48V	75V	100V	150V	200V	300V	400V	500V	600V	750V
Max. continuous operating voltage (DC) Ucpv	55V	100V	125V	170V	225V	350V	460V	560V	670V	800V
Nominal discharge current(8/20) In	20kA	20kA	20kA	20kA	20kA	20kA	20kA	20kA	20kA	20kA
Max. discharge current(8/20) Imax	50kA	50kA	50kA	50kA	50kA	50kA	50kA	50kA	50kA	50kA
Lightning impulse current (10/350) Iimp	7.5kA	7.5kA	7.5kA	7.5kA	7.5kA	7.5kA	7.5kA	6kA	4.5kA	4.5kA
Voltage protection level Up	0.6 kV	0.6kV	0.7 kV	0.8kV	1.0 kV	1.2 kV	1.5 kV	2.0 kV	2.2kV	2.5kV
Leakage current Ipe	<0.1mA									
Short-circuit current Iscpv	1000A									
Operating temperature range	- 40℃ ~ + 85℃									
Mounting	35mm DIN-rail									
Degree of protection	IP20									
Thermal disconnector	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)



SPDs for DC / PV system

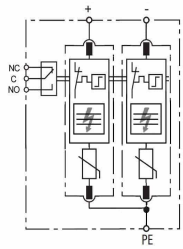
Class I + Class II / Type 1 + Type 2

ProSurge®
Maximum Safety in Surge Protection

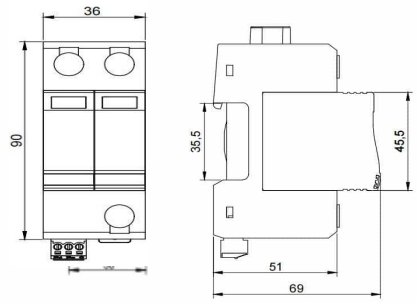
Prewired V configuration protection circuit

Part No.		PV50/xxx-V-C (-S)								
		48	75	100	150	200	300	400	500	600
In accordance with		IEC/EN 61643-31; UL1449 5th; EN 50539-11								
Category IEC/EU/VDE		I+ II /1+2/ B+C								
Nominal Voltage (DC) Un		48V	75V	100V	150V	200V	300V	400V	500V	600V
Max. continuous operating voltage (DC) Ucpv		55V	100V	125V	170V	225V	350V	460V	560V	670V
Nominal discharge current(8/20) In		20kA	20kA	20kA	20kA	20kA	20kA	20kA	20kA	20kA
Max. discharge current(8/20) Imax		50kA	50kA	50kA	50kA	50kA	50kA	50kA	50kA	50kA
Lightning impulse current (10/350) Iimp		7.5kA	7.5kA	7.5kA	7.5kA	7.5kA	7.5kA	7.5kA	6kA	4.5kA
Voltage protection level Up	DC+/- to PE	0.6kV	0.6kV	0.7kV	0.8kV	1.0kV	1.2kV	1.5kV	2.0kV	2.2kV
	DC + to DC -	1.0kV	1.0kV	1.2kV	1.5kV	2.0kV	2.2kV	2.8kV	3.5kV	4.0kV
Leakage Current Ipe		<0.1mA								
Short-circuit Current Iscpv		1000A								
Approvals, Certifications		TUV, CE								

■ Basic circuit diagram



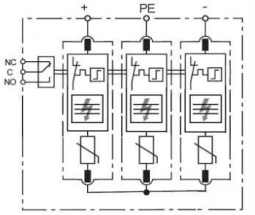
■ Dimension drawing (mm)



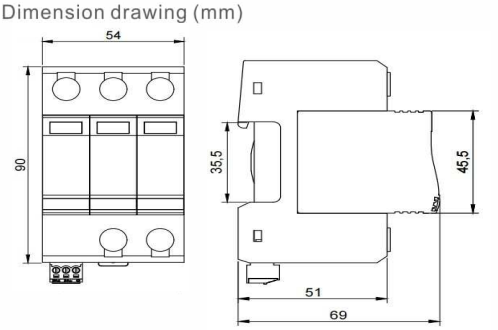
Prewired Y configuration protection circuit

Part No.		PV50/xxx-V-CD (-S)								
		100	200	300	400	600	800	1000	1200	1500
In accordance with		IEC/EN 61643-31; UL1449 5th; EN 50539-11								
Category IEC/EU/VDE		I+ II /1+2/ B+C								
Nominal voltage (DC) un		100V	200V	300V	400V	600V	800V	1000V	1200V	1500V
Max. continuous operating voltage (DC) Ucpv		110V	250V	340V	450V	700V	920V	1120V	1340V	1500V
Nominal discharge current(8/20) In		20kA	20kA	20kA	20kA	20kA	20kA	20kA	20kA	20kA
Max. discharge current(8/20) Imax		50kA	50kA	50kA	50kA	50kA	50kA	50kA	50kA	50kA
Lightning impulse current (10/350) Iimp		7.5kA	7.5kA	7.5kA	7.5kA	7.5kA	7.5kA	6kA	4.5kA	4.5kA
Voltage protection level Up	DC+/- to PE	1.0kV	1.2kV	1.5kV	2.0kV	2.5kV	2.8kV	3.5kV	4.0kV	4.5kV
	DC + to DC -	1.0kV	1.2kV	1.5kV	2.0kV	2.5kV	2.8kV	3.5kV	4.0kV	4.5kV
Leakage current Ipe		<0.1mA								
Short-circuit current Iscpv		1000A								
Approvals, certifications		TUV, CE								

■ Basic circuit diagram



■ Dimension drawing (mm)



ProSurge®
Maximum Safety in Surge Protection

SPD for wind turbine

Class I + Class II / Type 1 + Type 2

Because of the high exposed surface and height, wind turbines are frequently hit by direct lightning strikes. Comprehensive lightning and surge protection measures are essential to maximise the return on investment and prevent downtime.

In Wind turbine system, there are many vulnerable electronics equipment need to be protected, such as:

- The control system, include sensors, actuators, and the motors for steering the equipment into the wind etc.
- The electronics, include transformer, frequency converter, switchgear elements, and other expensive, sensitive equipment.
- And generators, battery subsystem etc.

Properly select and install surge protective devices (SPDs) will minimize the potential impact of lightning events,Prosurge creates groups of SPD for wind power generation system protection.

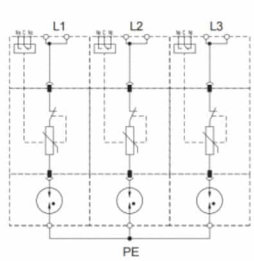
With built in PROSURGE VT technology, the prominent feature of BP25VT is higher TOV (temporary over-voltage) resistibility, which makes it can withstand high mains voltage fluctuation. For example, the BP25VT/750-S/3P has a rated (Uc) 750Vac MOV in series with gas discharge tube(GDT), the GDT is used for potential isolation and to prevent that the MOV based SPDs operate failure because of voltage fluctuations, and surge current discharge capacity rate to 100kA, these are specifically designed for protection of the generator lines of wind turbines.

For 400/690V power supply systems, BP25VT/440-S/3P can be installed to protect 400/690V transformer, inverters, mains filters and measurement equipment.

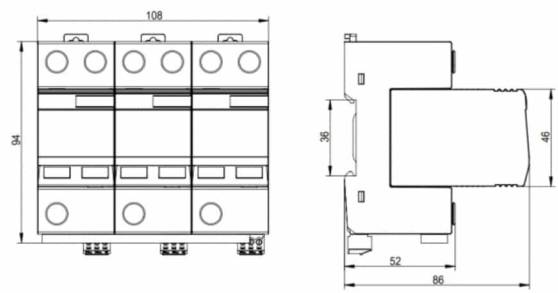
The power supply system of the control cabinet in the tower base, the switchgear cabinet in the nacelle ,the pitch system in the hub and the aircraft warning light is a 230/400V TN-C system (3Ph WYE, 3W+G), and which should be protected by class II/T2 SPDs, for example DT50/320-3V(-S).

