quot spd quot for grid tie inverters

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Just as solar SPDs must be properly rated, they must also be properly installed. The correct solar SPD installation will ensure that the device is providing the level of protection it is rated for --and that it will continue to do so for the lifetime of the product. The instructions and tips in this guide will help you understand what is required to properly install a solar surge protection device.

The surge protection device, SPD, is the first line of defense against damaging voltage surges. Solar SPDs are engineered to provide a high level of protection against the damaging effects of lightning and utility-related electrical surges.

The surge protection device location will vary depending on the type of product being protected and the level of protection required. Generally, the various equipment and circuits must be connected to one. Here below are the general guidelines for SPD installation:

To ensure that your SPD is properly installed and that it will provide the level of protection it is designed to provide, it’s crucial that you follow the manufacturer"s instructions. That said, here is the solar SPD installation guide to provide you with an overview of what’s required.

The first step in installing a solar SPD is to select the proper location for the device. There are three main classes of solar SPD based on the specified location or installation point: the main SPD, the circuit SPC, and load SPD.

The main surge protector is designed to be installed at the service entrance, between the utility power source or solar array and the inverter. Main SPDs provide surge protection for the entire electrical system, including all branch circuits.

The circuit surge protector is a type 2 SPD and usually provides secondary protection. This protection device is designed to be installed at the main service panel, between the main SPD and the branch circuit breakers.

The load surge protector is a type 3 SPD and provides tertiary protection. It is normally installed at the point of use, between the branch circuit breaker and the electronic equipment. Load SPDs provide surge protection for electronic equipment and appliances.

Solar SPD installation guidelines also recommend the proper connection of the SPD to the electrical system. The SPD should be connected to the phase (hot) conductor, neutral conductor, and the ground conductor.

Once the SPD is properly installed and connected, the last step is to test the device to ensure that it is functioning correctly. SPD manufacturers provide instructions on how to properly test their products alongside

their installation instructions.

To ensure a successful solar SPD installation, various rules must be followed. These will help avoid any problems and will guarantee the correct functioning of the device in dissipating surges. The rules include those that concern the SPD regulations of your country, manufacturer guidelines, and proper electrical safety practices.

1. Make sure that the selected SPD is properly rated for the application. The SPD voltage rating must be greater than the maximum expected voltage of the system. The current rating, too, should not be less than the maximum surge current that the system can experience.