

COAXIAL LIGHTNING SURGE PROTECTOR (Waterproof Type)

SP1000PW (TYPE:M-J/M-P)
SP3000W (TYPE:N-J/N-J)



Instruction Manual

To use the unit properly, read the instructions thoroughly before installing the unit. Keep the instructions at hand to refer to it if necessary.

Caution

1. To avoid shock, do not touch the unit and a coaxial cable being connected to the unit after the thunder lightning starts.
2. To avoid damaging radio equipment from thunder lightning, disconnect a coaxial cable from the equipment and keep it away as possible from your reach, preferably outside, if the equipment is switched off for a long time.
3. To install the unit, be sure to provide stable foot step to avoid falling down or slipping off from a ladder,
4. To avoid injuring other people, do not drop the unit, parts, or tools.
5. To avoid falling, slipping, or injuring, do not install or inspect the unit under bad weather condition.
6. To avoid causing fire, shock, or injuring, do not connect ground the unit to a gas pipe or water pipe.

Note

1. Do not share the ground line with other utility ground lines such as power line. It is recommended to separate the unit's ground line from ones in other systems to avoid malfunctioning the unit.
2. Though the unit is designed to work well to protect radio equipment from high surge voltage caused by the static electrocutions or thunder lightning, it cannot protect the equipment from high current and voltage caused by a thunder strike itself. To protect the equipment from the strike, install proper thunder conductor separately.

Features

1. To achieve maximum safety, the unit employs builtin pressured gas tube surge arrester element to discharge and ground the surge current when it exceeds predetermined discharge voltage.
2. The unit starts discharging at predetermined voltage and stops discharging repeatedly as necessary. It is practically no need to replace the unit. And, if the unit is broken by chance, it is easily accessible to replace the unit without calling a service.

3. Coaxial structure of the unit allows the unit to have good RF performance, broad bandwidth, low insertion loss, and low VSWR.
4. Since the surge protectors are designed to be waterproof, no waterproofing procedure is required.

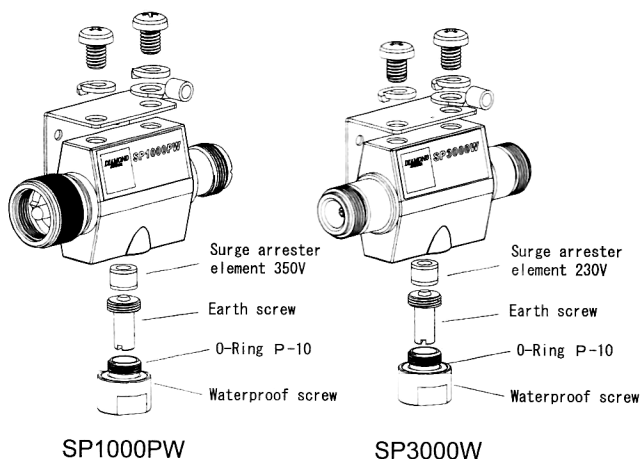
Installation

1. It is recommended to install the unit at the place where has easy access to the grounding point such as the place where a coaxial cable is fed into the building.
2. Crimp or solder a copper wire, with 2.5 to 3.2mm diameter, to a grounding lug and connect the other end to buried earth ground. It is recommended to make the grounding line as short as possible.
3. Tape both ends of the unit. First, tape coaxial connecting section with weather seal form tape thoroughly and then tape it with vinyl electrical tape to fasten. This handling is not required when the unit is installed in the building.

☆ To make good surge grounding

Take the following precautions in mind and refer to those books specialized in grounding, or consult with specialist.

- Make grounding resistance as low as possible.
- To make ground contact are as large as possible, use electrode such as copper plate as large as possible.
- When the antenna is installed on a tower high above the ground, ground the base section of the tower with thick wire (more than 30mm copper wire or more than 50mm cross sectional area aluminum wire). Then install the unit at right below the antenna and connect the unit's earth section to the tower to use the tower as effective grounding line.



Model NO.	SP1000PW	SP3000W
Frequency range	DC~1000MHz	DC~3000MHz
Impedance	50Ω	
VSWR	Less than 1.2	
Insertion loss	Less than 0.3dB	
Max. power rating	400WPEP	200WPEP
DC breakdown voltage (100V/S)	350V±20%	230V±20%
Max. impulse breakdown voltage(1000/μS)	800V	650V
Nominal impulse discharge current(8/20μS 10 times)	10kA	
Impulse life (10/1000μS) 100A(times)	300	
DC holdover voltage	150V	
Insulation resistance	Over 10,000MΩ	
Connector	M-J/M-P	N-J/N-J
Outer dimensions (Max. value incl. connector)	78WX55HX26D(mm)	
Weight	Approx. 130g	Approx. 150g