Part No.	BP25VT/440(-S)/3P	BP25VT/750(-S)/3P
In accordance with	IEC/EN 61643-11:2011; UL1449 5th	
Category IEC/EU/VDE	I+ II /1+2/ B+C	
Nominal voltage (AC) Un	400/690V	690V
Max. continuous operating voltage(AC) Uc	440V	750V
Nominal discharge current(8/20) In	25kA	
Max. discharge current(8/20) Imax	100kA	
Lightning impulse current (10/350) Iimp	22kA	4kA
Voltage protection level Up	1.8kV	2.5kV
Temporary overvoltage TOV-120 min U_T Withstand mode	763V	1145V
Short-circuit current rating Isccr	50 kArms	
Leakage current Ipe	0 mA	
Backup fuse(only required if not already provided in mains)	≤315A gL/gG	
Operating temperature range	-40℃ ~ +85℃	
Mounting	35mm DIN-rail	
Degree of protection	IP20	
Thermal disconnector	Internal green–normal ; red–failure	
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)



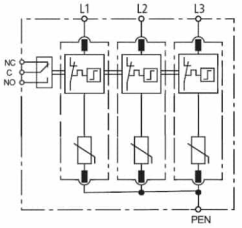
SPD for wind turbine

Class I + Class II / Type 1 + Type 2

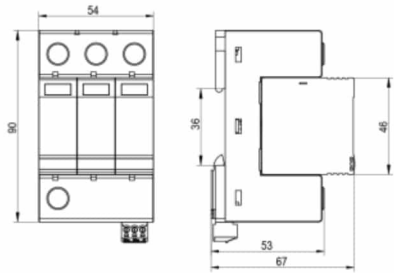
ProSurge®
Maximum Safety in Surge Protection

Part No.	DT50/275-3V(-S)	DT50/320-3V(-S)	DT50/440-3V(-S)	DT50/750-3V(-S)
In accordance with	IEC/EN 61643-11:2011; UL1449 5th			
Category IEC/EU/VDE	I+ II /1+2/ B+C			
Nominal voltage (AC) Un	230V	230V	400V	600V
Max. continuous operating voltage(AC) Uc	275V	320V	440V	750V
Nominal discharge current(8/20) In	20kA			
Max. discharge current(8/20) Imax	50kA	50kA	50kA	50kA
Lightning impulse current (10/350) Iimp	7.5kA	7.5kA	6.0kA	3.5kA
Voltage protection level Up	1.2kV	1.4kV	2.0kV	2.8kV
Temporary overvoltage TOV-5sec U_T Withstand mode	335V	335V	580V	870V
Short-circuit current rating Isccr	25 kArms			
Leakage current Ipe	0.1 mA			
Backup fuse(only required if not already provided in mains)	⩽125A gL/gG			
Operating temperature range	-40℃ ~ +85℃			
Mounting	35mm DIN-rail			
Degree of protection	IP20			
Thermal disconnector	Internal green–normal ; red–failure			
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)



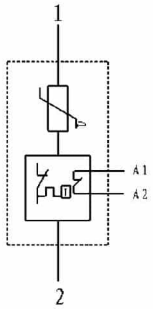
ProSurge®
Maximum Safety in Surge Protection

PCB mounting SPDs

Class I, II / Type 1,2

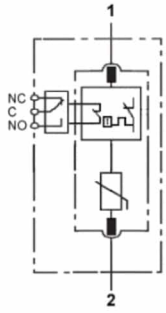
The PCB mounting SPD is easy integrated on printed circuit boards (PCB) and close to sensitive electronic element inside device, to minimize the potential impact of lightning events. The PCB mounting SPD will help to significantly reduce the cost of substantial repair, replacement, system downtime and the loss of revenue. PROSURGE's PCB mounting SPD is size optimization and space efficiency, which is a high performance but low cost solution for the industry of power electronics. It employs high energy Metal Oxide Varistor (MOV), and constructed with patented thermal protection and arc extinguishing technology which ensure safe disconnection while faulty current or abnormal voltage happened. Prosurge PCB mounting SPDs have comprehensively improved the safety performance and proven to be excellent fail-safe and self-protected protective devices because of patented technology.

- **PCB mounting-Soldering**



Part No.	PTMOV	PVTMOV	20PTMOV	SMTMOV	HSMTMOV
IEC/EN/UL category	II/T2/Type1ca	II/T2/Type 1ca	II/T2/Type1ca	II/T2/Type1ca	I+II/T1+T2/Type1ca
Max. continuous operating voltage Uc /Ucpv/MCOV	AC:150V~690V	DC:48V~1000V	AC:150V~550V	AC:150V~690V	AC:150V~320V
Nominal discharge current(8/20) In	10kA	10kA	20kA	20kA	15kA/20kA
Lightning impulse current (10/350) Iimp	-	-	-	-	8kA/ -
Max. discharge current(8/20) Imax	25kA	25kA	50kA	50kA	45kA/75kA
Fault indication	NA	NA	NA	A	A
Remote alarm contact	A	A	A	A	A
Operating temperature	-40~80℃	-40~85(110)℃	-40~85℃	-40~85℃	-40~85℃
Certification	UL,CE	TUV,CE	UL,CE	UL,CE	UL,CE

- **PCB mounting- Pluggable while install with soldering socket**



Part No.	MPV50	SP D	MPVB12.5	MBPS12.5
IEC/EN/UL category	I+II/T1+T2/Type1ca	II/T2/Type1ca	I+II/T1+T2/Type1ca	I+II/T1+T2/Type1ca
Max. continuous operating voltage Uc /Ucpv/MCOV	DC:48V~750V	DC:85V~825V	DC:48V~750V	AC:75V~750V
Nominal discharge current(8/20) In	20kA	20kA	25kA	25kA
Lightning impulse current (10/350) Iimp	7.5kA	-	12.5kA	12.5kA
Max. discharge current(8/20) Imax	50kA	50kA	80kA	80kA
Fault indication	A	A	A	A
Remote alarm contact *	A	A	A	A
Operating temperature	-40~85℃	-40~85℃	-40~85℃	-40~85℃
Certification	TUV,CE	UL,CE	TUV,CE	TUV,CE

Note:
***: Need be used with socket.**

PCB mounting SPDs

Application in AC Power Electronics

ProSurge®
Maximum Safety in Surge Protection

UL Type 1ca SPD

PTMOV/20PTMOV

UL1449 5th tested
Global patented
In: 10/20kA
Imax: 25/50kA

Part No.	MCOV /Uc	In	Imax	Voltage protection rating (VPR) UL 1449	Short circuit current rating (SCCR) UL 1449
PTMOV150/S	150Vac	10kA	25kA	0.6kV	200kA
PTMOV180/S	180Vac	10kA	25kA	0.8kV	200kA
PTMOV320/S	320Vac	10kA	25kA	1.0kV	200kA
PTMOV420/S	420Vac	10kA	25kA	1.2kV	200kA
PTMOV550/S	550Vac	10kA	22kA	1.8kV	200kA
PTMOV690/S	690Vac	10kA	22kA	2.0kV	200kA
20PTMOV150/S	150Vac	20kA	50kA	0.6kV	200kA
20PTMOV320/S	320Vac	20kA	50kA	1.0kV	200kA
20PTMOV420/S	420Vac	20kA	50kA	1.2kV	200kA
20PTMOV550/S	550Vac	20kA	45kA	1.8kV	200kA

UL Type 1ca SPD

SMTMOV/HSMTMOV

UL1449 5th tested
Global patented
In: 20kA
Imax: 50/75kA

Part No.	MCOV /Uc	In	Imax	Voltage protection rating (VPR) UL 1449	Short circuit current rating (SCCR) UL 1449
SMTMOV150	150Vac	20kA	50kA	0.6kV	200kA
SMTMOV180	180Vac	20kA	50kA	0.8kV	200kA
SMTMOV275A	275Vac	20kA	50kA	0.8kV	200kA
SMTMOV320	320Vac	20kA	50kA	1.0kV	200kA
SMTMOV420	420Vac	20kA	50kA	1.5kV	200kA
SMTMOV550	550Vac	20kA	50kA	1.5kV	200kA
SMTMOV690	690Vac	20kA	40kA	2.0kV	200kA
HSMTMOV150	150Vac	20kA	75kA	0.6kV	200kA
HSMTMOV275A	275Vac	20kA	75kA	0.8kV	200kA
HSMTMOV320	320Vac	20kA	75kA	1.0kV	200kA

