

# Surge Protective Devices (SPDs)

Complete Surge Protection Solutions for Industrial, Commercial and Residential Applications



# UL 1449 3rd Edition: Why is this so important?

UL 1449 is Underwriters Laboratories' safety and performance standard for surge protection equipment. In 2009, this Standard was revised to the 3rd Edition. In addition to some nomenclature changes, there were two very important objectives for revising the UL 1449 Standard: to harmonize with the International standards for surge protective equipment (IEC 61643-1) and to modify performance tests to better simulate real world exposure.

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 arresters which are typically mounted outdoors and prior to service entrance equipment. The addition of surge arresters to UL 1449 ensures that line side devices (surge arresters) will be manufactured with safety related protection similar to load side devices.
- The second enhancement includes the addition of a Nominal Discharge Current Rating ( $I_{n}$ ). 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 3000 Amps as opposed to 500 Amps and surge products must show improved performance to obtain recommended VPR levels of surge protection.

## New Descriptive Terminology

Article 285 of the NEC title has been updated to be consistent with UL and IEEE. The term Transient Voltage Surge Suppressor (TVSS) is being replaced by Surge Protective Devices (SPDs). The requirements for SPDs were changed and they are now identified by Type 1, 2, 3, or 4 depending upon where the SPD will be incorporated within the power distribution system.

**Type 1 SPDs:** These devices are referred to as a Type 1 SPD due to their location within the power distribution system. This is typically on the supply side of the service disconnect overcurrent device (main service panel).

**Type 2 SPDs:** Typically service entrance SPD panels or branch circuit SPD panels that are connected on the load side of the service disconnect overcurrent device (main service panel).

**Type 3 SPDs:** Typically surge receptacles or cord connected point-of-use devices. They are permitted to be installed anywhere on the load side of a branch circuit up to the equipment served, provided the connection is a minimum of 10m (30ft.) from the service panel. Note: If the distance is less than 10m, a Type 2 SPD (or a Type 3 SPD tested to Type 2 requirements) must be used.

**Type 4 SPDs:** Component assemblies consisting of one or more Type 5 components together with a disconnect (integral or external) or a means of complying with the limited current tests in UL 1449.

**Type 5 SPDs:** Discrete component surge suppressors connected by its leads or provided with an enclosure with mounting means and wiring terminations.





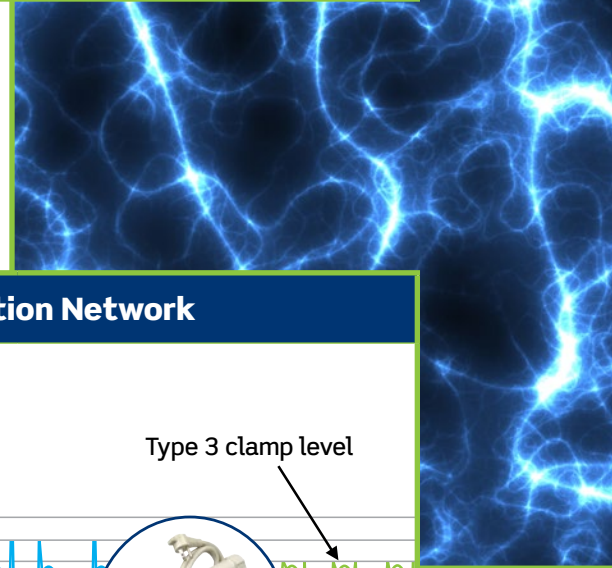
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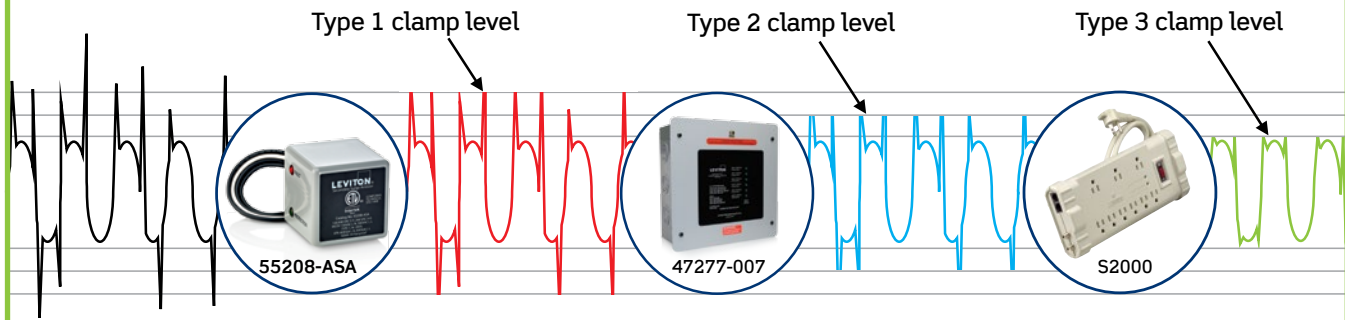
# Surge Protection Network

In order to achieve optimum protection for your equipment, it is essential to utilize a distributed approach to surge suppression. That is, you'll need to install surge protective devices (SPDs) that knock down high-energy transients at the building entrance and/or sub-panel so that they're manageable for the smaller SPDs that protect PCs and other equipment at point-of-use. Leviton offers a comprehensive selection of devices that will allow you to implement the most effective surge protection network possible.



## How To Implement An Effective Surge Protection Network

### SURGE PROTECTIVE DEVICES



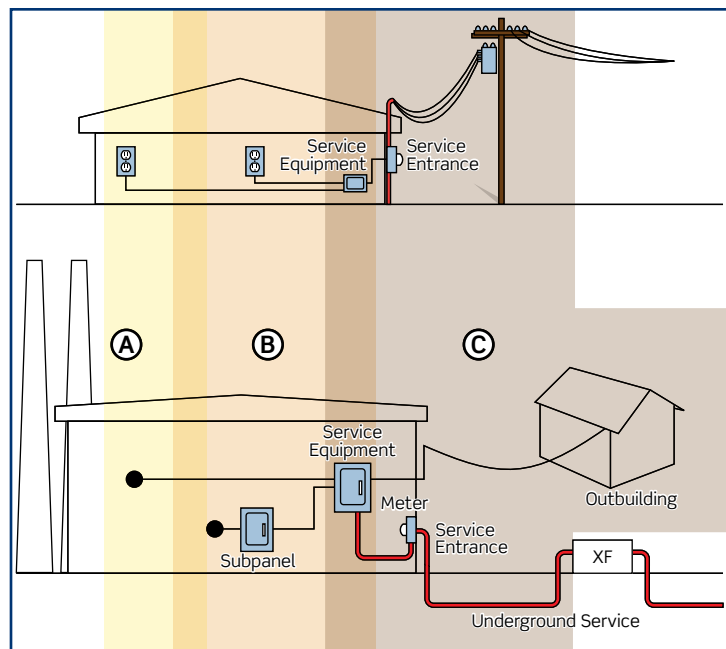
SURGE PROTECTIVE DEVICE PERFORMANCE	TYPE 1	TYPE 2	TYPE 3
	<p><b>TYPE 1</b></p> <p>Typically mounted on the line side of the main service entrance. Protects against external surges caused by lightning or utility capacitor bank switching.</p>	<p><b>TYPE 2</b></p> <p>Typically serves a branch circuit and protects against residual lightning energy, motor driven surges and other internally generated surges.</p>	<p><b>TYPE 3</b></p> <p>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.</p>

## 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. The sole reason that UL did not use Class 1, 2 and 3 is that North, Central & South America lean towards the IEEE documents, which use an 8 x 20µs surge waveform instead of the 10x350µs surge waveform, as it more accurately reflects the conditions experienced during a lightning strike. Since the test is different, the name had to be different.

The drawing to the right identifies category A, B and C as defined in the IEEE Trilogy of Standards. Category C ranges from the transformer secondary to just inside the building entrance. Category B includes all of the branch or sub-panels and Category A includes the receptacles and point-of-use devices such as cord-connected or plug-in surge devices.

Note: There is purposeful overlap between the categories as it is not a demarcation line but a transition. The figure to the right is from IEEE C62.41.2 which is the Recommended Practice on Characterization of Surges in Low-Voltage (1000V and Less) AC Power Circuits.





## Type 1 Surge Protective Devices

Permanently connected SPDs intended for installation between the secondary of the service transformer and the line side of the service equipment overcurrent device, as well as the load side, including watt-hour meter socket enclosures and intended to be installed without an external overcurrent protective device.



# Type 1 Surge Protective Devices

Leviton's Type 1 Surge Protective Devices protect against lightning strikes entering into main service panels or electrical equipment with high exposure to lightning, such as farming irrigation systems.



