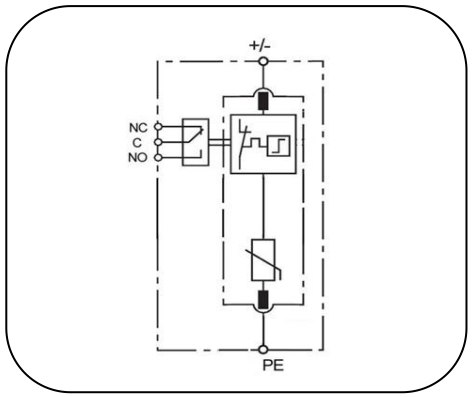
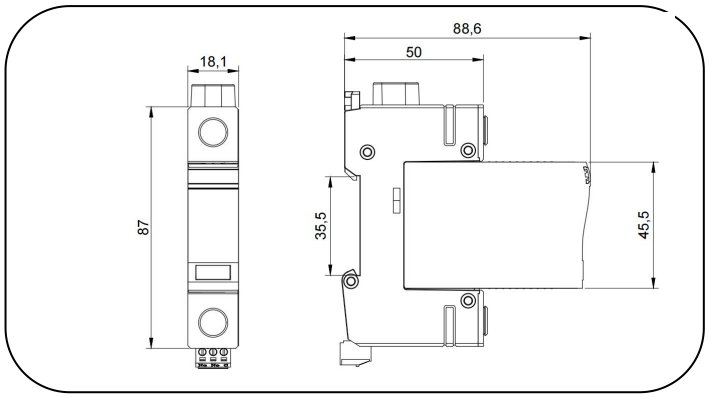
Class I + Class II (T1+T2), PV DC Surge Arresters

PVB12.5/…V



Basic circuit diagram



Dimension drawing

The PVB12.5 V is class I & class II (or T1+T2) single pole PV DC SPD designed for DC application such as PV/ Photovoltaic system dc-side protection, especially for location of high risk exposure or LPZ 0-2 building entrances (IEC 62305-4) to against the damage from direct or close lightning strikes.

With built in PROSURGE high energy MOV, PVB12.5 V ensures remarkable lightning current discharge capacity up to 12.5kA 10/350μs and high reliability. The unique design of thermal protection provides quick thermal response and secure disconnection.

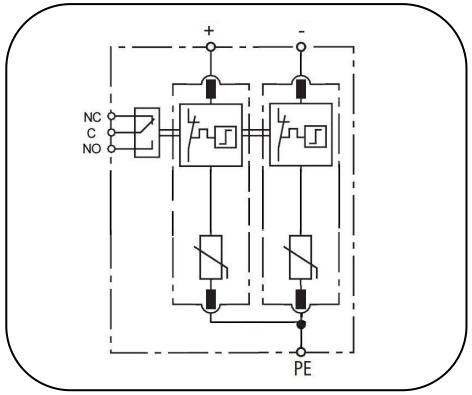
- TUV certified T1+ T2 PV DC SPD per IEC/EN 61643-31 standard.
- 18mm narrow model design, Single pole SPD for multi-purpose surge protection
- Application in Photovoltaic (PV) systems and other DC power system like charging system for electric vehicles etc.
- Unique thermal disconnector design
- Lightning current capacity up to 12.5kA 10/350μs
- Surge current capability up to 80kA 8/20μs
- Low voltage protection level
- Degradation failure indication and optional remote signal contact.
- Pluggable module for easy replacement without the need to remove system wiring.
- Wide operating temperature -40° C ~85° C
- 35mm DIN-rail mounting
- Comply with EN 50539-11,UL1449 5th, IEEE C62.41,CSA C22.2 standards