IEC/EN T1+T2 SPD

MBPS

IEC/EN 61643-11 tested
In: 25kA
Imax: 80kA
Iimp: 12.5kA

Part No.	Uc	In	Imax	Iimp	Voltage protection level (Up) IEC	Short circuit withstand capacity (Isccr) IEC
MBPS12.5V/75	75Vac	25kA	80kA	12.5kA	0.6kV	50kA
MBPS12.5V/150	150Vac	25kA	80kA	12.5kA	0.8kV	50kA
MBPS12.5V/180	180Vac	25kA	80kA	12.5kA	1.0kV	50kA
MBPS12.5V/275	275Vac	25kA	80kA	12.5kA	1.2kV	50kA
MBPS12.5V/320	320Vac	25kA	80kA	12.5kA	1.4kV	50kA
MBPS12.5V/350	350Vac	25kA	80kA	12.5kA	1.5kV	50kA
MBPS12.5V/385	385Vac	25kA	80kA	12.5kA	1.8kV	50kA
MBPS12.5V/440	440Vac	25kA	65kA	8kA	2.0kV	50kA
MBPS12.5V/480	480Vac	25kA	65kA	6kA	2.2kV	50kA
MBPS12.5V/600	600Vac	25kA	65kA	6kA	2.5kV	50kA
MBPS12.5V/750	750Vac	25kA	65kA	4kA	2.8kV	50kA

ProSurge®
Maximum Safety in Surge Protection

PCB mounting SPDs

Application in DC Power Electronics

IEC/EN T2 SPD

PVTMOV

IEC/EN 61643-31 tested
Global patented
In: 10kA
Imax: 25kA

Part No.	Ucpv	In	Imax	Voltage protection level (Up) IEC	Short circuit withstand capacity (Iscpv) IEC
PVTMOV48/S	48Vdc	10kA	25kA	0.3kV	1000A
PVTMOV100/S	100Vdc	10kA	25kA	0.5kV	1000A
PVTMOV180/S	180Vdc	10kA	25kA	0.6kV	1000A
PVTMOV200/S	200Vdc	10kA	25kA	0.7kV	1000A
PVTMOV300/S	300Vdc	10kA	25kA	1.0kV	1000A
PVTMOV400/S	400Vdc	10kA	25kA	1.2kV	1000A
PVTMOV500/S	500Vdc	10kA	25kA	1.6kV	1000A
PVTMOV600/S	600Vdc	10kA	25kA	1.9kV	1000A
PVTMOV800/S	800Vdc	10kA	25kA	2.5kV	1000A
PVTMOV1000/S	1000Vdc	10kA	25kA	2.7kV	1000A

IEC/EN T1+T2 SPD

MPV50

IEC/EN 61643-31 tested
In: 20kA
Imax: 50kA
Iimp: 7.5kA

Part No.	Ucpv	In	Imax	Iimp	Voltage protection level (Up) IEC	Short circuit withstand capacity (Iscpv) IEC
MPV50/48-V	55Vdc	20kA	50kA	7.5kA	0.6kV	1000A
MPV50/75-V	100Vdc	20kA	50kA	7.5kA	0.6kV	1000A
MPV50/100-V	125Vdc	20kA	50kA	7.5kA	0.7kV	1000A
MPV50/150-V	170Vdc	20kA	50kA	7.5kA	0.8kV	1000A
MPV50/200-V	225Vdc	20kA	50kA	7.5kA	1.0kV	1000A
MPV50/300-V	350Vdc	20kA	50kA	7.5kA	1.2kV	1000A
MPV50/400-V	460Vdc	20kA	50kA	7.5kA	1.5kV	1000A
MPV50/500-V	560Vdc	20kA	50kA	6kA	2.0kV	1000A
MPV50/600-V	670Vdc	20kA	50kA	4.5kA	2.2kV	1000A
MPV50/750-V	800Vdc	20kA	50kA	4.5kA	2.5kV	1000A

PCB mounting SPDs

Application in DC Power Electronics

ProSurge®
Maximum Safety in Surge Protection

IEC/EN T1+T2 SPD

MPVB12.5

IEC/EN 61643-31 tested
In: 25kA
Imax: 80kA
Iimp: 12.5kA

Part No.	Ucpv	In	Imax	Iimp	Voltage protection level (Up) IEC	Short circuit withstand capacity (Iscpv) IEC
MPVB12.5/48-V	55Vdc	25kA	80kA	12.5kA	0.6kV	1000A
MPVB12.5/75-V	100Vdc	25kA	80kA	12.5kA	0.7kV	1000A
MPVB12.5/100-V	125Vdc	25kA	80kA	12.5kA	0.7kV	1000A
MPVB12.5/150-V	170Vdc	25kA	80kA	12.5kA	0.8kV	1000A
MPVB12.5/200-V	225Vdc	25kA	80kA	12.5kA	1.0kV	1000A
MPVB12.5/300-V	350Vdc	25kA	80kA	12.5kA	1.4kV	1000A
MPVB12.5/400-V	460Vdc	25kA	80kA	12.5kA	1.6kV	1000A
MPVB12.5/500-V	560Vdc	25kA	80kA	12.5kA	1.8kV	1000A
MPVB12.5/600-V	670Vdc	25kA	80kA	12.5kA	2.2kV	1000A
MPVB12.5/750-V	800Vdc	25kA	65kA	8kA	2.5kV	1000A

UL Type 1ca SPD

SP D

Ul1449 5th tested
Global patented
In: 20kA
Imax: 50kA

Part No.	Upvdc	In	Imax	Voltage protection rating (VPR) UL 1449	Short circuit current rating (SCCR) UL 1449
SP85D	85Vdc	20kA	50kA	0.4kV	30kA
SP350D	350Vdc	20kA	50kA	0.9kV	100kA
SP460D	460Vdc	20kA	50kA	1.2kV	100kA
SP560D	560Vdc	20kA	50kA	1.5kV	100kA
SP670D	670Vdc	20kA	50kA	1.5kV	50kA
SP825D	825Vdcc	20kA	50kA	1.8kV	50kA

ProSurge®
Maximum Safety in Surge Protection

Lightning & Surge Monitoring Devices

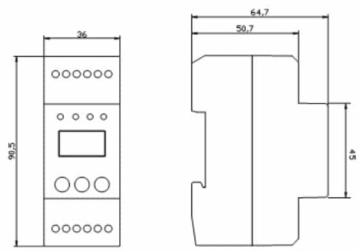
Surge monitoring & measurement

The PROSURGE Intelligent Surge & Power Monitor is a multi-function monitoring device for power system and LPS (lightning Protecting System),a core unit for Intelligent LPS or Surge Protective Devices (iSPDs), which is an innovative solution to make your LPS smart and intelligent.
It can be widely used in Telecom, Railway electrcal system, Wind power plant, Photovoltaic power plant, Network Communication system,building electrical system and automatic industrial lightning protection etc.
It has a leading technology and stable functions, through local Man-Machine interface or connecting to remote monitoring center, users can check completed LPS information.

