

# Glossary of ANSI/UL 3<sup>rd</sup> Edition Terms

**SURGE:** A sudden and sharp increase of current or voltage within electric circuits.

**SURGE PROTECTIVE DEVICE (SPD):** A device used to limit a surge on equipment by diverting or limiting it. SPDs were previously known as Transient Voltage Surge Suppressors or secondary surge arresters.

**SHORT CIRCUIT CURRENT RATING (SCCR):** The measurement of how much current the electrical system can supply during a fault condition. This value determines where an SPD may be installed. (Listed on the product)

**NOMINAL DISCHARGE CURRENT (In):** Peak value of the current through the SPD having a current wave shape of 8/20 where the SPD remains functional after 15 surges. (Listed on the product)

**NOMINAL SYSTEM VOLTAGE:** The voltage level at which a system normally operates. Nominal system voltages include, but are not limited to, 120, 208, 240, 277, 347, 480, 600 VAC. (Listed on the product)

**MODES OF PROTECTION:** Electrical paths within a system which an SPD offers defense against surge events. Examples of protection include, Line to Neutral (L-N), Line to Ground (L-G), Line to Line (L-L) and Neutral to Ground (N-G). (Listed on the product)

**VOLTAGE PROTECTION RATING (VPR):** The value assigned by UL which specifies the measured limited voltage value of the SPD. VPR rating is formally known as the "suppressed voltage rating". (Listed on the product)

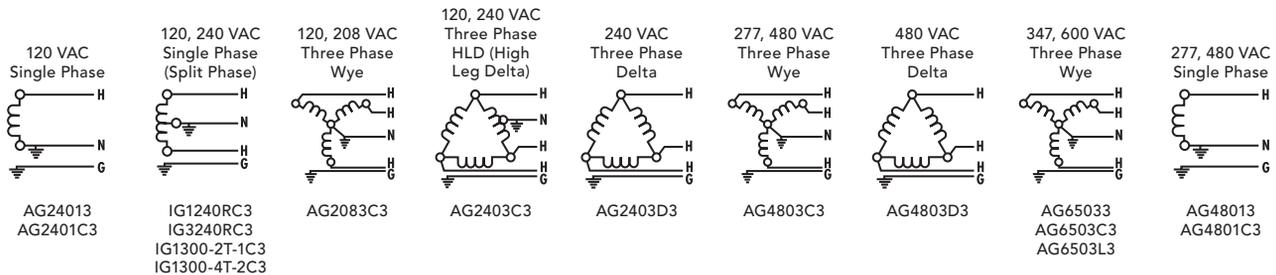
**MAXIMUM CONTINUOUS OPERATING VOLTAGE:** The maximum RMS voltage that may be applied to each mode of a surge protection device. (Listed on the product)

## Guidelines to consider when choosing a Surge Protection Device

1. Geographic location
  - a. Exposure to utility grid switching
  - b. Locations susceptible to brownouts or frequent utility power switching
2. Point of installation (also see types of SPD within definitions)
  - a. Protect equipment which is located near switching motors or transformers
  - b. Sensitive equipment: Computers, home theater systems, appliances which have sensitive electronics should be protected

## System Voltage

The wiring diagrams characterize common voltage configurations available for the products. Refer to individual product pages for models available in below configurations. Match the voltage configuration below with your voltage configuration at your service entrance, distribution panel or panelboard location where you want protection.



Note: As with all SPDs, this standard only protects against surges that travel along the electrical pathway and does not protect against direct lightning strikes traveling down non-electrical paths. For Type 2 SPDs, your SPD is only as useful as your weakest breaker. Make sure sizing of breakers within the electrical panel are at least a 20 amp dual pole breakers to aid in preventing short circuits before the SPD becomes functional. Type 1 SPDs are normally mounted before the panels which would not include a breaker.