RPD48-40/2P
DC Power Module SPD

1 Application

The RPD48-40/2P product is a DC power supply modular SPD, which is safe, reliable, and has strong grid adaptability. It provides line-to-line and line-to-protective earth (PE) protection for 48V DC power ports to prevent lightning-induced overvoltage. and damage caused by ground potential reaction.

2 Features

Features of RPD48-40/2P DC Power Module SPD are:

- Large flow capacity and low limiting voltage;
- The operating voltage is appropriate and the protection circuit is robust;
- Built-in over-temperature and over-current protection, no freewheeling, high reliability and safety;
- The module has a pluggable structure, the module prevents mis-insertion, is replaceable, and is easy to maintain;
- Equipped with status indication and remote signaling alarm functions;
- The workmanship is exquisite and can work in harsh environments for a long time. It is fixed with 35mm DIN rail, which is easy to install and maintain.

3 Operating Principle

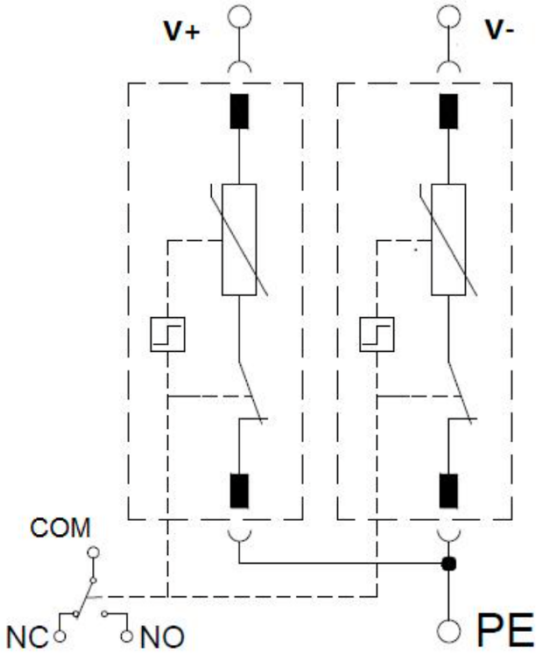


Figure 3-1 Operating principle of RPD48-40/2P (for reference only)

4 Technical Data

Model / Parameter	RPD48-40/2P
SPD classification IEC61643-31	Class II
SPD classification GB18802.1	Class II
Nominal operating voltage Un	DC48V
Maximum continuous operating voltage Uc	DC85V
Nominal discharge current In(8/20μs)	20kA
Maximum discharge current Imax(8/20μs)	40kA
Protection Voltage Up	≤0.6kV
Protect Mode	V+-PE、 V--PE
Protection Level	Class C

Response time	≤25ns
Leakage current	≤20μA
Access conductor cross section	6~25mm^2
Deterioration failure indication	Turns red after failure
Installation wiring torque	3Nm
Remote	Alarm dry contact (RSC:Remote Signal Contact)，NC-COM-NO contact
Remote signaling terminal performance	AC:250V/0.5A;DC:250V/0.1A，125V/0.2A，75V/0.5A
Remote signaling wire cross section	Maximum 1.5mm^2
Installation	35mm standard DIN rail
Enclosure material	UL94-V0

