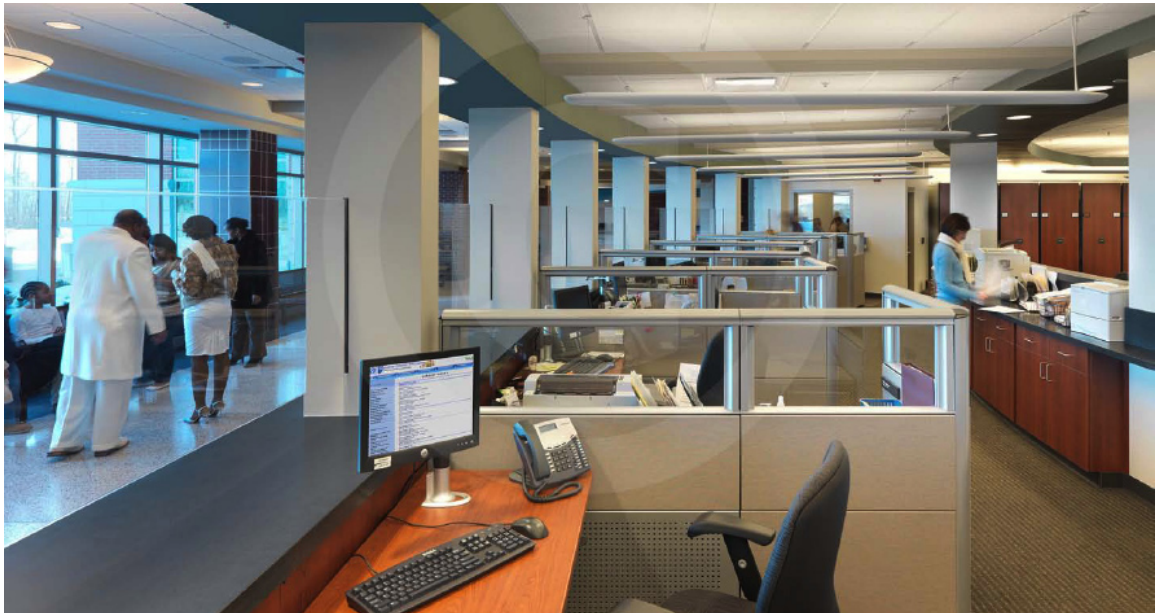# Tamper-Resistant Surge Protective Receptacles, 15A and 20A

Commercial and Hospital Grade versions
NEC 2008 and UL 1449 3rd Edition Compliant

As a pioneer in the electrical device industry, Leviton is once again the first to introduce Tamper-Resistant versions of our Surge Protective Receptacles. These devices are fully compliant with the NEC 2008 and UL 1449 3rd edition, so you can rest assured that your equipment is protected, as well as your staff and visitors.

The low cost of these receptacles, combined with their ease of installation, means they can be placed anywhere you have a standard electrical outlet. So with a small investment, you have the assurance that your equipment is well protected, whether it's a heart monitor in the emergency room or a computer in your office.

Features

- Available in 15A 125V and 20A 125V ratings
- Tamper-Resistant Shutter Mechanism prevents incidental contact with energized contacts
- Indicator light provides visual indication that equipment is being protected
- Single and Duplex versions
- EMI/RFI Noise Filtering
- Available audible alarm for hidden locations (can be silenced)
- Wide variety of color options aid in identifying different types of equipment or applications
- Back and side-wired design with durable metal mounting strap
- Point-of-use protection for up to 18,000 amps of surge current total

SMART GRID™

For smart grid information please refer to smart grid info box on back cover.

Tamper-Resistant Surge Protective Receptacles

LEVITON®

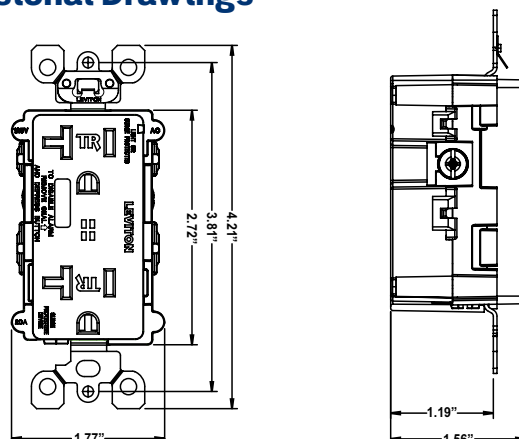| T5280 | T5380 | T7280 | T7380 | T8280 | T8380 |

Specifications

Electrical Specifications

Dielectric Voltage	Withstands 2000V per UL498
Current Limiting	Full Rated Current
Temperature Rise	Max 30C after 250 cycles OL at 200% rated current

