

the leading electrical & electronics monthly

ieema journal

VOLUME 8 • ISSUE NO. 11 • JULY 2017 • PGS. 104

ISSN 0970-2946 • Rs. 100/-

Industry fully equipped to meet Domestic Demand arising from Capacity Addition

Exports in power sector growing at 10% CAGR

Electrical Equipment Grows by 4.25% (2016-17)

Indian power sector - Investment potential of Rs 15 trillion in next 5 years

Solar power addition achieved 104% in overall renewable addition

Imports declining at a rate of 4% in last 5 years

Event

17th African Utility Week

In Depth

Energy Storage in India:
A Fast Evolving Landscape

Opinion

Need of Electricity Storage
System for Reliable
Renewable Energy Integration

SME Talk

Impact of GST on SME

ANNOUNCING ELEC RAMA-2018, 10-14 MARCH 2018



ELEC RAMA
we are all about electricity

10-14 MARCH 2018
INDIA EXPO MART
GREATER NOIDA, NCR, INDIA

SPD's and Safety

How to find out a safe SPD confirming to IEC 61643-11 : 2011



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 IEC 61643-1: 2005 (discontinued / withdrawn) (equivalent EN 61643-11)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

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.

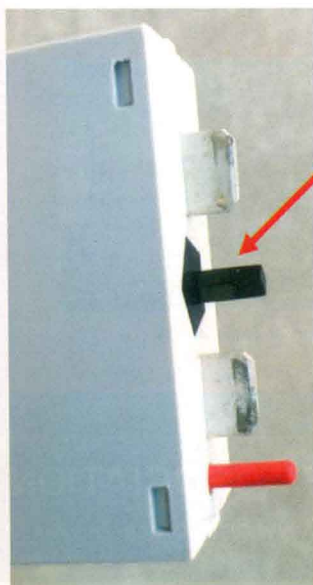
Following example help customers in selecting a SPD as per latest standard.

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

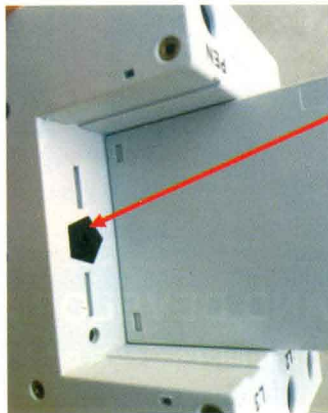
due to protection level (Up) much higher than the declared value in catalogue. Even self certified CE declarations are manipulated.

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. ■



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

S. Gopakumar

Managing Director, Cape Electric Ltd.