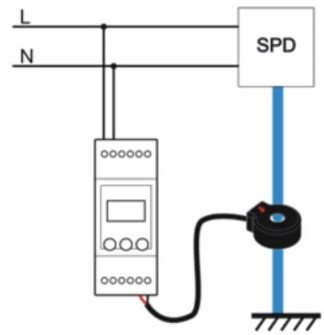
LEC-AT

- **Monitor and record 999's lightning and surge event (polarity, event time, total events quantity)**
- **Buzzer alarm when the number of lightning and surge event reaches a settable value**
- **OLED display, support history events information query**
- **RS-485 communication interface, users can browse history events information on the far-end PC**

■ Dimension drawing



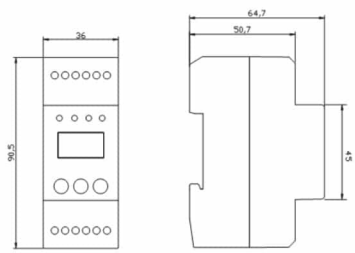
■ Examples of Installation



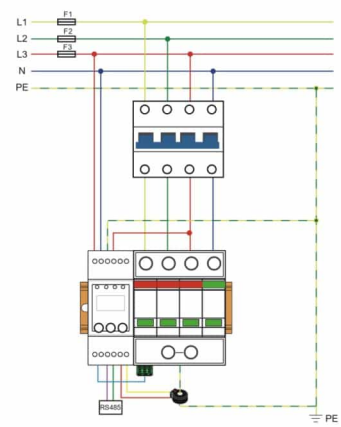
iSPM-02

- **Monitor and record 999's lightning and surge event (polarity, event time, total events quantity)**
- **SPD working status with alarm**
- **SPD's aging with alarm while close to end-of-life**
- **Backup over-current protection device working status (circuit breaker or fuse) with alarm**
- **Voltage on SPD in real-time, overvoltage alarm**
- **Grounding conditions of SPD with alarm**
- **N line monitor (screen light off while lost, alarm by remote signal contact)**
- **OLED display, support history events information query**
- **RS-485 communication interface, users can browns history events information on the far-end PC**

■ Dimension drawing



■ Examples of Installation



Lightning & Surge Monitoring Devices

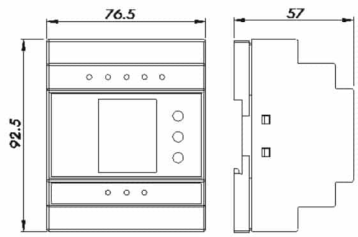
Surge monitoring & measurement

ProSurge®
Maximum Safety in Surge Protection

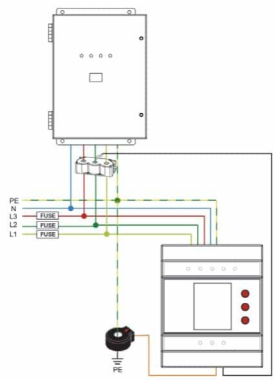
iSPM-03

- Monitor and record 5000's lightning and surge event **(surge amplitude, polarity, event time, total events quantity)**
- SPD working status with alarm
- SPD's leakage current measurement
- SPD's aging and alarm while close to end-of-life
- Power line & Grounding monitor with alarm while lost
- Backup over-current protection device working status (circuit breaker or fuse) with alarm
- Voltage on SPD in real-time (all phase lines), overvoltage alarm
- TFT display, support history events information query
- RS-485 communication interface, users can browns history events information on the far-end PC
- Din rail design, easy to install and use

■ Dimension drawing



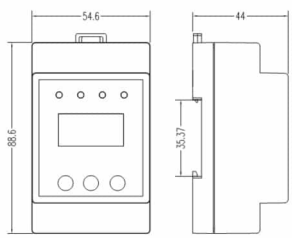
■ Examples of Installation



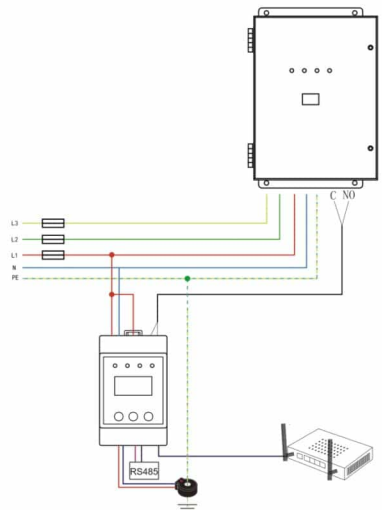
iSPM-04

- Monitor and record 5000's lightning and surge event **(polarity, event time, total events quantity)**
- SPD working status with alarm
- Backup over-current protection device working status (circuit breaker or fuse) with alarm
- Voltage on SPD in real-time, overvoltage alarm
- Grounding conditions of SPD with alarm
- N line monitor (screen light off while lost, alarm by remote signal contact)
- Buzzer alarm when the number of lightning and surge event reaches a settable value
- TFT display, support history events information query
- RS-485 communication interface, users can browns history events information on the far-end PC
- Web-based device, can be accessible via standard Web-browsers
- E-mail pushing, uses never miss fault information anywhere and anytime
- Din rail design, easy to install and use

■ Dimension drawing



■ Examples of Installation



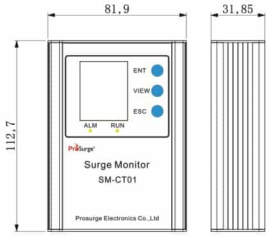
Lightning & Surge Monitoring Devices

Surge monitoring & measurement

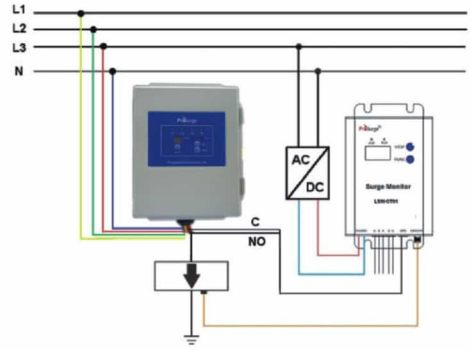
LSM-CT01

- Monitor and record 500's lightning and surge event **(surge amplitude, polarity, event time, totalevents quantity)**
- SPD working status
- USB interface for data export
- TFT display, support history events information query
- RS-485 communication interface, users can browns history events information on the far-end PC

■ Dimension drawing



■ Examples of Installation



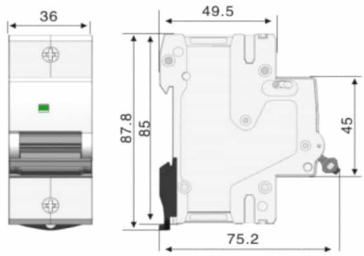
Surge Circuit Breaker

ProSurge®
Maximum Safety in Surge Protection

PROSURGE SCB provides enhance backup over-current protection for the SPD, which is located externally upstream of SPD, to avoid overheating and destruction of the SPD.
Comparing to normal backup device,like as traditional circuit breaker/fuse, the PROSURGE SCB is fully coordinated with the surge protective device, which achieves a better balance between surge withstand performance (no tripping while expected surge occurs) and sharp reaction against short circuit and abnormal leakage current.
While the Prosurge SCB is used in SPD circuit, the short current will be limited to less than 3A in case the SPD is unable to interrupt the power frequency short circuit current, which usually cause by power frequency temporary overvoltage(TOV). And because of this, the limited short circuit current will not lead to overheating of SPD and even burning, that makes SPDs safe and more reliable in most applications.

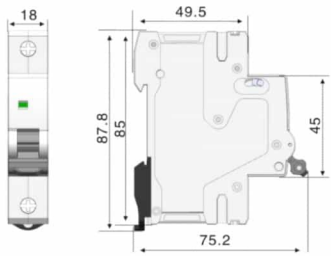
The SCB is also featuring the lower residual voltage while surge happens and compact size.

