

Lightning Protection (LPS), Surge Protection Devices (SPD) and Surge Arrester (SA) are three components of an effective electrical protection system. It is important to understand the difference among them.



Lightning Protection (LPS)

Lightning is an atmospheric discharge of electricity, most significant source of transient surges can travel at speed of 60,000 m/s (130,000 mph), can reach temperature up-to 30,000°C (54,000°F), can carry up-to 200kA, and can carry 30 - 100 million volts. LPS is a network designed as per UL96/96A, NFPA-780 and LPI-175 standard to capture a direct strike and provide a preferred path to ground to discharge dangerous electricity. Lightning strikes can cause fires, explosions, chemical release or mechanical disruption within or around a building.

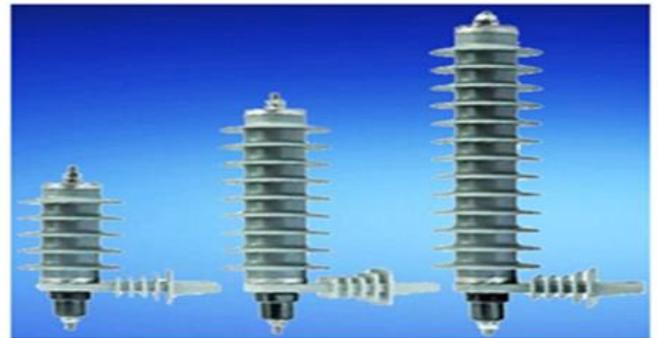
LPS is a safe-guard to building structures and protects property, inventory, electronic equipment and personnel from the destructive forces of lightning.

Surge Protective Device (SPD)

SPD is designed certified by ANSI/UL 1449 to protect electrical systems and equipment against surges, excess voltages either impulses or transient AC over voltages. An area that receives a lot of lightning or where electric utility power is unreliable, installing surge protectors greatly reduce damage to equipment in both commercial, Industrial and residential buildings.

Use of the surge protection devices is increasing continuously with 20% per year. They are used in service entrance, downstream panel board, and to make clean supply of power to solid state equipment. Typical SPD applications within industrial, commercial and residential include:

- Service entrance, control cabinets, electronic motor controllers, Telecom, base stations, data communication networks, metering, medical equipment, back-up power, UPS, HVAC, telephone lines, cable TV feeds, security systems, alarm signaling circuits, entertainment center household appliance, UPSs, CCTV equipment.



Surge Arrester (SA)

SA is designed for protecting large electrical distribution systems from lightning surges, and not for sensitive solid-state equipment. SA is best to protect insulation of transformers, panel boards, and wirings. It doesn't work well for solid state equipment. When comes the protection of large equipment like transformers that work under high voltage, surge arresters are best.

