MicroMate®

The Din-Rail Surge Protection Device (SPD) for DC power lines with status indicator is designed, fabricated and tested according to the stringent international standards.

The product, in parallel with the protected loads, can effectively suppress and discharge any over-voltage or over-current caused by inrush surges, spikes or electrical noises by maintaining the potential difference between the power lines with respective to earth. It automatically returns to its normal state after a lightning strike with good or bad status indicator. It is considered open-circuit with respective to earth under normal working condition.

- Provides lightning surge protection for DC power lines against transient voltages induced by lightning at the intersection of LPZ0B and LPZ3 as defined in GB50343 lightning protection zones.
- Suitable for lightning protection class D DC power system distribution.
- Modular design with status indicator showing good or deterioration state.
- With thermal breaker, built-in over-current fused protection to avoid possible fire hazard caused by lightning strikes.
- Core components are selected based on high reliability, multi-level protection and depressed residual performance.
- Extremely low residual voltage design, fast respond and large current capability.
- Suitable for telecommunication rooms, DC bus, DC bulbar microwave communications room, substation bus, control bus, and all electrical equipment in which surge protection for DC power lines is essential.

Technical Specifications

MODEL	SP12-20KA/2	SP24-20KA/2	SP48-20KA/2	SP110-20KA/2
Protection Class	Type D			
Operating Voltage (Un)	12V	24V	48V	110V
Max. Continuous Operating Voltage (Uc)	20V	30V	65V	150V
Nominal Discharge Current (8/20μs) (In)	10KA			
Max. Discharge Current (8/20μs) (Imax.)	20KA			
Voltage Protection Level (Up)	≤ 320V	≤ 350V	≤ 380V	≤ 500V
Response Time	< 25ns			
Leakage Current	≤ 20uA			
Protection Mode	"+"-PE / "-"-PE			
Working Environment	Temperature -40°C ~ 70°C; Relative Humidity < 90%			
Enclosure Material	Flammability Resistance ABS			
Dimensions (W x D x H)	36 x 90 x 65 mm^3			
Weight	0.21KG			

Note: Due to the policy of continued product improvement, specifications are subject to change without notice.

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Product Installation

1. The unit is suitable for most DC power distribution system. It is installed on the 35mm electrical din-rail and connected in parallel with the incoming DC power lines in the Distribution Board (DB). Ensure that the incoming power source is isolated before doing any electrical connections.

2. With reference to the Installation Diagram, connect Positive (+), Negative (-) and Earth (PE) in accordance with the markings on the terminals. Ensure that the connections are correct. Turn on the incoming power source and check if the status indicator showing Green color, which indicates good working state.

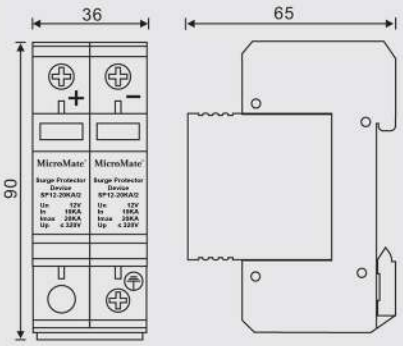
3. Regular checking the working status of the unit is strongly recommended. The status indicator shows Green color when the unit is on good working state, while Red color means the unit is on deterioration state and needs to be replaced.

4. All electrical wires should be tightened with correct torque and the recommended sizes are as follows,

   SPD cable: BVR≥2.5~16mm
   Grounding cable: BVR≥ 4~16mm

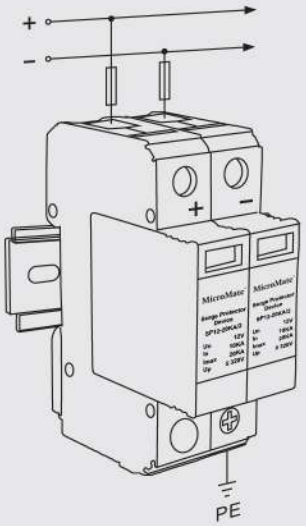
5. The grounding wire should be as short as possible and the grounding resistance should be less than 4 Ω in order to meet the lightning protection requirement.

Dimensions



Unit: mm

Installation Diagram



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