- **Used with class I/T1 SPD**



Part No.	SCB B15-1P	SCB B25-1P	SCB B50-1P
Pole number	1P		
Nominal voltage Un	230/400Vac		
Operating frequency	50/60Hz		
Rated max. impulse current (10/350us) Iimp	15kA	25kA	50kA
Nominal discharge current (8/20us) In	50kA	60kA	80kA
Rated short circuit current capacity Icn	100kArms	100kArms	100kArms
Rated trip current (frequency current)	3A		
Rated trip time	<0.1s		
IP protection level	IP20		
Wire connection	Flexible:2.5~25mm² Stranded:2.5~35mm²		
Operating temperature	-25℃~60℃		
Installation width	36mm		

- **Used with class II/T2 SPD**



Part No.	SCB C40-1P	SCB C65-1P	SCB C80-1P
Pole number	1P		
Nominal voltage Un	230/400Vac		
Operating frequency	50/60Hz		
Rated max. discharge current (8/20us) Imax	40kA	65kA	80kA
Nominal discharge current (8/20us) In	20kA	35kA	40kA
Rated short circuit current capacity Icn	50kArms	50kArms	50kArms
Rated trip Current (frequency current)	3A		
Rated trip time	<0.1s		
IP protection level	IP20		
Wire connection	Flexible:2.5~25mm² Stranded:2.5~35mm²		
Operating temperature	-25℃~60℃		
Installation width	18mm		

Intelligent SPDs (iSPDs)

The PROSURGE iSPD is an intelligent and auto self-protected SPD for the single phase or multi phase power systems. It's an innovative solution for most commercial and industrial environments with critical operations, to make your surge protection smart and intelligent.
The iSPD is composed of three essential parts: surge protective device (SPD), intelligent surge & power monitor (iSPM) or Lightning/Surge event counter LEC-AT and surge circuit breaker (SCB).

Prosurge high performance MOV based SPDs (Class I or II) of iSPD can protect sensitive equipment from the harmful transient voltage surges resulting from:

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

Prosurge's Class II SPD

PROSURGE **iSPM / LEC-AT** technology makes it easy to monitor the power & lightning protecting system. This device allows end user to monitor real time power quality for SPD and Lightning/Surge event and get alarm feedback on failure and fault from power system and device self:

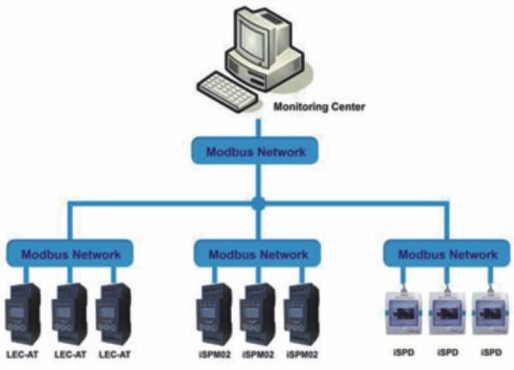
- **SPD working status with alarm for SPD Failure -Model: iSPM02**
- **SPD's aging with alarm while close to end-of-life of SPD -Model: iSPM02**
- **Lightning and surge event (surge polarity, time-to-event, total events quantity) - Model: iSPM02/LEC-AT**
- **Buzzer alarm when the number of surge events reaches a settable number - Model: LEC-AT**
- **Backup over-current protection device working status (circuit breaker or fuse) with alarm for CB or fuse open -Model: iSPM02**
- **Voltage on SPD in real-time, alarm for overvoltage event - Model: iSPM02**
- **Grounding conditions of SPD with alarm for Grounding fault - Model: iSPM02**
- **N line lost alarm (screen light off while lost, alarm by remote signal contact) - Model: iSPM02**

Prosurge's intelligent surge & power monitor

Prosurge's SCB

PROSURGE **SCB** provides backup over-current protection for the SPD, which is fully coordinated with the SPD's surge capacity. Comparing to normal backup circuit breaker/fuse, the integrated PROSURGE SCB achieve a better balance between surge withstand performance (no tripping while expected surge occurs) and sharp reaction against short circuit and abnormal leakage current.

The iSPD can communicate with computer or smart terminal.
It can connect RS485 half-duplex MODBUS RTU protocol communication mode to the remote monitoring center.
Or through the "RS485/Ethernet converter", the MODBUS communication protocol can be converted to the Ethernet protocol, allowing the iSPD to connect to the Internet.
Once the iSPDs are connected to network, end user will be easy to get accurate and convenient information through computer software or smartphone Apps, and be able to act quickly to guarantees system uninterrupted operation based on optimal information.



Connect by 485 MODBUS

Connect by 485 MODBUS / Ethernet

Intelligent SPDs (iSPDs)

ProSurge®
Maximum Safety in Surge Protection

Configuration & Ordering Information:

iSPD Intelligent SPD Model series	−02 Intelligent Surge &Power MonitorModel Series	/C SPD category per IEC/EN	320 Max. operating voltage (Uc)	−PN SPD config	−SCB Back up Surge Circuit Breaker
iSPD	−02: iSPM02 -AT : LEC-AT	−B: Class I or T1 -C : Class II or T2	320: 75VAC~320VAC	2: Two poles (2+0) PN:Two poles (1+1) 3:Three poles (3+0) 4:Four poles (4+0) 3PN:Four poles (3+1)	With or without

Intelligent Surge & Power Monitor choice:

Function	−02	−AT
Lightning and surge event logging (surge polarity, time-to-event, total events quantity)	√	√
Pre-set alarm number of surge event		√
SPD working status with alarm	√	
SPD's aging with alarm	√	
Backup over-current protection device working status with alarm	√	
Voltage on SPD in real-time with alarm	√	
Neutral line monitor with alarm	√	

iSPD-02/...-SCB

- **SPD + iSPM02 + SCB**
- **Surge capacity 8/20μs: 50kA**

Part No.			iSPD-02/C320-PN-SCB	iSPD-02/C320-3PN-SCB
General	Power system		2W+G, 1ph	4W+G, 3ph
	System voltage	Un	220/380V ~ 240/415V	
	Connection		Connection in parallel	
	Connecting cable		Power line:10-35mm²; Remote signal:1.5mm²	
	Mounting		Wall mounting	
	Dimension		148x180x87mm	200x180x87mm
SPD	SPD category		Class II / T2 per IEC 61643	
	Max. continuous operating voltage	Un	320VAC	
	Nominal discharge current (8/20 μs)	In	20kA	20kA
	Max. discharge current (8/20 μs)	Imax	50kA	50kA
	Voltage protection level	Up	1.5kV	1.5kV
	Thermal disconnector / Indication		Internal red - failure	
iSPM	Display screen		OLED screen	
	Event logging		999 events	
	Surge event counting		Counting current ⩾100A (adjustable)	
	Communication Interface		RS485	
	Indication		Buzzer / Indicator / remote signal	
SCB	Trip current	It	3±1A	
	Trip time	Tt	⩽40ms	

Intelligent SPDs (iSPDs)

iSPD-AT/... SCB

- **SPD + LEC-AT + SCB**
- **Surge capacity 8/20μs: 50kA**

Part No.			iSPD-AT/C320-PN-SCB	iSPD-AT/C320-3PN-SCB
General	Power system		2W+G, 1ph	4W+G, 3ph
	System voltage	Un	220/380V ~ 240/415V	
	Connection		Connection in parallel	
	Connecting cable		Power line:10-35mm²; Remote signal:1.5mm²	
	Mounting		Wall mounting	
	Dimension		148x180x87mm	200x180x87mm
SPD	SPD category		Class II / T2 per IEC 61643	
	Max. continuous operating voltage	Un	320VAC	
	Nominal discharge current (8/20 μs)	In	20kA	20kA
	Max. discharge current (8/20 μs)	Imax	50kA	50kA
	Voltage protection level	Up	1.5kV	1.5kV
	Thermal disconnector / Indication		Internal red - failure	
LEC-AT	Display screen		OLED screen	
	Event logging		999 events	
	Surge event counting		Counting current ⩾100A (adjustable)	
	Communication Interface		RS485	
	Indication		Buzzer / Indicator	
SCB	Trip current	It	3±1A	
	Trip time	Tt	⩽40ms	

iSPD-AT/...

