



Surge Protective Devices (SPD) are intended to limit surge voltages and divert surge current and there by protect equipment and the installation from failures. SPD contains at least one non-linear component that is connected in parallel to the lines where the surge voltage needs to be limited. For 230/400 volt power line SPD's are generally installed inside power distribution boards as well as in electrical and electronic equipment.

SPD's are the most sensitive devices in the electrical network with response time in nano seconds.

Different SPD testing standards are

- IEC 61643-1: 2005 (discontinued / withdrawn) (equivalent EN 61643-11)
- IEC 61643-11:2011 (equivalent EN61643:11-2012)



*Mechanical coding / interlock in the plug to prevent incorrect combination of plug-in SPD*



*Mechanical coding / interlock in base to prevent incorrect combination of plug-in SPD*

Discontinued standard check only the performance of SPD where as current valid standard need safety and performance tests. Number of safety parameters are included in the new standard for SPD's. In Europe, SPD's confirming the new standard are only allowed legally.

Some major improvement as per new standard is TOV and voltage protection level test, Mechanical coding/ interlock to prevent incorrect combinations of plug-in SPD modules and sockets.

Eg:- SPD with a voltage protection level between 1.2 and 1.4 KV as per old standard will offer actual protection level higher than 4 KV as per new standard.

Following example help customers in selecting a SPD as per latest standard.

As number of suppliers are still not able to manufacture SPD's confirming to safety requirements, they just dump the old products in India resulting in serious safety issues. These devices do not protect the installation

due to protection level (Up) much higher than the declared value in catalogue. Even self certified CE declarations are manipulated.

**Users of SPD's can ensure safety of SPD's by**

1. Checking the coding in pluggable SPD's
2. Check the test report of SPD's. Ask supplier to submit test report from an international lab such as VDE, KEMA, OVE etc. ■

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