50240-MSA

## Meter Socket Surge Adapter 50240 Surge Protective Devices

- Designed for 120/240 volt single-phase ringless or ring-type meters
- Rugged housing constructed of high-impact, non-conductive fiberglass-reinforced polycarbonate
- Featuring spring-loaded, high-pressure copper-plated contacts for maximum conductivity
- Limited Lifetime Product Warranty
- Connected equipment coverage up to \$10,000\*

\*Certain restrictions apply



51120-3R

55208-ASA

## 55000 Series Surge Protective Devices

- Provided with #10 AWG stranded, 18 in. long pigtail leads
- Connected equipment coverage up to \$10,000\*
- May also be used in Type 2 applications
- NEMA Type 3R enclosure for indoor or outdoor use
- Limited Lifetime Product Warranty

## 51120-3R Series Surge Protective Devices

- Standard J-Box enclosure with pre-punched standard knock-outs can be easily surface mounted in typical frame construction
- Provided with #12 AWG stranded, 28 in. long cord
- Connected equipment coverage up to \$25,000\*
- May also be used in Type 2 applications



## Ordering Information

Catalog Number	Description	Voltage (V AC) Configuration	Max Surge Current, Per mode
55240-ASA	Module	120/240 Single Phase	50kA
55208-ASA	Module	120/208 3Ø WYE, 240V 3Ø Delta	50kA
55480-ASA	Module	277/480 3Ø WYE, 480V 3Ø Delta	50kA
50240-MSA	Meter Socket Surge Adapter	120/240 Single Phase	50kA
51120-3R	Panel Mount	120/240 Single Phase	50kA

Specifications for: 55000 Series, 51120-3R and 50240-MSA Surge Protective Devices

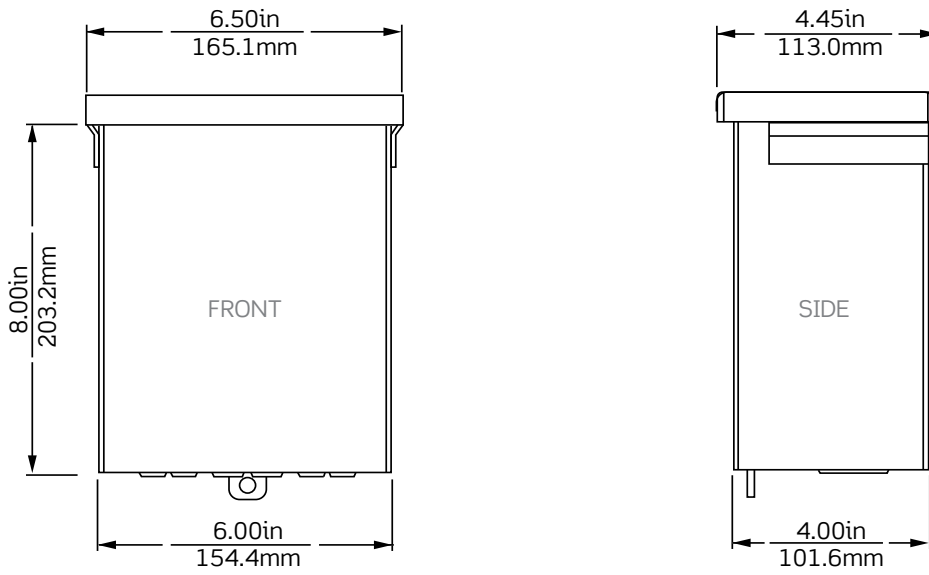
Catalog Number	55240-ASA	55208-ASA	55480-ASA	51120-3R	50240-MSA
<b>Electrical Specifications</b>					
Voltage	120/240V Single Phase	120/208V 3Ø WYE, 240V 3Ø Delta	277/480V 3Ø WYE, 480V 3Ø Delta	120/240V Single Phase	120/240V Single Phase
Frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Surge Technology	TPMOV	TPMOV	TPMOV	TPMOV	TPMOV
Amperage	—	—	—	—	200A* **
<b>Performance Data</b>					
Nominal Discharge Rating (I <sub>n</sub> )	20kA	20kA	20kA	20kA	20kA
Maximum Continuous Operating Voltage (MCOV)	150V	150V	320V	150V(L-N)/300V(L-L)	150V
Maximum Surge Current, Per Mode (Per Phase)	50kA (50kA)	50kA (50kA)	50kA (50kA)	50kA (50kA)	50kA (50kA)
Voltage Protection Rating (VPR) (Clamping)	600V(L-N)/800V(L-L)	600V(L-N)/800V(L-L)	700V(L-N)/800V(L-L)	500V(L-N)/800V(L-L)	600V(L1-N)/500V (L2-N)/ 400V (L1-L2)
Diagnostics	Protection Status LEDs & Audible Alarm			Protection Status LEDs	Protection Status LEDs
<b>Mechanical Specifications</b>					
Connection Type	Parallel Connection: Hardwired via 10AWG wire			Parallel Connection: Hardwired via 12AWG wire	Meter Base Connection: Hardwired Neutral
<b>Environmental Specifications</b>					
Flammability	Rated V-2 per UL 94			Rated V-2 per UL 94	Rated V-2 per UL 94
Operating Temperature	-10°C to 60°C			-10°C to 60°C	-40°C to 60°C
Storage Temperature	-20°C to 85°C			-20°C to 85°C	-50°C to 85°C
Enclosure Type	NEMA 3R			NEMA 3R	NEMA 3R
<b>Material Specifications</b>					
Enclosure	Polycarbonate with UV Inhibitors			Powder Coated Steel Outer Enclosure; Polycarbonate Module Enclosure	Fiberglass Reinforced Polycarbonate
Contacts	—			—	Copper
<b>Standards &amp; Certifications</b>					
Agency Certification	ETL Certified to be in compliance with UL 1449 3rd edition Type 1 Device				
National Electric Code (NEC)	285				
ANSI/IEEE Category C	C-62.11, C-62.41 & C-62.45				
<b>Warranty</b>					
Product Warranty	Limited Lifetime	Limited Lifetime	Limited Lifetime	Limited Lifetime	Limited Lifetime
Connected Equipment Coverage	Up to \$10,000*	Up to \$10,000*	Up to \$10,000*	Up to \$25,000*	Up to \$10,000*

\* As part of the True Whole House Surge Protection Warranty

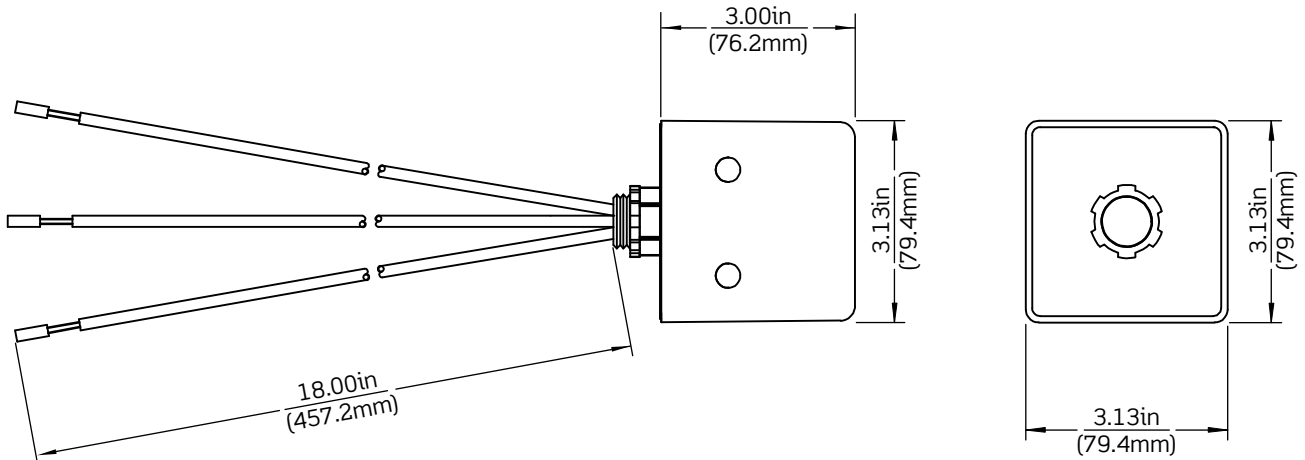
\*\* 200 Amp only when using Murray Cat. No. RH173CRF meter socket; otherwise 175 Amp

Dimensions for: 51120-3R, 55000 Series and 50240-MSA Surge Protective Devices

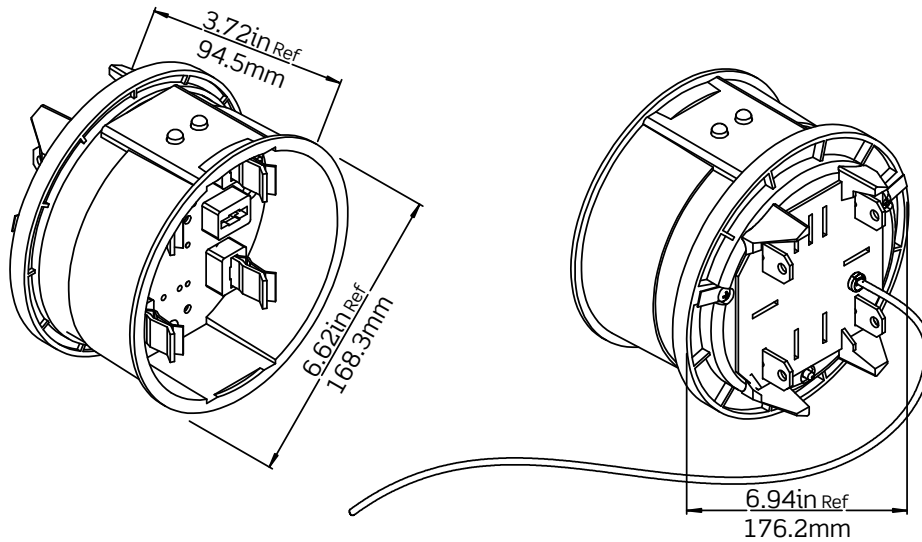
51120-3R



55000 Series



Typical for 50240-MSA







## Type 2 Surge Protective Devices

Permanently connected SPDs intended for installation on the load side of the service equipment overcurrent device; including SPDs located at the branch panel.



