

P series  
DC Power Supply System  
Surge Protective Devices



### → Test standards

EN 50164-1; IEC 62305; IEC 60364-5-53;  
IEC 61643-1; GB 18802.1; GB 50057; GB 50343

### → Model description

X-X-X-X-X

Protection system:  
D: DC power supply system  
PV: photovoltaic power system  
.....

Nominal voltage/Discharge current:  
24/20: 24 V DC/20 kA  
1200/40: 1200 V DC/40 kA  
385/40: 385 V AC/40 kA  
255/40: 255 V AC/40 kA  
385/60: 385 V AC/60 kA  
255/60: 255 VAC/60 kA  
385/100: 385 V AC/100 kA  
260/100: 260 V AC/100 kA  
260/25: 260 V AC/25 kA  
.....

Type: FL: lighting protection

Series: P: P series SPD

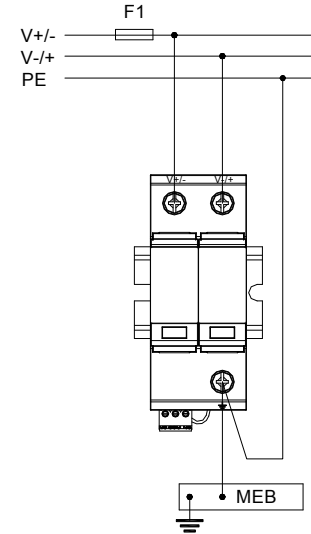
### → Features

- Strong resistance to surge;
- Fault indication and remote alarm terminal;
- Hot plugging, easy maintenance;
- 35 mm rail installation.

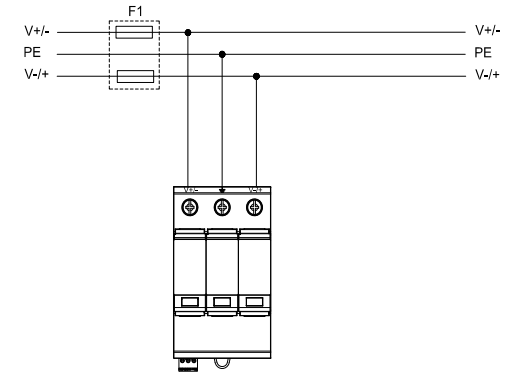
### → Parameters

Parameter \ Type	P-FL-24/20.D	P-FL-48/20.D	P-FL-220/20.D	P-FL-1200/40.PV
Nominal Voltage Un (DC)	24 V	48 V	220 V	1000 V
Max. continuous operating voltage Uc (DC)	48 V	60 V	320 V	1200 V
Short-circuit withstand capacity I <sub>SCWPV</sub>	/	/	/	1000 A
Nominal discharge current I <sub>n</sub> (8/20 μs, C2)	10 kA	10 kA	10 kA	20 kA
Max. discharge current I <sub>max</sub> (8/20 μs, C2)	20 kA	20 kA	20 kA	40 kA
Voltage protection level Up (8/20 μs, C2)	≤ 0.5 kV	≤ 0.5 kV	≤ 4.0 kV	≤ 4.0 kV
Remote alarm terminal	Selection			
Cross-sectional area (min.)	≥ 1.5 mm <sup>2</sup>			
Cross-sectional area (max.)	≤ 25 mm <sup>2</sup>			
Response time Ta	≤ 25 ns			
Working state/failure indicator	Green/Red			
Location	Indoor			
Temperature	-40~+80 °C			
Installation	35 mm DIN rail			
Protection degree	IP 20			
Material	PC, UL94 V-0			

### → Connection diagram



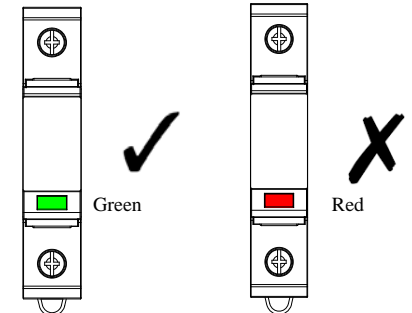
24 V, 48 V, 220 V DC power supply system



Photovoltaic power system

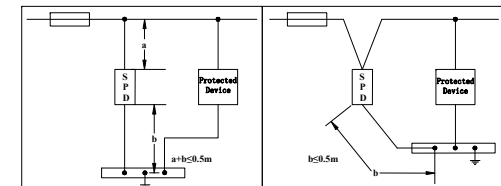
### → Fault indication

When the indication is green, the product is all right.  
When the indication is red, the product is damaged,  
please replace it in time.



