

UL 1449, 3rd Edition... What you need to know

Surge Protective Devices (SPDs) are continuously evolving and improving in their ability to protect sensitive electronic equipment from damage. As part of the evolution, Underwriters Laboratory (UL) is improving their ability to evaluate and test surge products. UL has recently required that all SPDs conform to a new standard which is called UL 1449, 3rd Edition. The new standard requires a higher level of surge protection performance.

OVERVIEW OF CHANGES:

The following terms and measurements are OUT -

- Surge Voltage Ratings (SVR) or “clamping voltage”. Controversial since there is no industry standard for testing. (Old SVR test used a 6kV/500A impulse)
- Duty Cycle Test.
- Maximum Surge Current.
- Joule Rating.

The following terms, tests, and measurements are IN -

- Voltage Protection Rating (VPR). Standardized test. Must survive 15 surges without significant degradation. (New VPR test uses a 6kV/3kA)
- New “Type” Designations
 - Type 1** - Line side of service entrance (meter socket units and lightning arresters).
 - Type 2** - Load side of service entrance (panel mount units).
 - Type 3** - Point-of-use (strips and receptacles).
 - Type 4** - Recognized Equipment (modules used by panel builders, etc.).
- Nominal Discharge Test for Type 1 & 2; In ratings 3kA, 5kA, 10kA, 20kA. Standardized test allows direct comparisons. Must survive 15 surges without significant degradation.

UL 1449, 3rd EDITION MARKING REQUIREMENTS:

- “MCOV” (Maximum Continuous Operating Voltage).
- Type 1, 2, 3 or 4 designation.
- In Rating (Nominal Discharge Current Rating)
- VPR (Voltage Protection Rating).
- SCCR (Short Current Rating)
- Voltage, Current, Frequency

The BOTTOM LINE:

- These new standards provide a higher level of surge protection.
- The new VPR is a harsher requirement.
- The lower the VPR rating, the better the SPD.
- Standardized tests allow direct manufacturer comparisons.
- SCCR (Short Current Rating)

Leviton offers a complete line of Surge Protection Devices that meet or exceed the requirements of the new UL 1449, 3rd Edition.