## Quick Reference – Type 2 Surge Protective Devices

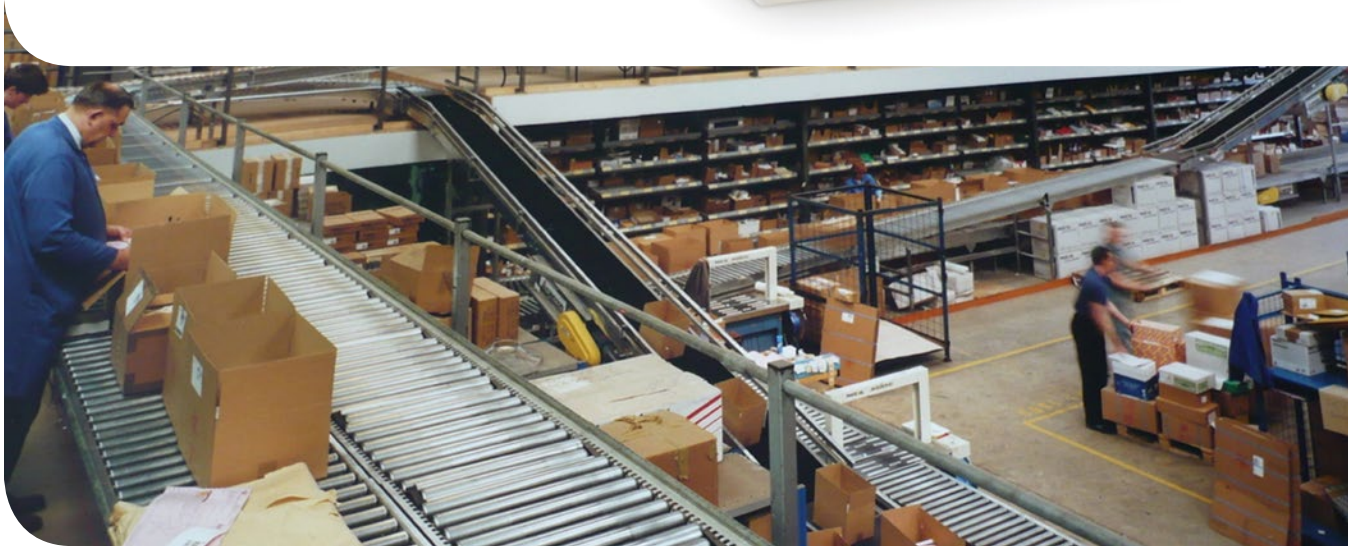
Catalog Number	Max Surge Current, Per Mode (Per Phase)	Nominal Discharge Current ( $I_N$ )	Replaceable Modules	NEMA Enclosure	Surge Counter	Noise Filtering
<b>120V and 120/240V, Single-Phase</b>						
52120-M1	100kA (100kA)	20kA	Yes	Type 12	No	Yes
52120-M2	100kA (100kA)	20kA	Yes	Type 12	No	Yes
52120-CM2	100kA (100kA)	20kA	Yes	Type 12	Yes	Yes
52120-M2H	100kA (100kA)	20kA	Yes	Type 12	No	Yes
32120-1	80kA (80kA)	3kA	No	Type 3R	No	Yes
42120-1	80kA (80kA)	3kA	No	Type 3R	No	Yes
51120-1	50kA (50kA)	3kA	No	Type 1	No	Yes
51110-SRG	48kA (96kA)	3kA	No	Type 4X	No	No
<b>120/208V, Three-Phase WYE</b>						
75120-7M3	320kA (640kA)	10kA	Yes	Type 12	Yes	Yes
74120-7M3	200kA (400kA)	10kA	Yes	Type 12	Yes	Yes
47120-7	200kA (400kA)	10kA	No	Type 1	No	Yes
47120-4X7	200kA (400kA)	10kA	No	Type 4X	No	Yes
57120-M3	150kA (150kA)	20kA	Yes	Type 12	No	Yes
57120-CM3	150kA (150kA)	20kA	Yes	Type 12	Yes	Yes
52120-M3	100kA (100kA)	20kA	Yes	Type 12	No	Yes
52120-CM3	100kA (100kA)	20kA	Yes	Type 12	Yes	Yes
52120-7M3, 52120-7MS	100kA (200kA)	20kA	Yes	Type 12	No	Yes
52120-7C3, 52120-7CS	100kA (200kA)	20kA	Yes	Type 12	Yes	Yes
51120-3	50kA (50kA)	3kA	No	Type 1	No	Yes
37120-7	100kA (200kA)	5kA	No	Type 1	No	Yes
<b>120/208V, Three-Phase WYE or 208V, Three-Phase Delta or 220V, Three-Phase Delta</b>						
32120-DY3	80kA (80kA)	3kA	No	Type 3R	No	Yes
42120-DY3	80kA (80kA)	3kA	No	Type 3R	No	Yes
<b>120/240/120V, Three-Phase Hi-leg Split Phase Delta</b>						
52412-DS3	100kA (100kA)	20kA	Yes	Type 12	No	Yes
32412-DS3	80kA (80kA)	3kA	No	Type 3R	No	Yes
42412-DS3	80kA (80kA)	3kA	No	Type 3R	No	Yes
<b>220/380V, Three-Phase WYE or 277/480V, Three-Phase WYE or 240V, Three-Phase Delta or 480V, Three-Phase Delta</b>						
32277-DY3	80kA (80kA)	3kA	No	Type 3R	No	Yes
42277-DY3	80kA (80kA)	3kA	No	Type 3R	No	Yes
<b>240V, Three-Phase Delta</b>						
57240-DM3	150kA (150kA)	20kA	Yes	Type 12	No	Yes
52240-DM3	100kA (100kA)	20kA	Yes	Type 12	No	Yes
<b>277/480V, Three-Phase WYE</b>						
75277-7M3	320kA (640kA)	10kA	Yes	Type 12	Yes	Yes
74277-7M3	200kA (400kA)	10kA	Yes	Type 12	Yes	Yes
47277-7	200kA (400kA)	10kA	No	Type 1	No	Yes
47277-4X7	200kA (400kA)	10kA	No	Type 4X	No	Yes
57277-M3	150kA (150kA)	20kA	Yes	Type 12	No	Yes
57277-CM3	150kA (150kA)	20kA	Yes	Type 12	Yes	Yes
52277-M3	100kA (100kA)	20kA	Yes	Type 12	No	Yes
52277-CM3	100kA (100kA)	20kA	Yes	Type 12	Yes	Yes
52277-7M3, 52277-7MS	100kA (200kA)	20kA	Yes	Type 12	No	Yes
52277-7C3, 52277-7CS	100kA (200kA)	20kA	Yes	Type 12	Yes	Yes
37277-7	100kA (200kA)	5kA	No	Type 1	No	Yes
<b>480V, Three-Phase Delta</b>						
57480-DM3	150kA (150kA)	20kA	Yes	Type 12	No	Yes
52480-DM3	100kA (100kA)	20kA	Yes	Type 12	No	Yes
<b>347/600V, Three-Phase WYE or 600V, Three-Phase Delta</b>						
32347-DY3	80kA (80kA)	---	No	Type 3R	No	Yes
42347-DY3	80kA (80kA)	---	No	Type 3R	No	Yes
<b>347/600V, Three-Phase WYE</b>						
57347-M3	150kA (150kA)	---	Yes	Type 12	No	Yes
<b>600V, Three-Phase Delta</b>						
57600-DM3	150kA (150kA)	---	Yes	Type 12	No	Yes

## Type 2 Modular Surge Protective Devices

Leviton's 74000 and 75000 Series panel mounted surge protective devices provide seven-mode protection in WYE-configured, 3-phase AC systems. Designed for most industrial and commercial environments with critical operations, these panels offer complete protection at the building entrance and distribution panel.



74120-7M3



### 74000 / 75000 Series for 3-Phase Applications

- Protection for up to 200,000 amps (74000 Series) or up to 320,000 amps (75000 Series) of surge current per mode
- Seven-Mode protection provides improved performance and longevity
- Real-time diagnostics monitor power and suppression status for each phase and provide both LED indicators and audible alarm
- User-replaceable plug-in modules eliminate the need to replace the entire surge panel following a damaging surge event
- Surge event history—including surge magnitude, time, and date for each surge event—can be viewed on an easy-to-read display or downloaded for storage
- Equipped with dry contacts for remote monitoring
- NEMA Type 12 enclosure resists dirt, dust and light splashing water
- Limited lifetime product warranty with free replacement modules\*

\*Certain restrictions apply

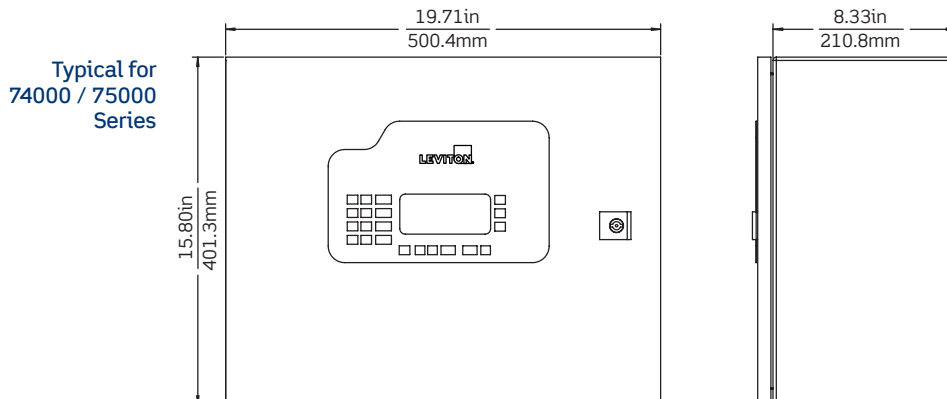
### Ordering Information

Catalog Number	Description	Voltage (V AC) Configuration	Max Surge Current, Per Mode (Per Phase)	Replacement Modules
74120-7M3	7-Mode Surge Protection Panel	120/208 3Ø WYE, 4-wire + gnd	200kA (400kA)	HC120-M40 (7)
74277-7M3	7-Mode Surge Protection Panel	277/480 3Ø WYE, 4-wire + gnd	200kA (400kA)	HC277-M40 (7)
75120-7M3	7-Mode Surge Protection Panel	120/208 3Ø WYE, 4-wire + gnd	320kA (640kA)	HC120-M53 (7)
75277-7M3	7-Mode Surge Protection Panel	277/480 3Ø WYE, 4-wire + gnd	320kA (640kA)	HC277-M53 (7)