Environmental Specifications

Flammability	Rated V-2 per UL 94
Operating Temperature	-40C to 60C

Material Specifications

Face Material	Nylon
Body Material	Polycarbonate
Line Contacts	Brass Triple-Wipe
Terminal Screws	Brass-Plated Steel
Grounding Screw	Brass-Plated Steel
Yoke	Zinc-Plated Steel
Clamp Nuts	Zinc-Plated Steel
Ground Clips	Brass-Plated Steel
Shutter Mechanism	Delrin® Acetal

Mechanical Specifications

Terminal ID	Brass-Hot, Green-Ground, Silver-Neutral
Terminal Accom.	14-10 AWG
Product ID	Ratings are permanently marked on device
Terminal Screw Torque Rating	14-16 in lbs.

Performance Data

Maximum Continuous Operating Voltage (MCOV)	150V rms
Joules Rating	720
Nominal Discharge Current (In)	3kA (Meets Type 2 & Type 3 Requirements)
Max Surge Current	L-N: 18kA, L-G: 9kA, N-G: 9kA
Noise Rejection	-30dB at 500kHz-30MHz
Voltage Protection Rating (VPR)	L-N: 600V, L-G: 700V, N-G: 600V
Short Circuit Current Rating (SCCR)	5000A
Diagnostics	Indicator Light, Audible Alarm (on select versions)

Standards and Certifications

NEMA	WD-6
ANSI	C-73
UL498	File E13399
UL1449 3rd Edition	File E317603
CSA C22.2 No. 42	File 152105
NOM	057

Ordering Information

Key:

▼ Isolated Ground (IG)	▪ Indicator Light
‖‖‖ Audible Alarm	● Hospital Grade

15A, 125V, TR Surge Protective Receptacle

Color	Outlet Configuration		
	Duplex	Duplex	Duplex
Brown	T5280	-	-
Ivory	T5280-I	T7280-I	T8280-I
White	T5280-W	T7280-W	T8280-W
Gray	T5280-GY	-	-
Red	-	-	T8280-R
Blue	T5280-B	T7280-B	T8280-B
Black	T5280-E	T7280-E	-
Lt Almond	T5280-T	T7280-T	T8280-T
Features	▪	▪ ‖‖‖	▪ ‖‖‖ ●

20A, 125V , TR Surge Protective Receptacle

Color	Outlet Configuration		
	Duplex	Duplex	Duplex
Brown	T5380	-	-
Ivory	T5380-I	T7380-I	T8380-I
White	T5380-W	T7380-W	T8380-W
Gray	T5380-GY	-	T8380-GY
Red	-	-	T8380-R
Blue	T5380-B	T7380-B	T8380-B
Black	T5380-E	T7380-E	-
Lt Almond	-	-	-
Features	▪	▪ ‖‖‖	▪ ‖‖‖ ●

Dimensional Drawings

4.21"
3.81"
2.72"
1.77"
1.19"
1.56"

Complete Line of UL 1449 3rd Edition Compliant Surge Protective Receptacles

The changes incorporated within UL 1449 3rd Edition provide three significant enhancements for customers of surge products. The first enhancement to the standard is the addition of secondary surge arrestors which are typically mounted outdoors and prior to service entrance equipment. The addition of surge arrestors to UL1449 ensures that line side devices (surge arrestors) will be manufactured with safety related protection similar to load side devices.

The second enhancement includes the addition of a Nominal Discharge Current Rating (In). The nominal discharge current test allows users to compare a surge protective device's durability (or ability to survive a lightning strike) under a UL regulated test. The UL regulated test provides for a fair and accurate competitive environment.

The third change is related to the voltage protection rating (VPR). The past test was called surge voltage rating (SVR). The requirements of the SVR test were too weak to exercise many of the surge products in a way that would show how well they are performing. The new VPR test is performed at 3000Amps as opposed to 500Amps and surge products must show improved performance to obtain recommended VPR levels of surge protection.