- **SPD + LEC-AT**
- **Surge capacity 8/20μs: 50kA**

Part No.			iSPD-AT/C320-PN	iSPD-AT/C320-3PN
General	Power system		2W+G, 1ph	4W+G, 3ph
	System voltage	Un	220/380V ~ 240/415V	
	Connection		Connection in parallel	
	Connecting cable		Power line:10-35mm²; Remote signal:1.5mm²	
	Mounting		DIN-Rail	
	SPD category		Class II / T2 per IEC 61643	
SPD	Max. continuous operating voltage	Uc	320VAC	
	Nominal discharge current (8/20 μs)	In	20kA	20kA
	Max. discharge current (8/20 μs)	Imax	50kA	50kA
	Voltage protection level	Up	1.5kV	1.5kV
	Thermal disconnector / Indication		Internal red - failure	
LEC-AT	Display screen		OLED screen	
	Event logging		999 events	
	Surge event counting		Counting current ⩾100A (adjustable)	
	Communication Interface		RS485	
	Indication		Buzzer / Indicator	

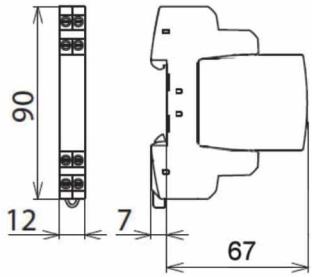
iSPD-...-SCB

- **SPD + SCB**
- **Surge capacity 8/20μs: 50kA**

Part No.			iSPD-C320-PN-SCB	iSPD-C320-3PN-SCB
General	Power system		2W+G, 1ph	4W+G, 3ph
	System voltage	Un	220/380V ~ 240/415V	
	Connection		Connection in parallel	
	Connecting cable		Power line:10-35mm²; Remote signal:1.5mm²	
	Mounting		DIN-Rail	
	SPD category		Class II / T2 per IEC 61643	
SPD	Max. continuous operating voltage	Uc	320VAC	
	Nominal discharge current (8/20 μs)	In	20kA	20kA
	Max. discharge current (8/20 μs)	Imax	50kA	50kA
	Voltage protection level	Up	1.5kV	1.5kV
	Thermal disconnector / Indication		Internal red - failure	
SCB	Trip current	It	3±1A	
	Trip time	Tt	⩽40ms	

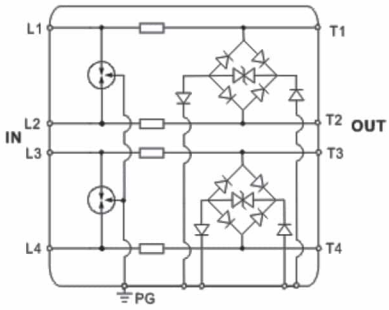
PROSURGE DM.. data network surge arrester are designed for universal 1 or 2-pair data lines against the damaging from surges and spikes caused by lightning and other electrical sources, suitable for use in category location B, C (ANSI/IEEE C62.41) or directly at the upstream near the protected devices.

- **Data network protector in according with UL497b, IEC61643-21:2012;**
- **12mm pluggable surge protector for DIN-Rail mounting**
- **Signal transmission is not interrupted when exchanging module**
- **Two-stage protection circuit. Limit the transients with gas discharge tubes and transzorb diodes**
- **Earthing is possible on DIN rail**
- **Different model are suitable to use for universal 4-20mA current loop, TTL, analog telephone line, measurement system and high-frequency bus and data transmission systems etc.**

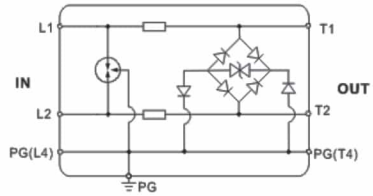


Model		DM-05/M4N1	DM-12/M4N1	DM-24/M4N1	DM-48/M4N1
Lines protected		2-Pair			
Nominal voltage (vdc)	Un	5V	12V	24V	48V
Max. continuous operating voltage (vdc/vac)	Uc	6V/4.2V	15V/10.6V	33V/23.3V	54V/38.1V
C2 nominal discharge current (8/20μs)	In	10kA			
Lightning Impulse current (10/350μs)	Iimp	2.5kA			
Voltage protection level	@C2 (8/20μs) Up	⩽30V(L-L); ⩽30V(L-G)	⩽45V(L-L); ⩽45V(L-G)	⩽55V(L-L); ⩽55V(L-G)	⩽100V(L-L); ⩽100V(L-G)
	@C3 (1KV/μs) Up	⩽24V(L-L); ⩽24V(L-G)	⩽38V(L-L); ⩽38V(L-G)	⩽48V(L-L); ⩽48V(L-G)	⩽75V(L-L); ⩽75V(L-G)
Rated load current	IL	1A			
Cut-off frequency	fG	100 MHZ			
Series impedance per line	R	0.68 Ω			

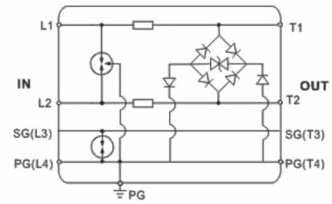
■ Basic circuit diagram



For 2-pair data line
DM-.../M4N1



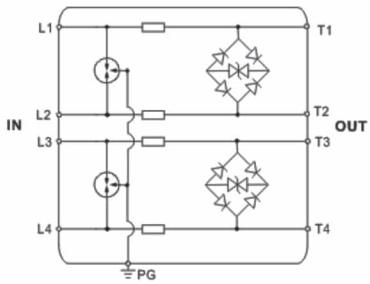
For 1-pair data line
DM-.../M2N1



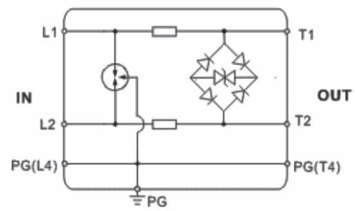
For 1-pair+shield data line
DM-.../M2N3

Model		DM-05/M4N2	DM-12/M4N2	DM-24/M4N2	DM-48/M4N2
Lines protected		2-Pair			
Nominal voltage (vdc)	Un	5V	12V	24V	48V
Max. continuous operating voltage (vdc/vac)	Uc	6V/4.2V	15V/10.6V	33V/23.3V	54V/38.1V
C2 nominal discharge current (8/20μs)	In	10kA			
C2 total nominal discharge current (8/20μs)		20kA			
Lightning Impulse current (10/350μs)	limp	2.5kA			
Voltage protection level	@C2 (8/20μs) Up	⩽30V(L-L); ⩽500V(L-G)	⩽45V(L-L); ⩽500V(L-G)	⩽55V(L-L); ⩽500V(L-G)	⩽100V(L-L); ⩽500V(L-G)
	@C3 (1KV/μs) Up	⩽24V(L-L); ⩽600V(L-G)	⩽38V(L-L); ⩽600V(L-G)	⩽48V(L-L); ⩽600V(L-G)	⩽75V(L-L); ⩽600V(L-G)
Rated load current	IL	1A			
Cut-off frequency	fG	100 MHZ			
Series impedance per line	R	0.68 Ω			

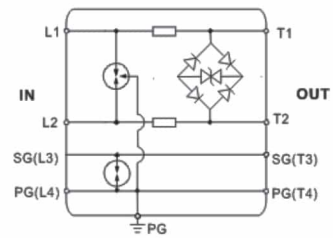
■ Basic circuit diagram



For 2-pair data line
DM-.../M4N2



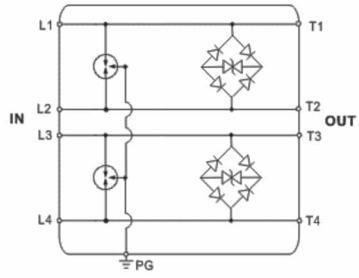
For 1-pair data line
DM-.../M2N2



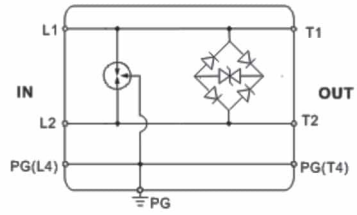
For 1-pair+shield data line
DM-.../M2N4

Model		DM-05/M4N6	DM-12/M4N6	DM-24/M4N6	DM-48/M4N6
Lines protected		2-Pair			
Nominal voltage (vdc)	Un	5V	12V	24V	48V
Max. continuous operating voltage (vdc/vac)	Uc	6V/4.2V	15V/10.6V	33V/23.3V	54V/38.1V
C2 nominal discharge current (8/20μs)	In	10kA			
C2 total nominal discharge current (8/20μs)		20kA			
Lightning Impulse current (10/350μs)	limp	2.5kA			
Voltage protection level	@C2 (8/20μs) Up	⩽30V(L-L); ⩽500V(L-G)	⩽45V(L-L); ⩽500V(L-G)	⩽55V(L-L); ⩽500V(L-G)	⩽100V(L-L); ⩽500V(L-G)
	@C3 (1KV/μs) Up	⩽24V(L-L); ⩽600V(L-G)	⩽38V(L-L); ⩽600V(L-G)	⩽48V(L-L); ⩽600V(L-G)	⩽75V(L-L); ⩽600V(L-G)
Rated load current	IL	2A			
Cut-off frequency	fG	100 MHZ			
Series impedance per line	R	0 Ω			