## Specifications and Dimensions for: 74000 / 75000 Series

Catalog Number	74120-7M3	74277-7M3	75120-7M3	75277-7M3	
<b>Electrical Specifications</b>					
Voltage	120/208 VAC 3-phase WYE	277/480 VAC 3-phase WYE	120/208 VAC 3-phase WYE	277/480 VAC 3-phase WYE	
Frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	
Surge Technology	40mm MOV	40mm MOV	53mm MOV	53mm MOV	
Recommended Circuit Breaker Rating	30A, 120V	30A, 277V	30A, 120V	30A, 277V	
<b>Performance Data</b>					
Nominal Discharge Rating (I <sub>n</sub> )	10kA				
Maximum Continuous Operating Voltage (MCOV)	L-L	300V	640V	300V	640V
	L-N	150V	320V	150V	320V
	L-G	150V	320V	150V	320V
	N-G	150V	320V	150V	320V
Voltage Protection Rating (VPR)	L-L	1200V	2000V	1500V	2000V
	L-N	700V	1200V	800V	1200V
	L-G	800V	1200V	800V	1200V
	N-G	500V	1000V	600V	1000V
Maximum Surge Current, Per Mode (Per Phase)	200kA (400kA)		320kA (640kA)		
Protection Mode	7 Mode				
Short Circuit Current Rating (SCCR)	10kA				
EMI/RFI Noise Filtering	-40dB (@ 5K-100MHz)				
Diagnostics	Real Time Protection status LEDs & Audible Alarm, Surge Counter, Downloadable event history log; shows magnitude, duration of spike				
Remote Monitoring	Dry Contact Leads-N.O./N.C. Form C Rated at 7Amps @ 240VAC or 30VDC				
<b>Mechanical Specifications</b>					
Connection Type	Parallel-Hardwire Using Terminal Block: Accepts up to #6 AWG				
<b>Environmental Specifications</b>					
Flammability	Rated V-2 per UL 94				
Operating Temperature	-10°C to 60°C				
Storage Temperature	-20°C to 85°C				
Enclosure Type	NEMA 12				
Relative Humidity	5% to 95% non-condensing				
<b>Material Specifications</b>					
Enclosure	Powder Coated Steel				
<b>Standards &amp; Certifications</b>					
Agency Certification	cULus 1449 3rd Edition Listed Type 2				
ANSI/IEEE Category A, B & C	C-62.41 & C-62.45				
<b>Warranty</b>					
Product Warranty	Limited Lifetime				
Replacement Module Warranty	Limited Lifetime*				

\*Certain Restrictions Apply



## Type 2 Modular Surge Protective Devices

Leviton's 52000 and 57000 Series panel mounted surge protective devices provide a good mix of value, performance, and features for main service or branch panel applications in industrial, commercial and residential environments. The parallel-operated design ensures continuous power even if surge protection is disabled. They feature indicator lights, a status relay and audible alarm for monitoring power and surge suppression, and replaceable surge modules for simplified maintenance after a destructive surge event.



52120-M2



57277-CM3

### 52000 and 57000 Series Service/Branch Panel Protection

- Protection for up to 100,000 amps (52000 Series) or 150,000 amps (57000 Series) of surge current per mode
- Redundant surge modules for mission critical applications
- Easily replaceable surge modules
- AC Sine Wave tracking provides enhanced EMI/RFI filtering
- NEMA Type 12 enclosure resists dirt, dust and light splashing water
- Models available with Surge Counter
- Models available with Integral Disconnect Switch
- Limited lifetime product warranty with free replacement modules\*

\*Certain restrictions apply

## Ordering Information

Catalog Number	Description	Voltage (V AC) Configuration	Max Surge Current, Per Mode (Per Phase)	Replacement Modules
52120-M1	2-Mode Surge Protection Panel	120 Single-phase, 2-wire + gnd	100kA (100kA)	(1) 2120, (1) 8120-GN
52120-M2	3-Mode Surge Protection Panel	120/240 Single-phase, 3-wire + gnd	100kA (100kA)	(2) 2120, (1) 8120-GN
52120-CM2	3-Mode Surge Protection Panel, with Surge Event Counter	120/240 Single-phase, 3-wire + gnd	100kA (100kA)	(2) 2120, (1) 8120-GN
52120-M2H	3-Mode Surge Protection Panel, DHC & X10 compatible	120/240 Single-phase, 3-wire + gnd	100kA (100kA)	(2) 2120-M2H, (1) 8120-GN
52120-M3	4-Mode Surge Protection Panel	120/208 3Ø WYE, 4-wire + gnd	100kA (100kA)	(3) 2120, (1) 8120-GN
52120-CM3	4-Mode Surge Protection Panel, with Surge Event Counter	120/208 3Ø WYE, 4-wire + gnd	100kA (200kA)	(3) 2120, (1) 8120-GN
52120-7M3	7-Mode Surge Protection Panel	120/208 3Ø WYE, 4-wire + gnd	100kA (200kA)	(3) 120-7M3, (1) 8120-GN
52120-7MS	7-Mode Surge Protection Panel with Integral Disconnect Switch	120/208 3Ø WYE, 4-wire + gnd	100kA (200kA)	(3) 120-7M3, (1) 8120-GN
52120-7C3	7-Mode Surge Protection Panel, with Surge Event Counter	120/208 3Ø WYE, 4-wire + gnd	100kA (100kA)	(3) 120-7M3, (1) 8120-GN
52120-7CS	7-Mode Surge Protection Panel, with Surge Event Counter and Integral Disconnect Switch	120/208 3Ø WYE, 4-wire + gnd	100kA (100kA)	(3) 120-7M3, (1) 8120-GN
52240-DM3	3-Mode Surge Protection Panel	240 3Ø Delta, 3-wire + gnd	100kA (100kA)	(3) 2240
52277-M3	4-Mode Surge Protection Panel	277/480 3Ø WYE, 4-wire + gnd	100kA (100kA)	(3) 2277, (1) 8320-GN
52277-CM3	4-Mode Surge Protection Panel, with Surge Event Counter	277/480 3Ø WYE, 4-wire + gnd	100kA (100kA)	(3) 2277, (1) 8320-GN
52277-7M3	7-Mode Surge Protection Panel	277/480 3Ø WYE, 4-wire + gnd	100kA (200kA)	(3) 277-7M3, (1) 8320-GN
52277-7MS	7-Mode Surge Protection Panel with Integral Disconnect Switch	277/480 3Ø WYE, 4-wire + gnd	100kA (200kA)	(3) 277-7M3, (1) 8320-GN
52277-7C3	7-Mode Surge Protection Panel, with Surge Event Counter	277/480 3Ø WYE, 4-wire + gnd	100kA (200kA)	(3) 277-7M3, (1) 8320-GN
52277-7CS	7-Mode Surge Protection Panel, with Surge Event Counter and Integral Disconnect Switch	277/480 3Ø WYE, 4-wire + gnd	100kA (200kA)	(3) 277-7M3, (1) 8320-GN
52480-DM3	3-Mode Surge Protection Panel	480 3Ø Delta, 3-wire + gnd	100kA (100kA)	(3) 2480
52412-DS3	4-Mode Surge Protection Panel	120/240/120 Split Phase Delta, 4-wire + gnd	100kA (100kA)	(2) 2120, (1) 2412, (1) 8120-GN
57120-M3	4-Mode Surge Protection Panel	120/208 3Ø WYE, 4-wire + gnd	150kA (150kA)	(3) 7120, (1) 8120-GN
57120-CM3	4-Mode Surge Protection Panel, with Surge Event Counter	120/208 3Ø WYE, 4-wire + gnd	150kA (150kA)	(3) 7120, (1) 8120-GN
57240-DM3	3-Mode Surge Protection Panel	240 3Ø Delta, 3-wire + gnd	150kA (150kA)	(3) 7240
57277-M3	4-Mode Surge Protection Panel	277/480 3Ø WYE, 4-wire + gnd	150kA (150kA)	(3) 7277, (1) 8320-GN
57277-CM3	4-Mode Surge Protection Panel, with Surge Event Counter	277/480 3Ø WYE, 4-wire + gnd	150kA (150kA)	(3) 7277, (1) 8320-GN
57480-DM3	3-Mode Surge Protection Panel	480 3Ø Delta, 3-wire + gnd	150kA (150kA)	(3) 7480
57347-M3	4-Mode Surge Protection Panel	347/600 3Ø WYE, 4-wire + gnd	150kA (150kA)	(3) 7347, (1) 8385-GN
57600-DM3	4-Mode Surge Protection Panel	600 3Ø Delta, 3-wire + gnd	150kA (150kA)	(3) 7600