5 Dimensions

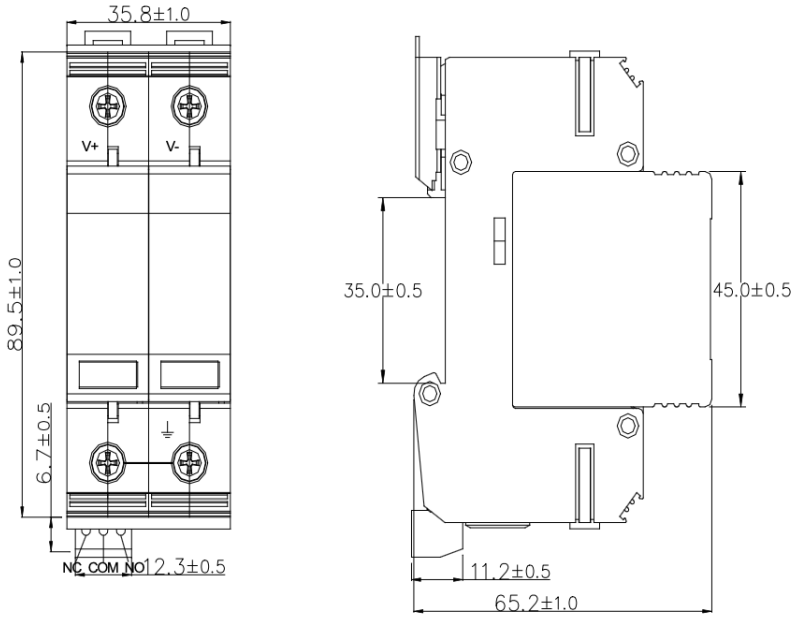


Figure 5-1 RPD48-40/2P overall dimensions

Figure 5-2 Appearance of RPD48-40/2P

6 Installation & Maintenance Precautions

1. The product is installed and fixed using a 35mm standard guide rail. When the V-shaped wiring shown in Figure 7-1 is recommended for wiring, conventional direct parallel wiring as shown in Figure 7-2 can also be used. In order to achieve better protection effect, when using direct parallel wiring, the wiring should be as short as possible and the total length should be controlled within 0.5m.

2. When remote alarm is required, the alarm wiring is shown in Figure 7-3.

3. A suitable fuse or circuit breaker should be connected in series with the front end of the power surge protector.

4. The power supply must be disconnected during installation, and live operation is strictly prohibited.

5. After installation, check whether it works normally. When the power surge protector is working normally, its working status indication should be green, the alarm dry contact NC-COM is in the conducting state, and the alarm dry contact NO-COM is in the open circuit state; when the DC power supply modular surge protector fails, the status The indication turns red, and at the same time, the alarm dry contact NC-COM is in an open circuit state, and the alarm dry contact NO-COM is in a conductive state.

6. The power surge protector does not require special maintenance. You only need to regularly check whether the module wiring is loose and whether the status indication is normal.

7. If one of the following phenomena occurs, it can be determined that the power surge protector has failed and needs to be replaced in time:

1) The status indication of the power surge protector turns red;

2) The alarm dry contact NC-COM of the power surge protector becomes open circuit, and the alarm dry contact NO-COM becomes short circuit.

7 Wiring

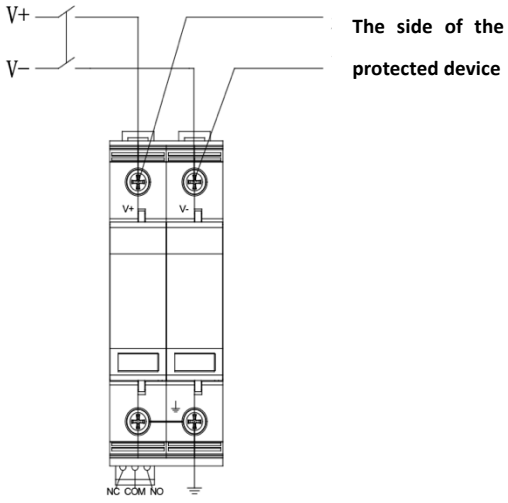


Figure 7-1 RPD48-40/2P wiring diagram-'V' shape wiring

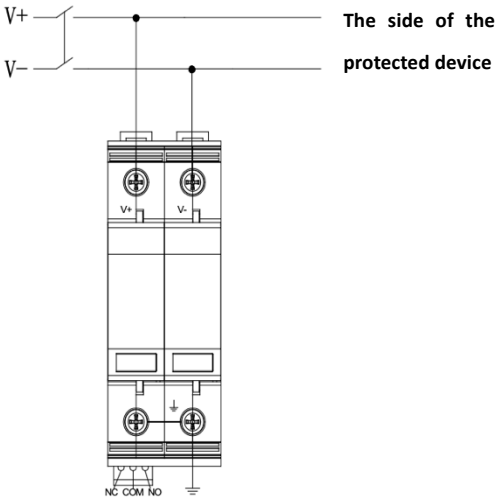


Figure 7-2 RPD48-40/2P wiring diagram - conventional wiring

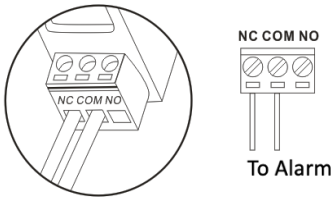
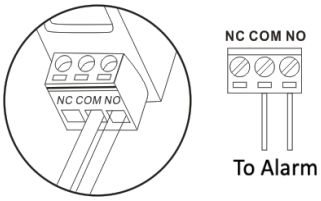


Figure 7-3 Remote alarm connection method 1: Normally closed, fault open circuit



Remote alarm connection method 2: Normally open, fault short circuit

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