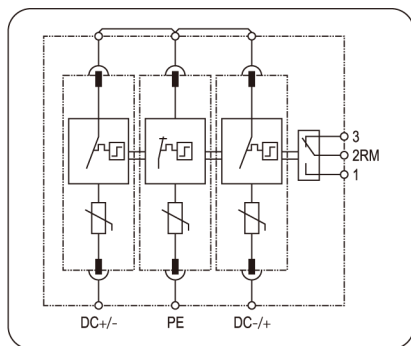


Solar SPD PV system



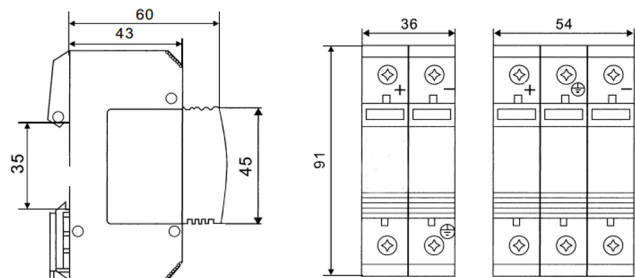
Basic circuit diagram:



• Technical data

Type	FN-500V	FN-800V	FN-1000V
Max. PV voltage U_n	$\leq 500V$	$\leq 800V$	$\leq 1000V$
DC voltage (max. continuous voltage) U_c	500V	800V	1060V
Nominal discharge current (8/20 μ s) I_n		20kA	
Max. discharge current (8/20 μ s) I_{max}		40kA	
Voltage protection level at I_n U_p	$\leq 1.8V$	$\leq 2.5kV$	$\leq 3.6kV$
Response time t_A		$\leq 25ns$	
Operating temperature range T_u	$-40^\circ C \dots +80^\circ C$		
Cross-sectional area	1.5mm ² -25mm ² solid/35mm ² flexible		
Mounting on	35mm DIN rail		
Enclosure material	Orange (module)/light gray (base)		
Dimension	2 pole	2 pole	3 pole
Type of remote signaling capacity	Switching contact		
Switching capacity	AC: 250V/0.5A; DC: 250V/0.1A; 125V/0.2A; 75V/0.5		
Cross sectional area for remote signaling contact	Max. 1.5mm solid		
Test standards	GB 18802.1; IEC 61643-1		
Certification	CE (LVD, EMC)		

Dimension drawing



Product introduction

1. Summary

FN DC items SPD is applied in photovoltaic system. The max. PV voltage up to $U_{cpv}=1000V$ dc, protecting photovoltaic inverter and so on.
Designed according to IEC 61643-11; GB 18802.1;

3. Application

FN DC items SPD is applied in PV system power supply system, Prevent surge and LPZ 0b indirect lightning, protecting photovoltaic inverter equipment.

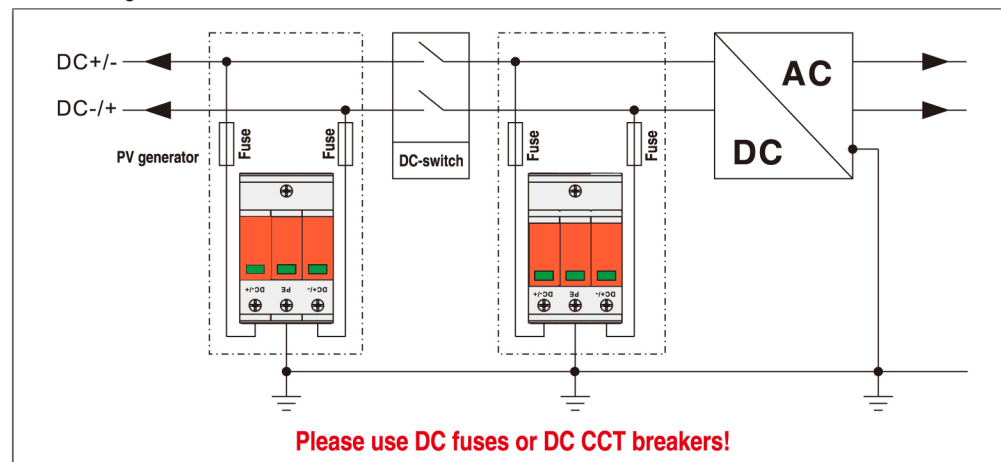
• Installation instruction

This surge protective device is usually installed in distribution-box, protecting PV system devices in photovoltaic generator circuit.

Fuse must be installed at the upstream of the SPD or the lightning arrester to make sure that the protected system has double protection. The value of the fuse used in a SPD system should be conformed to:

1. The value of FUSE should not be larger than the max. withstand capacity of the SPD's backup fuse value.
2. Under the status of the max. current in the power supply & close loop circuit available current, the fuse should be able to disconnect when overloaded or short-circuited.
3. Take 1 & 2 into consideration, the fuse should be as large as possible to allow the maximum surge discharge of SPD.

Installation diagram:



Please use DC fuses or DC CCT breakers!



WARNING:

1. The device must be installed by electrically skilled person, conforming to national standards and safety regulations.
2. It is recommended that installation should be done under power off condition.

2. Main character

- High discharge capacity, quick response, pluggable
- Approved fault-resistant circuit, consist of three varistors and thermal disconnection device
- Multi functional connection for conductor and busbars
- Window will display red when fault occurs, also provide remote alarm terminal at the same time

4. Application environment

- Temperature: $-40^\circ C \sim +80^\circ C$
- Relative humidity: $\leq 95\%$ ($25^\circ C$)

• Installation steps

1. Check the product for integrity of the package; make sure the product window indicate green.
2. Mount the SPD on 35 mm DIN rail.
3. Connect conductors, the cross-sectional area of cable must be larger than 6mm². The withstand voltage value of cable is not smaller than AC800V; ensure wiring reliable.
4. If need remote alarm, it should be connected signal lines to remote signal terminal 1 and 2, or 2 and 3 (When normal 1 and 2 open, 2 and 3 close; when fault, the state is reversed).
5. After above, switch on the power supply and turn on the circuit breaker, if the SPD appeared red window, indicates the unit is faulty.

Regularly inspect the operating status, especially after lightning. Once the fuse upstream break, or the SPD's window not indicate green, electrician should check/replace the SPD.