

VPM1000-50/3N+NPG(T1+T2) 50kA Three-phase Power Module SPD

1 Application

VPM1000-50/3N+NPG(T1+T2) is AC power supply lightning arrester, used for the first-level (Class B) lightning overvoltage protection of three-phase AC power supply.

2 Features

Features of VPM1000-50/3N+NPG(T1+T2) three-phase AC power SPD are:

- Large flow capacity, limiting low voltage;
- The action voltage is appropriate, the protection circuit is robust;
- Built-in over-temperature, over-current protection, no continuous flow, high reliability and safety;
- Module pluggable structure, module anti-misinsertion, replaceable, easy maintenance;
- With status indicator and remote alarm function;
- Sophisticated technology, can work in harsh environment for a long time, using 35mmDIN rail fixed, easy installation, simple maintenance.

3 Technical Data

Parameter	Model
	VPM1000-50/3N+NPG(T1+T2)
SPD classification IEC61643-11	Class I+ II /Type1+2
SPD category GB18802.11	Class I+II
Protection mode	3+1 mode
Nominal operating voltage Un	800V, 50/60Hz
Maximum continuous operating voltage Uc	L-N: 1000VAC; N-PE: 255VAC
Impulse discharge current, Iimp (10/350 μs)	12.5kA
Nominal discharge current In (8/20 μs)	25kA
Max discharge current Imax (8/20 μs)	50kA
Voltage protection level, Up	L-N≤5.0kV; N-PE≤2.0kV
Leakage current	≤20μA
Response time	L-N≤25ns; N-PE≤100ns
Maximum backup protection fuse	80A gL/gG
Access wire cross section	6~35mm ²
Bare wire crimping length	12.5mm
Installation torque (max)	3Nm
Deterioration failure indication	The lightning protection module has an indication window, which turns red in the fault state
Remote communication mode	RSC: Remote Signal contact, NC-COM-NO contact
Remote terminal performance	AC: 250V/0.5A; DC: 250V/0.1A, 125V/0.2A, 75V/0.5A
Remote wire section	Max. 1.5mm ²
Installation mode	Standard rail mounting DIN rail 35mm
Housing material	PA66 UL94-V0
Housing protection class	IP20
Operating environment	-40℃~+70℃
Relative humidity	≤95% (25℃)
Altitude	≤3000m
External dimensions(excluding terminal blocks)	92mm×90mm×85.4mm

4 Dimensions

This product belongs to one port parallel lightning protection module, adopts modular structure, 35mmDIN rail fixed, connection hole can connect up to 25mm² flexible wire and 35mm² rigid wire.

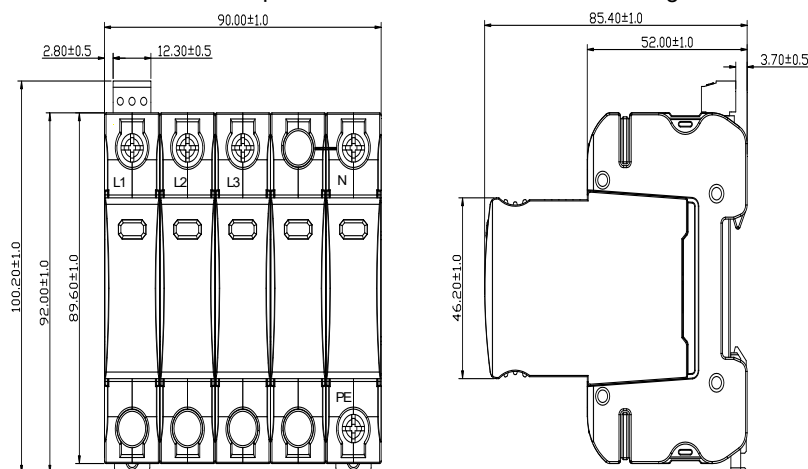


Figure 5-1 Dimensions of VPM1000-50/3N+NPG(T1+T2) (unit: mm)

5 Installation & Maintenance Precautions

1. The product is fixed using 35mm standard rails. If the V-shaped cable shown in Figure 6-1 is recommended, the conventional direct parallel cable shown in Figure 6-2 can also be used. In order to achieve a better protection effect, when the direct parallel connection is used, the connection should be as short as possible, and the total length should be controlled within 0.5m.
2. If the remote alarm is required, select the open or short port based on the alarm system, as shown in Figure 6-3.
3. The front end of the power SPD should be connected in series with suitable fuses or circuit breakers.
4. The power supply must be disconnected during installation. Live operation is prohibited. The connection wires must meet the requirements.
5. After the installation is complete, check whether the work is normal. When the power SPD works normally, the remote signaling contact NC-COM is in the on-state and the RSC NO-COM is in the open state. When the power surge protector fails, the status indicator turns red, the RSC NC-COM for alarm is in the open state, and the RSC NO-COM for alarm is in the short state.
6. The power surge protector does not require special maintenance, and only needs to check regularly whether the module wiring is loose and the status indicator is normal.
7. If either of the following situations appears, the SPD fails and needs replacement.
 - 1) The status indicator of the power surge protector turns red;
 - 2) The NC-COM RSC of the power surge protector is in the open state, and the NO-COM RSC is in the short state.

6 Wiring

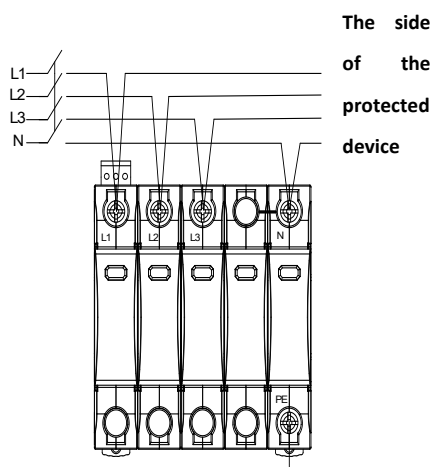


Figure 6-1 wiring diagram-'V' shape wiring

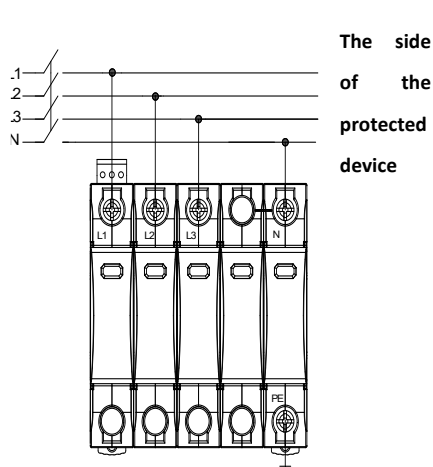


Figure 6-2 wiring diagram-routine wiring

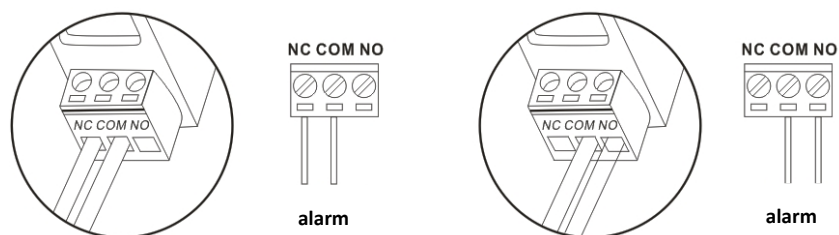


Figure 6-3 Remote alarm connection 1 is normally closed, fault open

Remote alarm connection 2 is normally open, fault short circuit