Technical data

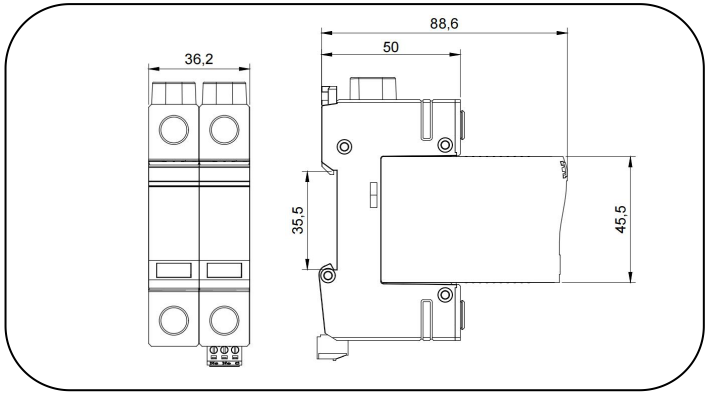
Part No.	PVB12.5/48-V (-S)	PVB12.5/75-V (-S)	PVB12.5/100-V(-S)	PVB12.5/150-V(-S)	PVB12.5/200-V(-S)	PVB12.5/300-V(-S)	PVB12.5/400-V(-S)	PVB12.5/500-V(-S)	PVB12.5/600-V(-S)	PVB12.5/750-V(-S)
In accordance with	IEC/EN 61643-31; UL1449 5th; EN 50539-11									
Category IEC/EU/VDE	I+ II /1+2/ B+C									
DC+ to DC- or DC+/- to PE	DC+ to DC- or DC+/- to PE									
Nominal Voltage (DC) Un	48V	75V	100V	150V	200V	300V	400V	500V	600V	750V
Max. continuous operating voltage (DC) Ucpv	85V	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
Response time tA	≤25ns									
Leakage Current Ipe	<0.1mA									
Short-circuit Current Iscpv	25kA									
Operating temperature range	- 40ºC ~ + 85ºC									
Altitude	-500m ~ +4000m									
Cross-section of connection wire (max)	Single-strand 35mm^2; multi-strand 25mm^2									
Mounting	35mm DIN-rail in accordance with EN 50022/DIN46277-3									
Enclosure material	thermoplastic; extinguishing degree UL94 V-0									
Degree of protection	IP20									
Installation width	1 modules, DIN 43880									
Thermal disconnector	Internal Green – normal ; red - failure									
Remote alarm contact	Optional									
Approvals, Certifications	TUV, CE									
Additional data for Remote Alarm Contacts										
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									
Cross-section of remote signaling wire	Max. 1.5mm^2(or # 16AWG)									

Class I + Class II (T1+T2), PV DC Surge Arresters

PVB12.5/…-V-C



Basic circuit diagram



Dimension drawing

The PVB12.5 C is class I & class II (or T1+T2) prewired PV DC SPD designed for DC application such as PV/ Photovoltaic system dc-side protection, especially for location of high risk exposure or LPZ 0-2 building entrances (IEC 62305-4) to against the damage from direct or close lightning strikes.

With built in PROSURGE high energy MOV, PVB12.5V C ensures remarkable lightning current discharge capacity up to 12.5kA 10/350μs and high reliability. The unique design of thermal protection provides quick thermal response and secure disconnection.

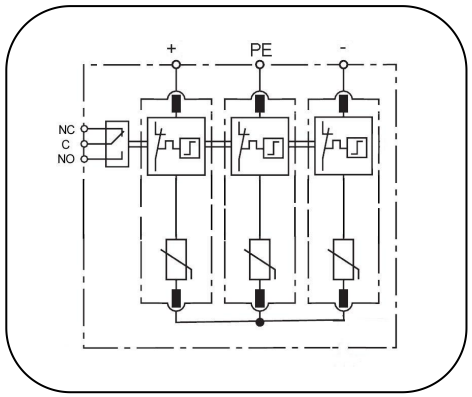
- TUV certified T1+ T2 PV DC SPD per IEC/EN 61643-31 standard.
- 18mm narrow model design, prewired two poles of V circuit for common mode protection
- Application in Photovoltaic (PV) systems and other DC power system like charging system for electric vehicles etc.
- Unique thermal disconnector design
- Lightning current capacity up to 12.5kA 10/350μs
- Surge current capability up to 80kA 8/20μs
- Low voltage protection level
- Degradation failure indication and optional remote signal contact.
- Pluggable module for easy replacement without the need to remove system wiring.
- Wide operating temperature -40° C ~85° C
- 35mm DIN-rail mounting
- Comply with EN 50539-11,UL1449 5th, IEEE C62.41,CSA C22.2 standards