Match Your Protection to Your Need

To help you select from among the many options available in our line of Surge Protective Receptacles, here's a helpful guide to walk you through the product selection process. Think about each of these key considerations when choosing the ideal receptacles for your installation:

Grade	Style & Configuration	Features	Color
Commercial Grade Designed for use in enterprise, industrial and residential applications, Leviton's robust commercial grade receptacles meet the needs of a broad range of applications. **Hospital Grade** For patient safety and consistent operation of critical equipment, these receptacles meet all required hospital standards. Tight plug tolerances limit the risk of critical equipment being unplugged by accident.	**Decora® [Single or Duplex]** The popular Decora footprint matches well with standard fixtures found in a variety of homes, offices, hospitals and industrial settings. **4-in-1** Provides a larger number of outlets with a more utility oriented appearance.	**Indicator Light** Standard on all Leviton Surge Protection Receptacles, the indicator light assures you that your critical equipment is protected. **Audible Alarm** For locations where the outlet is hidden, or for an extra measure of safety, audible alarms alert you when the receptacle needs to be replaced. **Amperage** Receptacles available in 15 or 20 amp ratings. **Isolated Ground (IG)** When used with a direct path to an isolated building ground, these receptacles reduce electromagnetic noise that could interfere with the performance of sensitive equipment. **Tamper-Resistant Shutter** For applications where the NEC requires installation of Tamper-Resistant Receptacles, you now have the ability to protect your your equipment as well as your personnel.	**Decora and 4-in-1** Styles are available in eight colors to provide easy identification of surge outlets. This also allows color-coding to designate different types of equipment or applications.

Key:

▼	Isolated Ground (IG)	▫	Indicator Light
‖‖‖	Audible Alarm	●	Hospital Grade

LEVITON

Commercial / Industrial

Decora® Surge Protective Receptacles

Amp.	Outlet Config.	Color								Features
		Brown	Ivory	White	Gray	Red	Blue	Orange	Lt. Almond	
15A	Duplex	5280	5280-I	5280-W	5280-GY	-	5280-B	-	5280-T	▫
20A	Duplex	5380	5380-I	5380-W	5380-GY	-	5380-B	-	-	▫
15A	Duplex	5280-IG	5280-IGI	5280-IGW	-	-	5280-IGB	5280-IGO	-	▼ ▫
20A	Duplex	5380-IG	5380-IGI	5380-IGW	5380-IGG	-	5380-IGB	5380-IGO	-	▼ ▫
15A	Duplex	-	7280-I	7280-W	-	-	7280-B	-	7280-T	▫ ‖‖‖
20A	Duplex	-	7380-I	7380-W	-	-	7380-B	-	-	▫ ‖‖‖

4-IN-1 Surge Protective Receptacles

Amp.	Outlet Config.	Brown	Ivory	White	Gray	Red	Blue	Orange	Lt. Almond	Features
15A	Four-In-One	-	5480-I	5480-W	5480-GY	5480-R	5480-BU	-	-	▫
20A	Four-In-One	-	5490-I	5490-W	5490-GY	-	5490-BU	-	-	▫
15A	Four-In-One	-	-	-	-	-	-	5480-IG	-	▼ ▫
20A	Four-In-One	-	5490-IGI	-	-	-	5490-IGB	5490-IG	-	▼ ▫

Hospital Grade

Decora® Surge Protective Receptacles

Amp.	Outlet Config.	Color								Features
		Brown	Ivory	White	Gray	Red	Blue	Orange	Lt. Almond	
15A	Duplex	8280	8280-I	8280-W	-	8280-R	8280-B	-	8280-T	▫ ‖‖‖ ●
20A	Duplex	8380	8380-I	8380-W	8380-GY	8380-R	8380-B	-	-	▫ ‖‖‖ ●
20A	Single	-	8381-I	-	-	-	-	-	-	▫ ‖‖‖ ●
15A	Duplex	-	8280-IGI	8280-IGW	-	-	8280-IGB	8280-IGO	-	▼ ▫ ‖‖‖ ●
20A	Duplex	-	8380-IGI	8380-IGW	8380-IGG	-	8380-IGB	8380-IGO	-	▼ ▫ ‖‖‖ ●
20A	Single	-	8381-IGI	-	-	-	-	-	-	▼ ▫ ‖‖‖ ●

4-IN-1 Surge Protective Receptacles

Amp.	Outlet Config.	Brown	Ivory	White	Gray	Red	Blue	Orange	Lt. Almond	Features
15A	Four-In-One	-	8480-I	8480-W	-	8480-R	-	-	-	▫ ●
20A	Four-In-One	-	8490-I	8490-W	-	8490-R	-	-	-	▫ ●
15A	Four-In-One	-	8480-IGI	8480-IGW	-	-	8480-IGB	-	-	▼ ▫ ●
20A	Four-In-One	-	8490-IGI	-	-	-	8490-IGB	8490-IG	-	▼ ▫ ●

