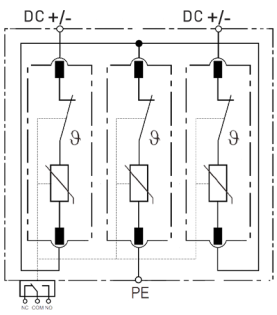
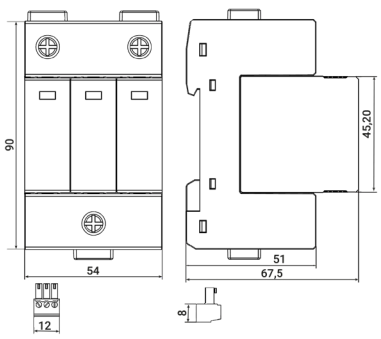
Category IEC / EN:	Type 2 PV surge protection device (SPD)
Location of use:	String box, Inverter
Protection modes:	(+)-PE, (-)-PE, (+)-(-)
High surge discharge rating:	I_{max} : 40 kA
Complies with:	EN 61643-31:2019, IEC 61643-31:2018
Pluggable module	

Technical data: PV C PRO 40/1100		
Max. continuos operating voltage(PV)	U_{CPV}	1100V DC
Nominal discharge current (8/20)	I_n	20 kA
Max.discharge current (8/20)	I_{max}	40 kA
Total discharge current (8/20)	I_{TOTAL}	50 kA
Voltage protection level (+)-PE, (-)-PE	U_p	3,8 kV
Voltage protection level (+)-(-)	U_p	3,8 kV
Short circuit current rating	I_{SCPV}	1000 A
Operating temperature range	T_u	-40 °C ... +80 °C
Response time	t_a	< 25 ns
Operating state / fault indication		green / red
Number of ports		1
Mechnical characteristics		
Min.cross section for terminals	mm²	1,5 mm² solid wire
Max.cross section for terminals	mm²	25 mm² flex. Wire/35 mm² solid wire
Mounting		indoor/35 mm DIN rails acc. to EN 60715
Enclousure material/flammability rate		thermoplastic, gray, UL 94 V-0
Degree of protection		IP 20
Type of remote signalling contact		changeover contact
Switching capacity (a.c.)		250 V / 0.5 A
Switching capacity (d.c.)		250 V / 0.1 A; 125 V / 0.2 A; 75 V / 0.5 A

Order informations	Order Code	Weight
PV C PRO 40/1100	600045	323 g
PV C PRO 40/1100-R (with remote contact)	600049	326 g
PV C PRO 40/1100-M (module)	600050	57 g

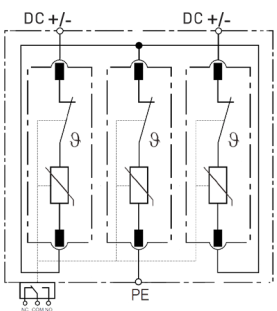


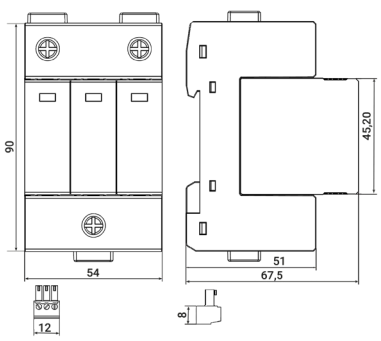


Category IEC / EN:	Type 1+2 PV surge protection device (SPD)
Location of use:	String box, Inverter
Protection modes:	(+)-PE, (-)-PE, (+)-(-)
Complies with:	EN 61643-31:2019, IEC 61643-31:2018
Pluggable module	