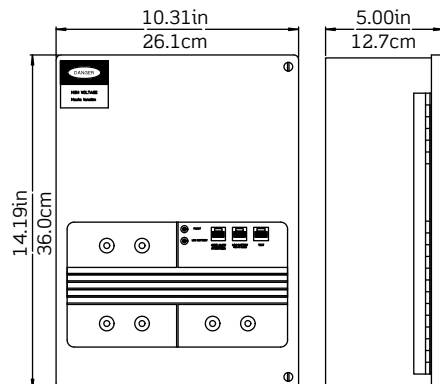
## Specifications for: 57000 Series

Catalog Number	57120-M3 57120-CM3	57240-DM3	57277-M3 57277-CM3	57480-DM3	57347-M3	57600-DM3
<b>Electrical Specifications</b>						
Voltage	120/208VAC 3-phase WYE	240VAC 3-phase Delta	277/480VAC 3-phase WYE	480VAC 3-phase Delta	347/600VAC 3-phase WYE	600VAC 3-phase Delta
Frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Surge Technology	40mm MOV	40mm MOV	40mm MOV	40mm MOV	40mm MOV	40mm MOV
Recommended Circuit Breaker Rating	30A, 120V	30A, 240V	30A, 277V	30A, 480V	30A, 600V	30A, 600V
<b>Performance Data</b>						
Nominal Discharge Rating ( $I_N$ )	20 kA	20 kA	20 kA	20 kA	N/A	N/A
Maximum Continuous Operating Voltage (MCOV)	L-N	150V	—	320V	—	390V
	L-G	300V	—	640V	—	—
	N-G	150V	—	320V	—	—
	L-L	300V	320V	640V	640V	680V
Maximum Surge Current, Per Mode (Per Phase)	150kA (150kA)	150kA (150kA)	150kA (150kA)	150kA (150kA)	150kA (150kA)	150kA (150kA)
Voltage Protection Rating (VPR)	L-N	1000V	—	1500V	—	1500V <sup>1</sup>
	L-G	1500V	—	2500V	—	—
	N-G	800V	—	1200V	—	1000V <sup>1</sup>
	L-L	1500V	1500V	2500V	2000V	2000V <sup>1</sup>
Protection Mode	4 Mode	3 Mode	4 Mode	3 Mode	4 Mode	4 Mode
Short Circuit Current Rating (SCCR)	100kA	100kA	100kA	100kA	100kA	100kA
EMI/RFI Noise Rejection	-20 to -40dB (@ 1.5K-1.2MHz)					
Diagnostics	Real Time Protection Status LEDs & Audible Alarm					
<b>Mechanical Specifications</b>						
Connection Type	Parallel-hardwired, feed-through dual wire terminal block: Accepts up to #3 AWG wire					
Remote Monitoring	Dry Contacts-N.O./N.C. Form C Rated at 7Amps @ 240VAC or 30VDC					
<b>Environmental Specifications</b>						
Enclosure Type	NEMA 12					
Operating Temperature	-20°C to 40°C					
Storage Temperature	-20°C to 85°C					
Flammability	Rated V-2 per UL 94					
Relative Humidity	5% to 95% non-condensing					
<b>Material Specifications</b>						
Enclosure	Powder Coated Steel					
<b>Standards &amp; Certifications</b>						
Agency Certification	cULus Listed Type 2				CSA C22.2 Certified	
ANSI/IEEE Category A, B & C	C-62.41 & C-62.45				C-62.41 & C-62.45	
<b>Warranty</b>						
Product Warranty	Limited Lifetime					
Replacement Module Warranty	Limited Lifetime*					

<sup>1</sup>Surge Voltage Rating (SVR)

\*Certain restrictions apply

Typical for  
57000 & 52000  
Series



## Specifications for: 52000 Series

Catalog Number	52120-M1	52120-M2 52120-CM2	52120-M2H	52120-M3 52120-CM3	52120-7M3 52120-7C3 52120-7MS 52120-7CS	52240-DM3	52277-M3 52277-CM3	52277-7M3 52277-7C3 52277-7MS 52277-7CS	52480-DM3	52412-DS3	
<b>Electrical Specifications</b>											
Voltage	120VAC	120/ 240VAC	120/ 240VAC	120/ 208VAC 3-phase WYE	120/ 208VAC 3-phase WYE	240VAC 3-phase Delta	277/ 480VAC 3-phase WYE	277/ 480VAC 3-phase WYE	480VAC 3-phase Delta	120/240/ 120VAC 3-phase Hi-Leg Delta	
Frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	
Surge Technology	40mm MOV	40mm MOV	40mm MOV	40mm MOV	40mm MOV	40mm MOV	40mm MOV	40mm MOV	40mm MOV	40mm MOV	
Recommended Circuit Breaker Rating	30A, 120V	30A, 120/240V	30A, 120/240V	30A, 120/208V	30A, 120/208V	30A, 240V	30A, 277/480V	30A, 277/480V	30A, 480V	30A, 120/240V	
<b>Performance Data</b>											
Nominal Discharge Rating (I <sub>n</sub> )	20kA	20kA	20kA	20kA	20kA	20kA	20kA	20kA	20kA	20kA	
Maximum Continuous Operating Voltage (MCOV)	L-N	150V	150V	150V	150V	150V	—	320V	320V	—	L-N:150V H-N:320V
	L-G	300V	300V	300V	300V	150V	—	640V	320V	—	L-G:300V H-G:470V
	N-G	150V	150V	150V	150V	150V	—	320V	320V	—	150V
	L-L	—	300V	300V	300V	300V	320V	640V	640V	550V	L-L:300V H-L:470V
Maximum Surge Current, Per Mode (Per Phase)	100kA (100kA)	100kA (100kA)	100kA (100kA)	100kA (100kA)	100kA (200kA)	100kA (100kA)	100kA (100kA)	100kA (200kA)	100kA (100kA)	100kA (100kA)	
Voltage Protection Rating (VPR)	L-N	1000V	1000V	1000V	1000V	1000V	—	1500V	1500V	—	L-N:1000V H-N:1500V
	L-G	1500V	1500V	900V	1500V	1200V	—	2500V	1500V	—	L-G:1500V H-G:2000V
	N-G	700V	700V	700V	700V	700V	—	1200V	1200V	—	700V
	L-L	—	1500V	1500V	1500V	1500V	1500V	2500V	2500V	2000V	L-L:1500V H-L:2500V
Protection Mode	2 Mode	3 Mode	3 Mode	4 Mode	7 Mode	3 Mode	4 Mode	7 Mode	3 Mode	4 Mode	
Short Circuit Current Rating (SCCR)	100kA	100kA	100kA	100kA	100kA	100kA	100kA	100kA	100kA	100kA	
EMI/RFI Noise Filtering	-20dB to -40dB (50KHz-10MHz)										
Diagnostics	Real Time Protection status LEDs & Audible Alarm										
Remote Monitoring	Dry Contacts-N.O./N.C. Form C Rated at 7Amps @ 240VAC or 30VDC										
<b>Mechanical Specifications</b>											
Connection Type	Parallel-hardwired, feed-through dual wire terminal block: Accepts up to #3 AWG wire										
<b>Environmental Specifications</b>											
Enclosure Type	NEMA 12										
Operating Temperature	-20°C to 40°C										
Storage Temperature	-20°C to 85°C										
Flammability	Rated V-2 per UL 94										
Relative Humidity	5% to 95% non-condensing										
<b>Material Specifications</b>											
Enclosure	Powder Coated Steel										
<b>Standards &amp; Certifications</b>											
Agency Rating	cULus Listed Type 2										
ANSI/IEEE Category A, B & C	C-62.41 & C-62.45										
<b>Warranty</b>											
Product Warranty	Limited Lifetime										
Replacement Module Warranty	Limited Lifetime*										

\*Certain restrictions apply



# Type 2 Non-Modular Surge Protective Devices

Leviton's 37000 and 47000 Series panel mounted surge protective devices provide seven-mode protection in WYE-configured, 3-phase AC systems. These devices are designed for installation at the service entrance, at branch panels, or as dedicated transient surge protection for critical equipment.



37120-7



47277-7

## 37000 and 47000 Series for Commercial and Industrial Applications

- Protection for up to 100,000 amps (37000 Series) or 200,000 amps (47000 Series) of surge current per mode
- Models available in NEMA Type 1 enclosures for indoor applications and Type 4X enclosures (47000 series only) for outdoor applications
- Seven-Mode Protection (each phase to neutral, each phase to ground and neutral to ground)
- Real-time diagnostics monitor power and suppression status for each phase and provide both LED indicators and audible alarm
- Equipped with dry contacts for remote monitoring
- Limited lifetime product warranty

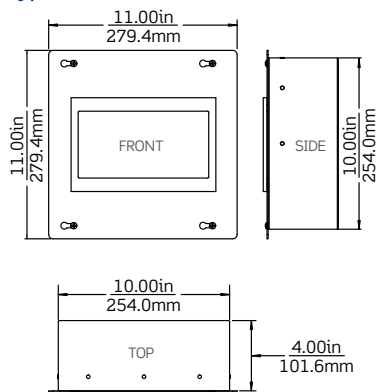
## Ordering Information

Catalog Number	Description	Voltage (V AC) Configuration	Max Surge Current, Per Mode (Per Phase)
37120-7	7-Mode Surge Protection Panel	120/208 3Ø WYE, 4-wire + gnd	100kA (200kA)
37277-7	7-Mode Surge Protection Panel	277/480 3Ø WYE, 4-wire + gnd	100kA (200kA)
47120-7	7-Mode Surge Protection Panel	120/208 3Ø WYE, 4-wire + gnd	200kA (400kA)
47120-4X7	7-Mode Surge Protection Panel in Type 4X enclosure	120/208 3Ø WYE, 4-wire + gnd	200kA (400kA)
47277-7	7-Mode Surge Protection Panel	277/480 3Ø WYE, 4-wire + gnd	200kA (400kA)
47277-4X7	7-Mode Surge Protection Panel in Type 4X enclosure	277/480 3Ø WYE, 4-wire + gnd	200kA (400kA)