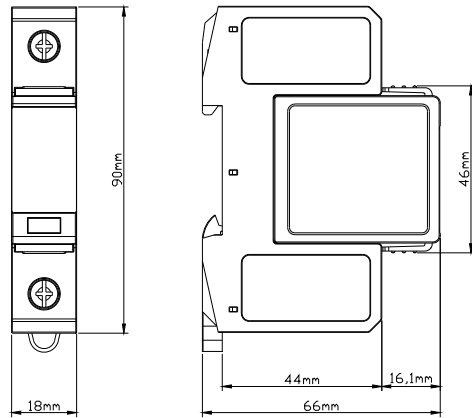
### → Wiring instructions

Increasing the length of the connection wire of the SPD will reduce the overvoltage effect of the SPD so keep the total length as long as possible less than 0.5 m.



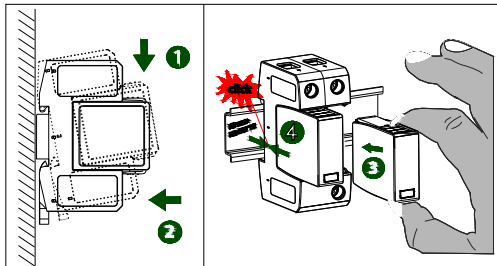
Nanjing New Power Electric Co., Ltd.

## → Dimension



## → Installation

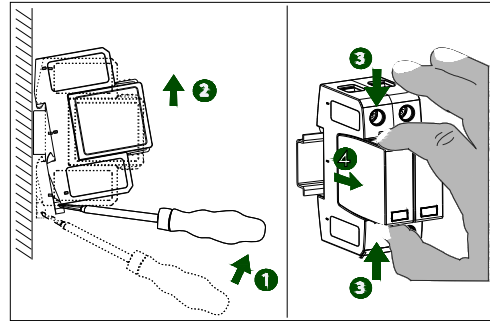
- The apparatus can be mounted on a DIN 35 mm standard rail corresponding to DIN EN 60715, they must be snapped onto the rail, and never slanted or tipped to the side.
- Installation steps are as follows:



Installation

- When installing the SPD, as shown in arrows 1 and 2, make the bayonet locked into the guide rail, Press the spring pin slightly and make the SPD on the DIN guide rail.
- When installing the module, make the arrow on the module and the pedestal at the same side, aim at card slot, then pinch the module as shown in arrows 3 and push in. The sound of "Ka" slight means completion.

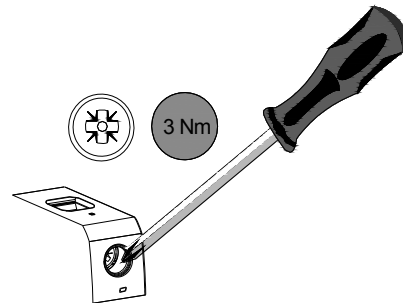
- Removing steps are as follows:



- When removing the SPD, as shown in arrows 1 and 2, screw the spring pin outward with the screwdriver, rotate the SPD and take off the SPD.
- When removing the module, as shown in arrows 3 and 4, pinch the side edge of the module as shown in the figure and pull out the module.

## → Connections

- Maximum torque of the screw is 3 N.m;



- Wire size is 1.5 mm<sup>2</sup>~25 mm<sup>2</sup>.

**Min. 1.5 mm<sup>2</sup>~ Max. 25 mm<sup>2</sup>**



## → Attentions

- The devices degree of protection is IP 20 and must be protected from undesirable ambient conditions (water,

small foreign objects). It is suitable for installed in control room or high density field cabinet, convenient for installation and displacement.

- The devices were designed for use in pollution degree 2 and overvoltage category III as IEC/EN 60664-1. If used in areas with higher pollution degree, the devices need to be protected accordingly.
- Installation position shall not be affected by strong mechanical vibration, impact and electromagnetic induction from signal terminal and power supply, should conformity with the requirements on electromagnetic interference resistance of products in Class 3 industrial field atmosphere stipulated in IEC 61000-4, and the atmosphere shall be free from gases that are corrosive to metal and plastic components.
- Before installation, please check the surge protector is intact or not. If have any damage, it should not be installed.
- Only using the SPD according to this document, if more than the rated value, SPD and other device are likely to be damaged.

## → Supplements

- The apparatus must be installed, connected and adjusted by qualified personnel in non-hazardous area according with the instruction manual.
- If faults cannot be eliminated, the apparatus must be taken out of operation and protected from being placed in service again inadvertently. Devices must only be repaired directly by the manufacturer. Tampering with the apparatus is dangerous and therefore forbidden.
- The operator must strictly comply with the relevant local safety standards and guidelines.
- If there is any content difference between the specification and the website or sample, the instructions shall prevail. We reserve the rights to change or update the product information without prior noticing the users.