Technical data: PV B PRO 12,5/1100		
Maximum continuos operating voltage(PV)	U_{CPV}	1100V DC
Impulse discharge current (10/350)	I_{imp}	6,25 kA
Specific energy	W/R	9.77 kJ/Ω
Charge	Q	3.125As
Nominal discharge current (8/20)	I_n	20 kA
Max.discharge current (8/20)	I_{max}	40 kA
Total discharge current (10/350)	I_{TOTAL}	6,25 kA
Total discharge current (8/20)	I_{TOTAL}	50 kA
Voltage protection level (+)-PE, (-)-PE	U_p	3,8 kV
Voltage protection level (+)-(-)	U_p	3,8 kV
Response time	t_a	< 25 ns
Short-circuit current rating	I_{SCPV}	1000 A
Operating temperature range	T_u	-40 °C ... +80 °C
Operating state / fault indication		green / red
Number of ports		1
Mechnical characteristics		
Min.cross section for terminals	mm²	1,5 mm² solid wire
Max.cross section for terminals	mm²	25 mm² flex. Wire/35 mm² solid wire
Mounting		indoor/35 mm DIN rails acc. to EN 60715
Enclousure material/flammability rate		thermoplastic, gray, UL 94 V-0
Degree of protection		IP 20
Type of remote signalling contact		changeover contact
Switching capacity (a.c.)		250 V / 0.5 A
Switching capacity (d.c.)		250 V / 0.1 A; 125 V / 0.2 A; 75 V / 0.5 A

Order informations	Order Code	Weight
PV B PRO 12,5/1100	600046	399 g
PV B PRO 12,5/1100-R (with remote contact)	600047	402 g
PV B PRO 12,5/1100-M (module)	600048	83 g





Popularity of Solar Energy Systems
Nowadays, solar panel become more and more popular as an alternative or even primary source of household energy. In the last few years, various researches focus on how to improve Photovoltaic (PV) Solar Panel efficiency, reliability, and even availability during all seasons or even at night. Moreover, because installation of photovoltaic solar system is in outdoor it shall also endure outer severe weather condition, animal intervention, and also electrical events such as surge and lightning.

The Importance of Protecting Solar System
PV solar panel can be installed off grid or on grid. Off grid means that the solar system is not connected to the electricity grid. It means that the output power generated by solar PV is consumed or stored on site. On the other hand, on grid PV system means that the system is connected to grid via household connection. Whether on grid or off grid, both systems are equally at risk from lightning strike. In location that lightning protection is properly installed, it is shown that the PV breakdown during the lightning is not caused by poorly designed PV but rather lead by an ineffectual design of the protection. With more photovoltaic power plants being built, the issue for the sector become worse and worse.

This is why **DC surge protection device (SPD)** take into account. As PV system is like other electronic device and also consist of sensitive material, solar PV panels are susceptible to voltage spikes as a minor voltage spike can damage any internal electronic component. The DC SPD works by limiting the transient overvoltage and divert the current waves to earth. Hence the amplitude of the overvoltage values is limited so that it will not harm electrical installation, switchgear, and other electronic device.

Surge overvoltage can affect a PV system installation in a number of ways such as:
- If the lightning hits the PV solar modules, the DC side of the system will be affected.
- If the lightning hits the network after the inverter, the AC system will be affected.
- If the lightning strikes the PV or the structure near it.
- If the lightning strikes the grid network and transferred to the PV solar system.

Whether you plan on installing solar panels or already rely on them, ZAŠČITE is here to provide you with quality protection that you can count on.

Our company specializes in the production of low-voltage electrical cabinets and electrical cabinets for the protection of photovoltaic systems according to your wishes and needs. Based on our experience, we offer technical support and advice in all phases of cabinet production.
We also advise on the installation of the highest quality components.
We manufacture cabinets quickly and reliably.

Our advantages:

- We are a manufacturer of surge protectors - we install our own, tested, top-quality surge protectors in the cabinets.
- We use quality components from well-known manufacturers (Eti, Weidmuller, Schrack,...).
- Enough space for wiring, enough cable glands.
- We also manufacture cabinets with components and in accordance with the customer's project.