Technical data

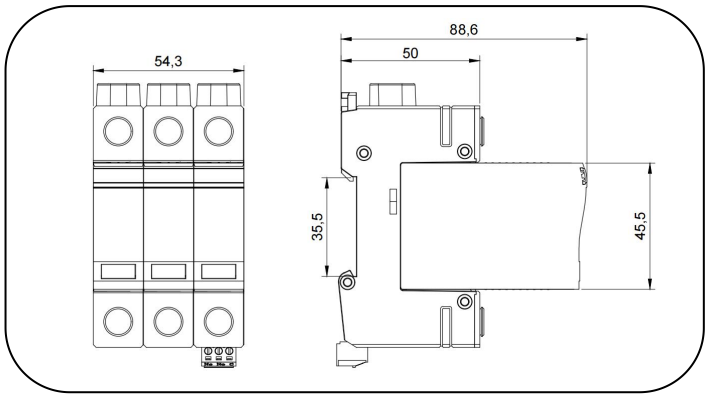
Part No.	PVB12.5/48-V-C (-S)	PVB12.5/75-V-C(-S)	PVB12.5/100-V-C(-S)	PVB12.5/150-V-C(-S)	PVB12.5/200-V-C(-S)	PVB12.5/300-V-C(-S)	PVB12.5/400-V-C(-S)	PVB12.5/500-V-C(-S)	PVB12.5/600-V-C(-S)	PVB12.5/750-V-C(-S)
In accordance with	IEC/EN 61643-31; UL1449 5th; EN 50539-11									
Category IEC/EU/VDE	I+ II /1+2/ B+C									
Protection mode	DC+ to DC- , DC+/- to PE									
Nominal Voltage (DC) Un	48V	75V	100V	150V	200V	300V	400V	500V	600V	750
Max. continuous operating voltage (DC) Ucpv	85V	100V	125V	170V	225V	350V	460V	560V	670V	800
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 — DC+/- to PE	0.6 kV	0.7kV	0.7kV	0.8kV	1.0kV	1.4kV	1.6kV	1.8kV	2.2kV	2.5kV
Voltage protection level Up — DC + to DC -	1.0kV	1.2kV	1.2kV	1.5kV	2.0kV	2.5kV	3.0kV	3.5kV	4.0kV	4.5kV
Response time tA	≤25ns									
Leakage Current Ipe	<0.1mA									
Short-circuit Current Iscpv	25kA									
Operating temperature range	- 40ºC ~ + 85ºC									
Altitude	-500m ~ +4000m									
Cross-section of connection wire (max)	Single-strand 35mm^2; multi-strand 25mm^2									
Mounting	35mm DIN-rail in accordance with EN 50022/DIN46277-3									
Enclosure material	thermoplastic; extinguishing degree UL94 V-0									
Degree of protection	IP20									
Installation width	2 modules, DIN 43880									
Thermal disconnector	Internal Green – normal ; red - failure									
Remote alarm contact	Optional									
Approvals, Certifications	TUV, CE									
Additional data for Remote Alarm Contacts										
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									
Cross-section of remote signaling wire	Max. 1.5mm^2(or # 16AWG)									

Class I + Class II (T1+T2), PV DC Surge Arresters

PVB12.5/…-V-CD



Basic circuit diagram



Dimension drawing

The PVB12.5 CD is class I & class II (or T1+T2) prewired PV DC SPD designed for DC application such as PV/ Photovoltaic system dc-side protection, especially for location of high risk exposure or LPZ 0-2 building entrances (IEC 62305-4) to against the damage from direct or close lightning strikes.

With built in PROSURGE high energy MOV, PVB12.5V CD ensures remarkable lightning current discharge capacity up to 12.5kA 10/350μs and high reliability. The unique design of thermal protection provides quick thermal response and secure disconnection.

- TUV certified T1+ T2 PV DC SPD per IEC/EN 61643-31 standard.
- 18mm narrow model design, prewired three poles of Y circuit for common mode & differential mode protection
- Application in Photovoltaic (PV) systems and other DC power system like charging system for electric vehicles etc.
- Unique thermal disconnector design
- Lightning current capacity up to 12.5kA 10/350μs
- Surge current capability up to 80kA 8/20μs
- Low voltage protection level
- Degradation failure indication and optional remote signal contact.
- Pluggable module for easy replacement without the need to remove system wiring.
- Wide operating temperature -40° C ~85° C
- 35mm DIN-rail mounting
- Comply with EN 50539-11,UL1449 5th, IEEE C62.41,CSA C22.2 standards

Technical data

Part No.	PVB12.5/100-V-CD(-S)	PVB12.5/200-V-CD(-S)	PVB12.5/300-V-CD(-S)	PVB12.5/400-V-CD(-S)	PVB12.5/600-V-CD(-S)	PVB12.5/800-V-CD(-S)	PVB12.5/1000-V-CD(-S)	PVB12.5/1200-V-CD(-S)	PVB12.5/1500-V-CD(-S)
In accordance with	IEC/EN 61643-31; UL1449 5th; EN 50539-11								
Category IEC/EU/VDE	I+ II /1+2/ B+C								
Protection mode	DC+ to DC- , DC+/- to PE								
Nominal Voltage (DC) Un	100V	200V	300V	400V	600V	800V	1000V	1200V	1500V
Max. continuous operating voltage (DC) Ucpv	170V	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, DC+ to DC-)	1.0kV	1.2kV	1.5kV	2.0kV	2.5kV	3.0kV	3.5kV	4.0kV	4.5kV
Response time tA	≤25ns								
Leakage Current Ipe	<0.1mA								
Short-circuit Current Iscpv	25kA								
Operating temperature range	- 40ºC ~ + 85ºC								
Altitude	-500m ~ +4000m								
Cross-section of connection wire (max)	Single-strand 35mm^2; multi-strand 25mm^2								
Mounting	35mm DIN-rail in accordance with EN 50022/DIN46277-3								
Enclosure material	thermoplastic; extinguishing degree UL94 V-0								
Degree of protection	IP20								
Installation width	3 modules, DIN 43880								
Thermal disconnector	Internal Green – normal ; red - failure								
Remote alarm contact	Optional								
Approvals, Certifications	TUV, CE								
Additional data for Remote Alarm Contacts									
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								
Cross-section of remote signaling wire	Max. 1.5mm^2(or # 16AWG)								