■ Basic circuit diagram



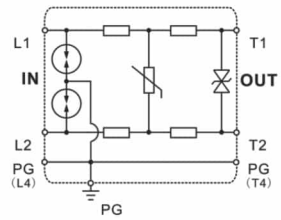
For 2-pair data line
DM-.../M4N6



For 1-pair data line
DM-.../M2N6

Model		DM-12/M2N5	DM-24/M2N5	DM-48/M2N5	DM-110/M2N5
Lines protected		1-Pair			
Nominal voltage (vdc)	Un	12V	24V	48V	110V
Max. continuous operating voltage (vdc/vac)	Uc	15V/10.6V	33V/23.3V	54V/38.1V	170V/120V
C2 nominal discharge current (8/20μs)	In	10kA			
C2 total nominal discharge current (8/20μs)		20kA			
Lightning Impulse current (10/350μs)	Iimp	2.5kA			
Voltage protection level	@C2 (8/20μs) Up	⩽25V(L-L); ⩽750V(L-G)	⩽50V(L-L); ⩽750V(L-G)	⩽100V(L-L); ⩽750V(L-G)	⩽260V(L-L); ⩽750V(L-G)
	@C3 (1KV/μs) Up	⩽19V(L-L); ⩽650V(L-G)	⩽45V(L-L); ⩽650V(L-G)	⩽70V(L-L); ⩽650V(L-G)	⩽230V(L-L); ⩽650V(L-G)
Rated load current	IL	1A			
Cut-off frequency	fG	2 MHz			
Series impedance per line	R	1.36 Ω			

■ Basic circuit diagram

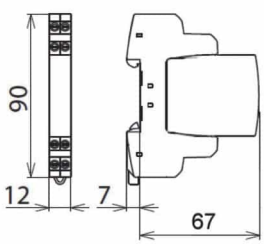


For 1-pair data line

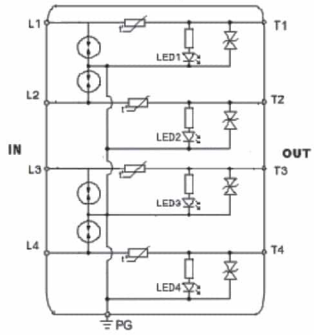
DM-../M..N7 data network protector is with **failure indication and fault-current** protection inside to make protection module replacement timely and prevent failure or even destruction of signal or communication system.These modules are suitable for digital I/O signal or analog power surge protection.

Model		DM-05/M4N7	DM-12/M4N7	DM-24/M4N7	DM-48/M4N7
Lines protected		2-Pair			
Nominal voltage (vdc)	Un	5V	12V	24V	48V
Max. continuous operating voltage (vdc/vac)	Uc	6V/4.2V	15V/10.6V	33V/23.3V	54V/38.1V
C2 nominal discharge current (8/20μs)	In	10kA			
C2 total nominal discharge current (8/20μs)		20kA			
Lightning Impulse current (10/350μs)	Iimp	2.5kA			
Voltage protection level	@C2 (8/20μs) Up	⩽30V(L-L); ⩽500V(L-G)	⩽45V(L-L); ⩽500V(L-G)	⩽55V(L-L); ⩽500V(L-G)	⩽100V(L-L); ⩽500V(L-G)
	@C3 (1KV/μs) Up	⩽24V(L-L); ⩽600V(L-G)	⩽38V(L-L); ⩽600V(L-G)	⩽48V(L-L); ⩽600V(L-G)	⩽75V(L-L); ⩽600V(L-G)
Rated load current	IL	1A			
Cut-off frequency	fG	2 MHz			
Series impedance per line	R	PTC			

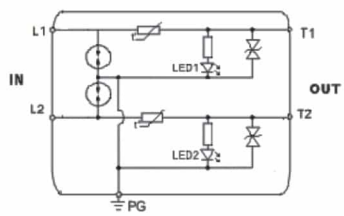
■ Dimension drawing



■ Basic circuit diagram



For 2-pair data line
DM-.../M4N7



For 1-pair data line
DM-.../M2N7

ProSurge®
Maximum Safety in Surge Protection

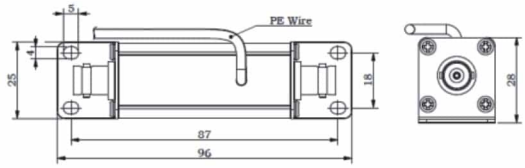
SPDs for Information System

Prosurge D-05/BNC surge arrester is designed for coaxial systems such as camera and video system protection against the damage from surges and spikes caused by lightning and other electrical sources, suitable for use in category location B, C (ANSI/IEEE C62.41) or directly at the upstream near the protected devices.

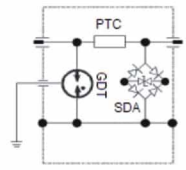
- **Data network protector in according with UL 497b, IEC 61643-21:2012**
- **High discharge capacity, total nominal discharge current up to 20kA 8/20μs**
- **Two-stage protection circuit**
- **Limit the transient with gas discharge tubes and transzorb diodes**
- **Comprising a PTC for overcurrent fault and short-circuit fault protection**
- **BNC connector for protection of video signal, cameras or TV system**
- **Low insertion loss**

Part No.		D-05/BNC-FF50-B
Nominal voltage (vdc)	Un	5V
Max. continuous operating voltage (vdc/vac)	Uc	6/5V
C2 nominal discharge current (8/20μs)	In	10kA
C2 total nominal discharge current (8/20μs)	In	20kA
Voltage protection level	L-SG@C2 (8/20μs) Up	≤30V
	L-SG@C3 (1KV/μs) Up	≤24V
Frequency range	f	0~20MHz
Nominal current	IL	0.35A
Technology		Two-stage protection circuit, GDT/SAD & PTC technology
Insertion loss at 20MHz		< 0.2dB
VSWR		< 1.2dB
Continuous power	P	0.77 Watts
Series Impedance per line	R	0.6 Ohm (PTC)
Input / output connection type		BNC, 50 Ohm

■ Dimension drawing



■ Basic circuit diagram

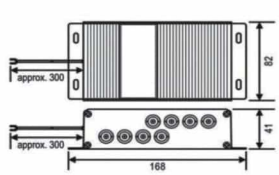


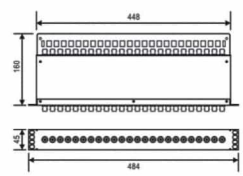
Multiport Coaxial Protector

8-ports protector DSB05/BNC-8P
16-ports protector DSB05/BNC-16P 19" bay design
24-ports protector DSB05/BNC-24P 19" bay design

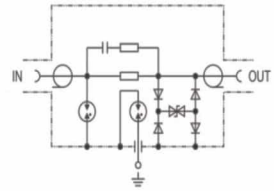
Part No.		DSB05/BNC-8P	DSB05/BNC-16P	DSB05/BNC-24P
Number of connection Ports		8	16	24
Nominal voltage (Vdc)	Un	5V		
Max. continuous operating voltage (Vdc)	Uc	8V		
Open circuit voltage (1.2/50μs)	Uoc	5kV (L-SG), 10kV (SG-PG)		
Lightning Impulse current (10/350μs)	Iimp	0.5kA		
Nominal discharge current (8/20μs)	In	2.5kA (L-SG), 5kA (SG-PG)		
Max. discharge current (8/20μs)	Imax	5kA (L-SG), 10kA(SG-PG)		
Voltage protection level at In	Up	≤25V (L-SG)		
Voltage protection level at 1kV/μs	Up	≤15V (L-SG), ≤600V (L/SG-PG)		
Bandwidth	fG	300MHz		

■ Dimension drawing





■ Basic circuit diagram



SPDs for Information System

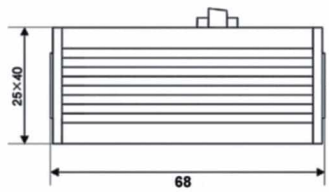
ProSurge®
Maximum Safety in Surge Protection

Prosurge D-05/RJ45-CAT6/H Protector is designed for Gigabit Ethernet terminals against surges. It is suitable for use in category location B, C (ANSI/IEEE C62.41) or directly at the upstream near the protected devices.