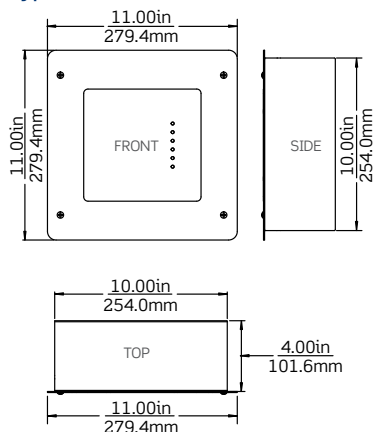
## Specifications and Dimensions for: 37000 and 47000 Series

Catalog Number	37120-7	37277-7	47120-7	47120-4X7	47277-7	47277-4X7
<b>Electrical Specifications</b>						
Voltage	120/208 VAC 3-phase WYE	277/480 VAC 3-phase WYE	120/208 VAC 3-phase WYE	120/208 VAC 3-phase WYE	277/480 VAC 3-phase WYE	277/480 VAC 3-phase WYE
Frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Surge Technology	40mm MOV	40mm MOV	40mm MOV	40mm MOV	40mm MOV	40mm MOV
Recommended Circuit Breaker Rating	30A, 120/208V	30A, 277/480V	30A, 120/208V	30A, 120/208V	30A, 277/480V	30A, 277/480V
<b>Performance Data</b>						
Nominal Discharge Rating (I <sub>N</sub> )	5kA	5kA	10kA	10kA	10kA	10kA
Maximum Continuous Operating Voltage (MCOV)	L-L	280V	640V	280V	280V	640V
	L-N	140V	320V	140V	140V	320V
	L-G	140V	320V	140V	140V	320V
	N-G	130V	300V	130V	130V	300V
Maximum Surge Current, Per Mode (Per Phase)	100kA (200kA)	100kA (200kA)	200kA (400kA)	200kA (400kA)	200kA (400kA)	200kA (400kA)
Voltage Protection Rating (VPR)	L-L	1200V	2000V	1000V	1000V	1800V
	L-N	800V	1200V	700V	700V	1200V
	L-G	900V	1500V	900V	900V	1500V
	N-G	700V	1200V	700V	700V	1200V
Short Circuit Current Rating (SCCR) Protection Modes	10kA	10kA	10kA	10kA	10kA	10kA
Protection Mode	7 Mode					
Noise Filtering	-40dB @ 10K - 10MHz					
Diagnostics	Real Time Protection status LEDs & Audible Alarm					
<b>Mechanical Specifications</b>						
Connection Type	Hardwire Using Terminal Block: Accepts up to #6 AWG wire					
<b>Environmental Specifications</b>						
Enclosure Rating	NEMA Type 1	NEMA Type 1	NEMA Type 1	NEMA Type 4x	NEMA Type 1	NEMA Type 4x
Operating Temperature	-10°C to 60°C	-10°C to 60°C	-10°C to 60°C	-10°C to 60°C	-10°C to 60°C	-10°C to 60°C
Storage Temperature	-20°C to 85°C	-20°C to 85°C	-20°C to 85°C	-20°C to 85°C	-20°C to 85°C	-20°C to 85°C
Flammability	Rated V-2 per UL 94					
Relative Humidity	5% to 95% non-condensing					
<b>Material Specifications</b>						
Enclosure	Powder Coated Steel	Powder Coated Steel	Powder Coated Steel	Fiberglass	Powder Coated Steel	Fiberglass
<b>Standards &amp; Certifications</b>						
Agency Certification	cULus 1449 3rd Edition Listed Type 2					
ANSI/IEEE Category A, B & C	C-62.41 & C-62.45					
<b>Warranty</b>						
Product Warranty	Limited Lifetime					

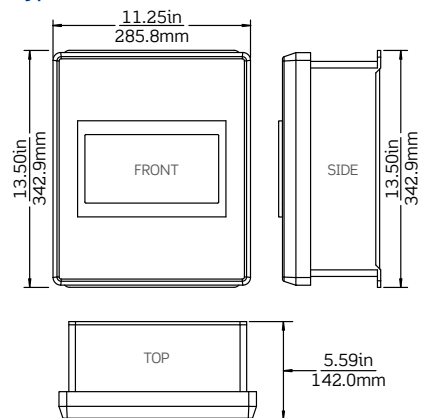
Typical for 37120-7 & 37277-7



Typical for 47277-4X7



Typical for 47120-4X7



## Type 2 Non-Modular Surge Protective Devices

One of our most popular series, Leviton's 32000 and 42000 surge protection panels provide protection for up to 80kA of surge current per mode. They feature noise filtering, visual and audible indication of surge protection status and dry contacts for remote monitoring, all in a compact enclosure.



**42120-1  
with 42001-FMC  
Flush Mount Collar**

**42120-1**



### 32000 and 42000 Series Panel Mount Surge Protective Device

- 32000 Series features reduced noise filtering for optimum compatibility with Leviton's Decora Home Control and X10 communication network devices
- 42000 Series incorporates enhanced noise filtering and sine wave tracking for superior protection
- Three-phase models can be wired for either WYE or Delta AC systems
- Equipped with indicator lights and audible alarm for monitoring power and surge suppression status
- NEMA Type 3R enclosure for indoor/outdoor applications
- Optional flush mount collar available (42001-FMC)
- Limited lifetime product warranty

### Ordering Information

Catalog Number	Description	Voltage (V AC) Configuration	Max Surge Current, Per Mode (Per Phase)
32120-1	4-Mode Surge Protection Panel	120/240 Single-phase, 2-wire + gnd	80kA (80kA)
32120-DY3	7-Mode Surge Protection Panel	120/208 3Ø WYE, 4-wire + gnd; 208 3Ø Delta, 3-wire + gnd; 220 3Ø Delta, 3-wire + gnd	80kA (80kA)
32277-DY3	7-Mode Surge Protection Panel	220/380 3Ø WYE, 4-wire + gnd; 277/480 3Ø WYE, 4-wire + gnd; 240 3Ø Delta, 3-wire + gnd; 480 3Ø Delta, 3-wire + gnd	80kA (80kA)
32412-DS3	7-Mode Surge Protection Panel	120/240/120 3Ø Hi-leg Split Phase Delta, 4-wire + gnd	80kA (80kA)
42120-1	4-Mode Surge Protection Panel	120/240 Single-phase, 2-wire + gnd	80kA (80kA)
42120-DY3	7-Mode Surge Protection Panel	120/208 3Ø WYE, 4-wire + gnd; 208 3Ø Delta, 3-wire + gnd; 220 3Ø Delta, 3-wire + gnd	80kA (80kA)
42277-DY3	7-Mode Surge Protection Panel	220/380 3Ø WYE, 4-wire + gnd; 277/480 3Ø WYE, 4-wire + gnd; 240 3Ø Delta, 3-wire + gnd; 480 3Ø Delta, 3-wire + gnd	80kA (80kA)
42412-DS3	7-Mode Surge Protection Panel	120/240/120 3Ø Hi-leg Split Phase Delta, 4-wire + gnd	80kA (80kA)
32347-DY3	4-mode Surge Protection Panel	347/600 3Ø WYE, 4-wire + gnd or 3Ø Delta, 3-wire + gnd	80kA (80kA)
42347-DY3	4-mode Surge Protection Panel	347/600 3Ø WYE, 4-wire + gnd or 3Ø Delta, 3-wire + gnd	80kA (80kA)
42001-FMC	Flush Mount Collar for all 32000 and 42000 Series Panels	—	—

## Type 2 Surge Protective Devices

Leviton's 51120 Series panel mount surge protective devices are designed for use in homes and apartment buildings at the service entrance, electrical utility meter, or other branch panel locations. They are also ideal for use in pumping stations, radio towers and light commercial buildings where protection from high-energy, high-voltage transients is desired.



51120-1



### 51120 Series Panel Mount Surge Protective Devices

- Single high-energy solid-state semiconductor surge suppression circuitry per phase
- Real-time diagnostic visual indicator shows power and suppression status for each protected phase
- Standard J-Box enclosure with pre-punched standard knock-outs can be easily surface mounted in typical frame construction
- Feature a low VPR to ensure protection of sensitive electronic devices including LCD TVs, PDAs and computers
- Compatible with Leviton Decora Home Controls
- Limited Lifetime Product Warranty
- Connected equipment coverage up to \$25,000 for the 51120-1

### Ordering Information

Catalog Number	Description	Voltage (V AC) Configuration	Max Surge Current, Per Mode (Per Phase)
51120-1	2-Mode Surge Protection Panel	120/240 Single-phase, 2-wire + gnd	50kA (50kA)
51120-3	3-Mode Surge Protection Panel	120/208 3Ø WYE, 4-wire + gnd	50kA (50kA)