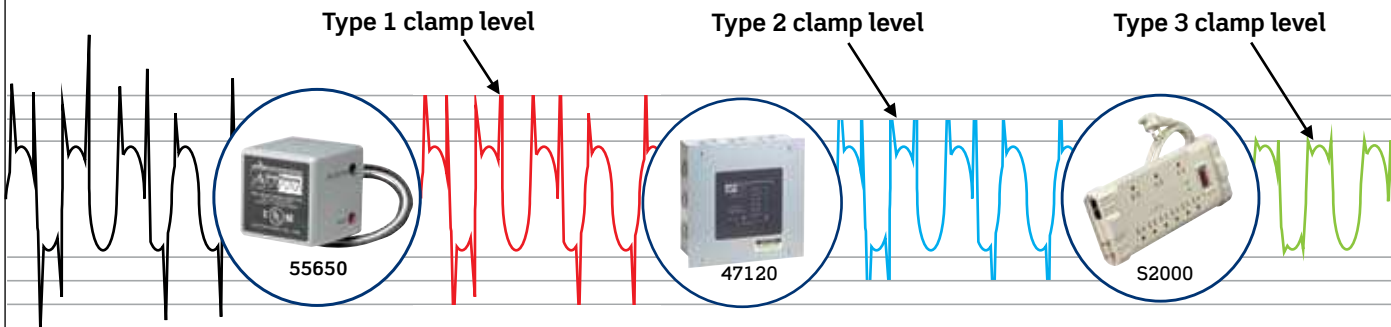# The Most Complete Line of Surge Protective Devices in the Industry

Leviton offers a broad range of SPDs for almost any requirement. Many of our surge panels have easily replaceable modules, which dramatically reduces maintenance costs. Additionally, Leviton SPDs are offered in many different enclosure styles, with a variety of options such as surface or flush mounting and an optional surge counter.

All Leviton SPDs incorporate large MOVs as opposed to lower cost small MOVs in parallel. Large MOVs offer an improved surge current rating and greater reliability, which ensures that the product will perform for many years. Finally, Leviton's world-class service team will provide on-site application support on an as-needed basis.

Surge Protector Types	Leviton Product Features
Type 1 55175 50240-MSA	Leviton Type 1 SPDs offer first line defense against external surges. They use the largest MOV's in the business (40mm & 53mm) and are outdoor rated. Plus, some of our Type 1 SPDs feature an audible alarm warning that the device is no longer providing the rated surge protection.
Type 2 75120 57120-CM3 32120-DY3	Leviton Type 2 surge panels use UL-recognized surge fuses. We offer models that contain replaceable modules, surge counters and 7-Mode protection. We also offer models that can be used for both Delta and WYE transformers. These SPDs conform to NEMA LS 1 guidelines.
Type 3 S2000-0PS T8280-W 5480-IGI	Leviton offers SPDs to meet all point-of-use applications. Our surge strips provide triple-redundant protection: Thermal Cut-off Fuse (TCO), Neutral-Ground Fuse and Circuit Breaker (CB). We also offer tamper-resistant receptacle versions, IG versions and quads.
Type 4 51020-DIN 51005-DIN 3803-485	Leviton's Type 4 SPDs are UL recognized components, and are available in a variety of configurations, including DIN rail mount, wall mount and leaded.

How To Implement an Effective Surge Protection Network

SURGE PROTECTIVE DEVICES

Type 1 clamp level

Type 2 clamp level

Type 3 clamp level

55650

47120

S2000

SURGE PROTECTIVE DEVICE PERFORMANCE	TYPE 1	TYPE 2	TYPE 3
	Typically mounted on the line side of the main service entrance. Protects against external surges caused by lightning or utility capacitor bank switching	Typically serves a branch circuit and protects against residual lightning energy, motor driven surges and other internally generated surges.	Typically used at the protected equipment. Provides point-of-use protection, easily replaceable and it provides the last line of defense against a lightning strike.

Standardization

The SPD Types (Type 1, 2, 3, 4) are the UL, NEC and IEEE attempt to harmonize with the IEC 61643-1 standard that uses Class 1, 2, 3 designators. North, Central & South America typically follow the IEEE Standards which identify the 8x20µs surge waveform instead of the 10x350µs surge waveform, as it more accurately reflects the conditions experienced during a lightning strike. The UL1449 Standards Technical Panel (STP) generated the new Type 1, 2, 3 and 4 designations to describe products that fall within the IEEE categories including category A, B and C. Since the test is different, the name had to be different.

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SMART>GRID

As part of Leviton's smart grid initiative, Leviton has identified surge protective devices as a smart grid component capable of improving the reliability of the North American power distribution system by providing a level of protection for electronic circuits that include, e.g., smart meters, communication networks, wind turbines and solar systems. Leviton believes that surge protective devices may also improve the environment by enabling sensitive electronic equipment, including computer systems and data center equipment, to endure for their intended lifecycle. This stamp/seal signifies that these products are Leviton smart grid components.