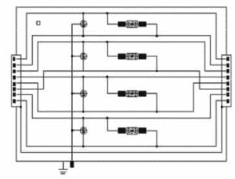
- **Data network protector In according with standard UL 497b, EN 50173 Category 6, IEC 61643-21:2012**
- **Ethernet CAT6 & CAT5 system protection**
- **Applied in offices and industries like Gigabit Ethernet, ATM or ISDN system, and VoIP system (e.g. switch, router, hub, modem and so on)**
- **High discharge capacity, total nominal discharge current 10kA 8/20μs and Lightning current up to 1.0kA 10/350μs**
- **RJ45 connector for CAT6 & CAT 5 network technology, 100BaseT, 1000BaseT, 8 wires protection.**
- **DIN-rail type is available**

Part No.		D-05/RJ45-CAT6/H
Nominal voltage (vdc)	Un	5V
Max. continuous operating voltage (vdc)	Uc	6V
C2 nominal discharge current (8/20μs)	In	2.5kA
C2 Total nominal discharge current (8/20μs)		10kA
Voltage protection level	L-SG@C2 (8/20μs) Up	≤55V
	L-SG@C3 (1KV/μs) Up	≤25V
Lightning Impulse current (10/350μs)	Iimp	1.0kA
Nominal current	IL	200mA
Transmission speed		1000Mbps
Insertion loss at 250MHz		≤ 3.0dB
Transmission standards		100BaseT / 1000BaseT / 1000BaseTX (CAT6)

■ Dimension drawing



■ Basic circuit diagram

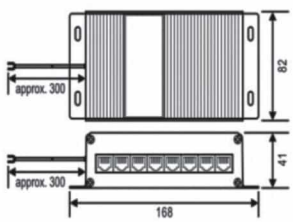


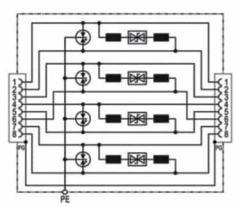
Multiport 1Gb Protector

24-ports protector DSB05/RJ45-1000M-24P/1000M 19"bay design

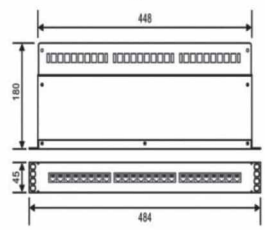
Part No.		DSB05/RJ45-1000M-24P
Number of Connection Ports		24
Nominal Voltage (Vdc)	Un	5V
Max. continuous operating voltage (vdc)	Uc	6V
C2 nominal discharge current (8/20μs)	In	2.5kA
C2 total nominal discharge current (8/20μs)		10kA
Voltage protection level	@C2 (8/20μs) Up	≤30V (L-L); ≤500V (L-G)
	@C3 (1KV/μs) Up	≤24V (L-L); ≤600V (L-G)
Lightning Impulse current (10/350μs)	Iimp	1kA
Nominal current	IL	150mA
Insertion loss		≤0.1dB
Transmission speed		1000Mbps
Technology		Two-stage protection circuit, GDT/SAD technology
Transmission standards		1000BaseT/Tx

■ Dimension drawing





■ Basic circuit diagram



ProSurge®
Maximum Safety in Surge Protection

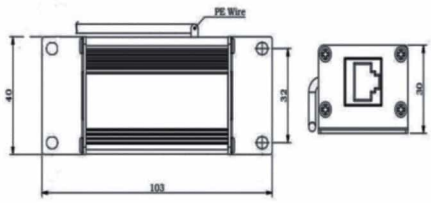
SPDs for Information System

Prosurge D-48 CAT6-PoE Protector is designed for protecting Gigabit Ethernet & Power-over Ethernet (PoE) terminals such as Internet camera, IP Telephone sets, and wireless access point, and are suitable for use in category location B, C (ANSI/IEEE C62.41) or directly at the upstream near the protected devices.

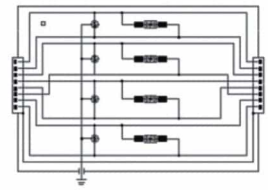
- **Data network protector In according with standard IEEE802.3 at/af, UL 497b, EN 50173 Category 6, IEC 61643-21:2012**
- **PoE compatible, Ethernet CAT6 & CAT5 system protection**
- **High discharge capacity, total nominal discharge current 10kA 8/20μs and Lightning current up to 1.0kA 10/350μs**
- **In aluminum housing**
- **RJ45 connector for CAT6 & CAT5 network technology, 100BaseT, 1000BaseT, 8 wires protection**

Part No.		D-48/RJ45-CAT6/H(POE)-B
Nominal voltage (vdc)	Un	48V
Max. continuous operating voltage (vdc)	Uc	68V
C2 nominal discharge current (8/20μs)	In	2.5kA
C2 total nominal discharge current (8/20μs)		10kA
Voltage protection level	@C2 (8/20μs) Up	≤190V (L-L); ≤500V (L-G)
	@C3 (1KV/μs) Up	≤145V (L-L); ≤600V (L-G)
Lightning Impulse Current (10/350μs)	Iimp	1kA
Nominal Current	IL	800mA
Insertion Loss		≤0.1dB
Transmission Speed		1000Mbps
Technology		Two-stage protection circuit, GDT/SAD technology
Transmission Standards		10BaseT / 100BaseT / 1000BaseT / 1000BaseTX (CAT6) / PoE
Pinning		1/2,3/6, 4/5, 7/8 for data; 1&2 / 3&6, 4&5 / 7&8 for PoE

■ Dimension drawing



■ Basic circuit diagram

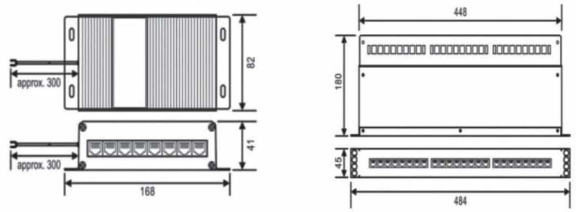


Multiport 1Gb -PoE Protector

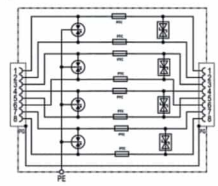
24-ports protector DSB48/RJ45-1000M-24P 19" bay design

Part No.		DSB48/RJ45-1000M-24P
Number of Connection Ports		24
Nominal voltage (vdc)	Un	48V
Max. continuous operating voltage (vdc)	Uc	60V
C2 nominal discharge current (8/20μs)	In	2.5kA
C2 total nominal discharge current (8/20μs)		10kA
Voltage protection level	@C2 (8/20μs) Up	≤190V (L-L); ≤500V (L-G)
	@C3 (1KV/μs) Up	≤145V (L-L); ≤600V (L-G)
Lightning Impulse Current (10/350μs)	Iimp	1kA
Nominal Current	IL	750mA
Series Impedance per Line	R	0.5Ω (PTC)
Insertion Loss		≤0.1dB
Transmission Speed		1000Mbps

■ Dimension drawing



■ Basic circuit diagram



Notes

We reserve the right to introduce changes in confguration and technology, dimensions, weights and materials in the course of technical progress. Illustrations are not binding. Misprints and errors cannot be ruled out and the right to make changes is reserved.

This catalogue is intended as an overview of PROSURGE surge protection devices. More detailed product information can be found at www.prosurge.com or contact us.

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