Specifications for: 32000/42000, 51120-1 and 51120-3

Catalog Number	51120-1	51120-3	32120-1 42120-1	32120-DY3 42120-DY3	32277-DY3 42277-DY3	32412-DS3 42412-DS3	32347-DY3 42347-DY3		
<b>Electrical Specifications</b>									
Voltage	120/240V AC, Single-Phase	120/208V AC, 3-Phase WYE	120V/240V Single Phase	120V/208V 3Ø WYE, 208V 3Ø Delta, 220V 3Ø Delta	277V/480V 3Ø WYE, 220V/380V 3Ø WYE, 240V 3Ø Delta, 480V 3Ø Delta	120V/240V/120V 3Ø Hi-leg Delta	347V/600V 3Ø WYE, 600V 3Ø Delta		
Frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz		
Surge Technology	40mm MOV	40mm MOV	40mm MOV	40mm MOV	40mm MOV	40mm MOV	40mm MOV		
Recommended Circuit Breaker Rating	20A, 120/24V	20A, 120/208V	20A, 120/240V	30A, 120/208V	30A, 277/480V	30A, 120/240V	30A, 347/600V		
<b>Performance Data</b>									
Nominal Discharge Rating (I <sub>n</sub> )	3kA	3kA	3kA	3kA	3kA	3kA	N/A		
Maximum Continuous Operating Voltage (MCOV)	L-N	150V	150V	150V	150V	320V	150V	385V	
	L-G	—	—	300V	300V	640V	300V	—	
	N-G	—	—	150V	150V	320V	150V	—	
	L-L	300V	300V	254V	254V	552V	254V	770V	
Maximum Surge Current, Per Mode (Per Phase)	50kA (50kA)	50kA (50kA)	80kA (80kA)	80kA (80kA)	80kA (80kA)	80kA (80kA)	80kA (80kA)		
Voltage Protection Rating (VPR)	L-N	800V	800V	800V	700V	1200V	800V	1200V <sup>2</sup>	
	L-G	—	—	1200V	1200V	2000V	1200V	—	
	N-G	—	—	700V	700V	1200V	700V	1000V <sup>2</sup>	
	L-L	1200V	1200V	1000V	1000V	1800V	1000V	2000V <sup>2</sup>	
Short Circuit Current Rating	10kA	10kA	100kA	100kA	100kA	100kA	100kA		
EMI/RFI Noise Filtering	-6dB to -28dB (@100KHz to 100MHz)	-6dB to -28dB (@100KHz to 100MHz)	32000 Series: -20 to -40dB (@ 1.5K-1.2MHz)						
			42000 Series: -30 to -40dB (@ 10K-10MHz)						
Diagnostics	Protection status LEDs		Real Time Protection Status LEDs & Audible Alarm						
<b>Mechanical Specifications</b>									
Connection Type	Parallel - Hardwired via 12AWG wire								
Remote Monitoring	—		Dry Contact Leads -N.O./N.C. Form C Rated at 7Amps @ 240VAC or 30VDC						
<b>Environmental Specifications</b>									
Enclosure type	NEMA 1			NEMA 3R					
Flammability	Rated V-2 per UL 94**								
Operating Temperature	-10°C to 60°C								
Storage Temperature	-20°C to 85°C								
Relative Humidity	5% to 95% non-condensing								
<b>Material Specifications</b>									
Enclosure	Powder Coated Steel								
<b>Standards &amp; Certifications</b>									
Agency Certification	cULus 1449 3rd Edition Listed Type 2						CSA C22.2 Certified		
ANSI/IEEE Category A, B & C	C-62.41 & C-62.45								
<b>Warranty</b>									
Product Warranty	Limited Lifetime								
Connected Equipment Coverage	Up to \$25,000*	—							

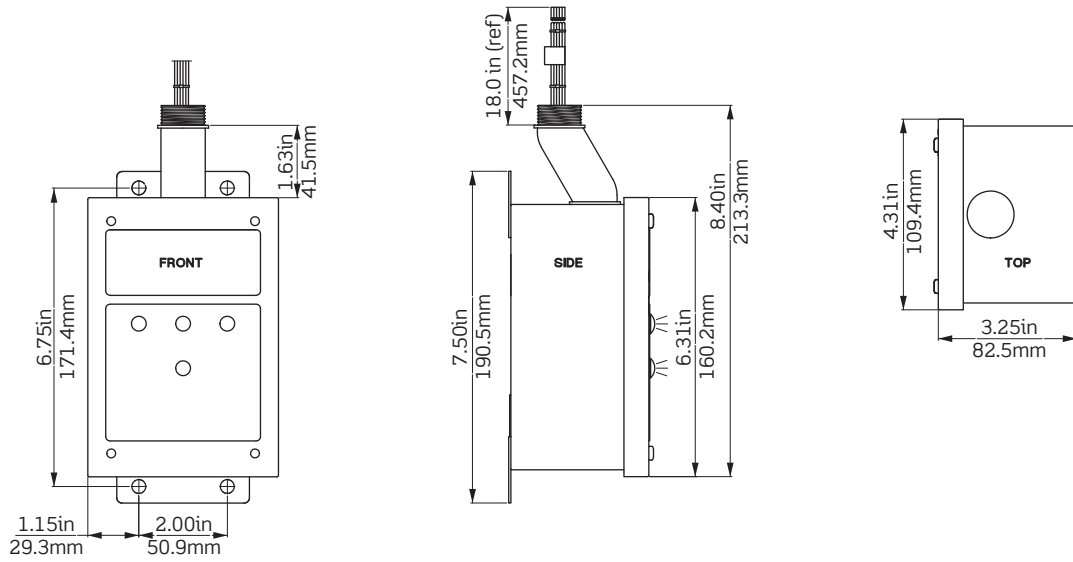
\* As part of the True Whole House Surge Protection Warranty

\*\* Flammability rating applies to module only

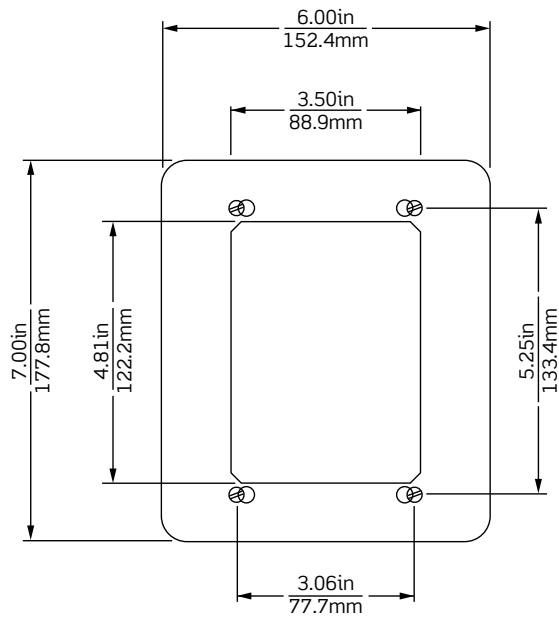
<sup>2</sup>Surge Voltage Rating (SVR)

Dimensions for: 32000/42000 Series, 51120-1 and 51120-3

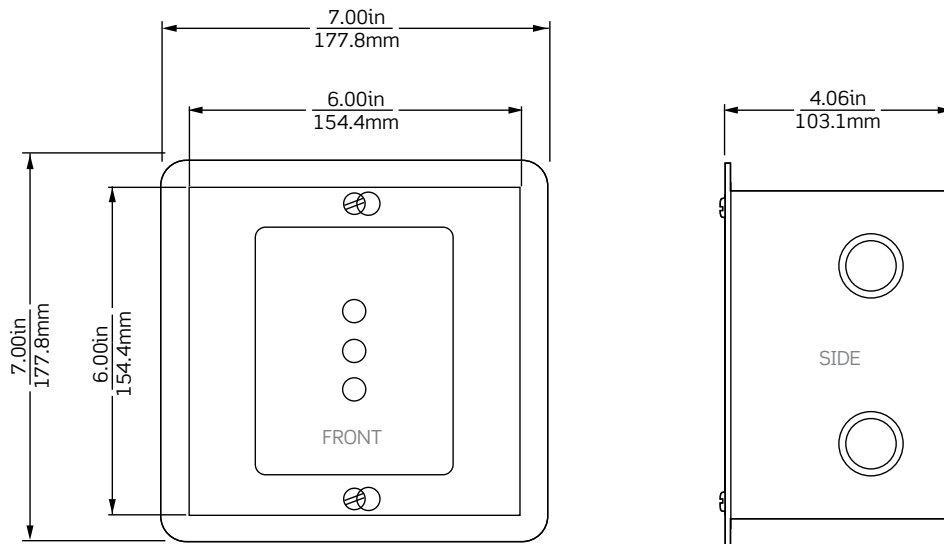
Typical for  
32000 / 42000  
Series



42001-FMC



51120-1 &  
51120-3



## Type 2 Surge Protective Devices

Leviton's 51110 Series Residential Surge Protection Panels are designed for mounting at the service entrance in homes, apartments and condominiums. They offer advanced surge protection for modern electronics and appliances, reducing the risk of damage from spikes and surges entering the property through AC power lines.

### 51110 Series Panel Mount Surge Protective Devices

- Real-time diagnostic visual indicator shows power and suppression status for each protected phase
- UL1449 3rd Edition rated
- DHC Power Line Carrier compatible
- 150 maximum continuous operating voltage (MOV) rating allows for tolerance to line voltage swells
- 10-year limited warranty



51110-SRG



### Ordering Information

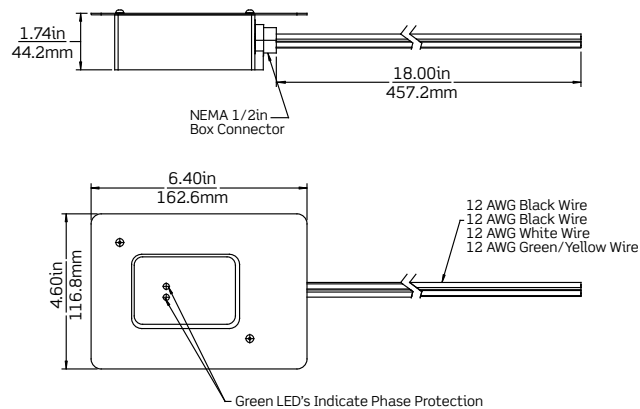
Catalog Number	Description	Voltage (V AC) Configuration	Max Surge Current, Per Mode (Per Phase)
51110-SRG	4-Mode Surge Protection Panel	120/240 Single-phase, 2-wire + gnd	48kA (96kA)

## Specifications for: 51110 Series

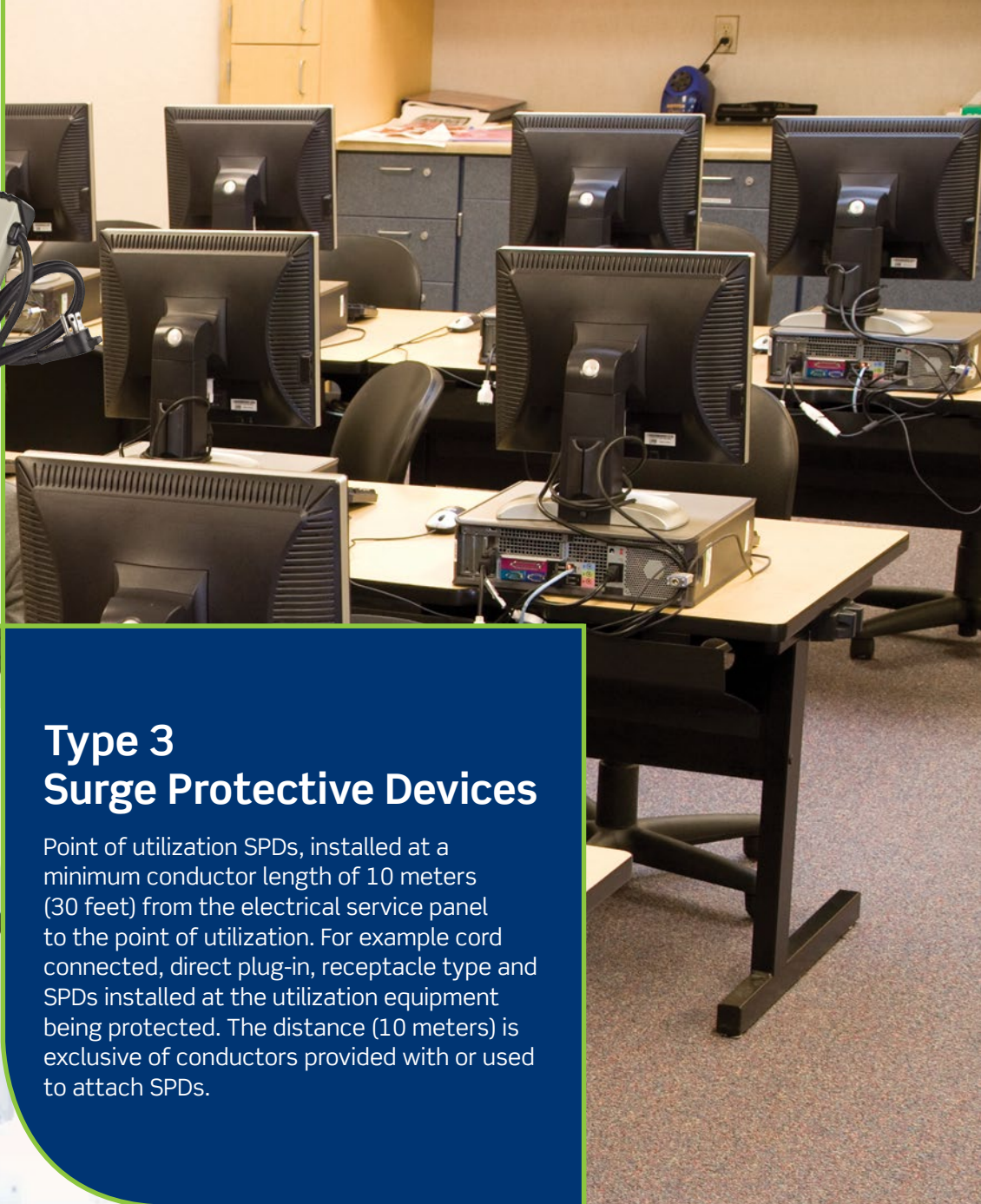
Catalog Number		51110-SRG
<b>Electrical Specifications</b>		
Voltage	120/240V AC, Single-Phase	
Frequency	50/60Hz	
Surge Technology	MOV	
Recommended Circuit Breaker Rating	30A, 120/240V	
<b>Performance Data</b>		
Nominal Discharge Rating (I <sub>n</sub> )	3kA	
Maximum Continuous Operating Voltage (MCOV)	L-N	150V
	L-G	150V
	N-G	150V
	L-L	300V
Maximum Surge Current, Per Mode (Per Phase)	48kA (96kA)	
Short Circuit Current Rating	10kA	
Diagnostics	Protection status LEDs	
Voltage Protection Rating (VPR)	L-N	600V
	L-G	600V
	N-G	600V
	L-L	1000V
EMI/RFI Noise Filtering	-6dB to -28dB (@100KHz to 100MHz)	
<b>Mechanical Specifications</b>		
Connection Type	Hardwired Parallel Connection	
<b>Environmental Specifications</b>		
Flammability	Rated V-2 per UL 94* *	
Operating Temperature	-10°C to 60°C	
Storage Temperature	-20°C to 85°C	
Enclosure Type	NEMA 4X	
Relative Humidity	5% to 95% non-condensing	
<b>Material Specifications</b>		
Outer Enclosure	Vinyl	
<b>Standards &amp; Certifications</b>		
Agency Certification	cULus 1449 3rd Edition Listed Type 2	
ANSI/IEEE Category A, B & C	C-62.41 & C-62.45	
<b>Warranty</b>		
Product Warranty	10-year Limited	

\*\* Flammability rating applies to module only

### 51110-SRG







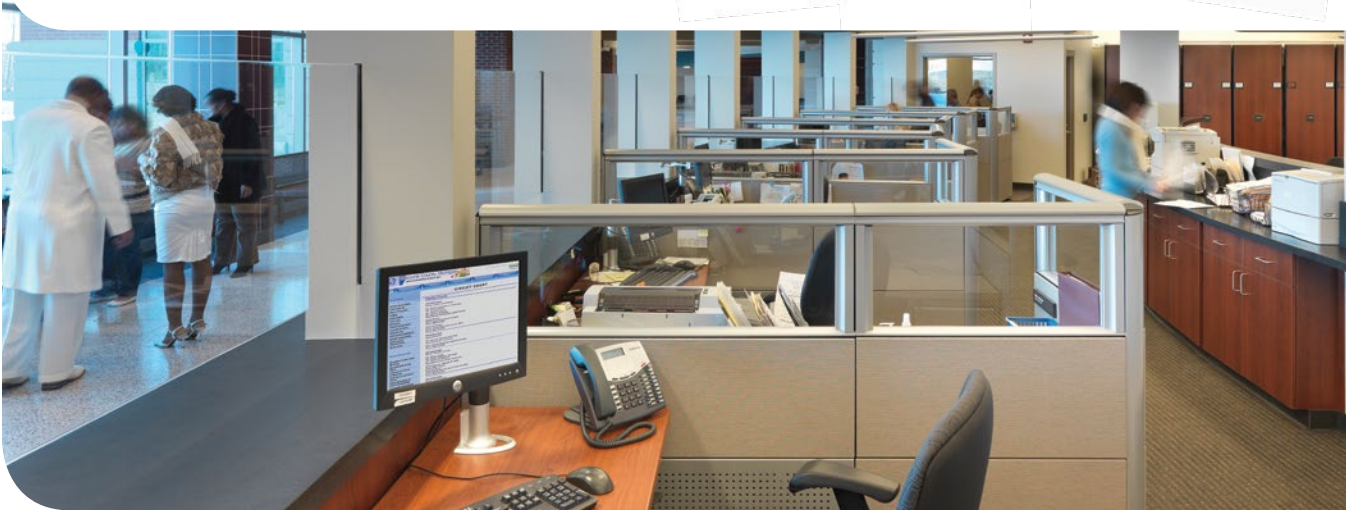
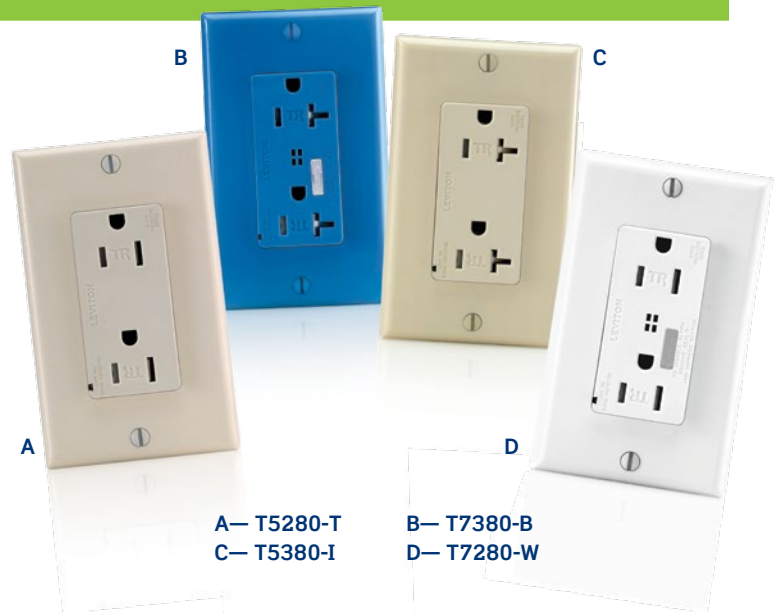
## Type 3 Surge Protective Devices

Point of utilization SPDs, installed at a minimum conductor length of 10 meters (30 feet) from the electrical service panel to the point of utilization. For example cord connected, direct plug-in, receptacle type and SPDs installed at the utilization equipment being protected. The distance (10 meters) is exclusive of conductors provided with or used to attach SPDs.



## Type 3 Surge Protective Devices

Leviton offers the broadest selection of surge protective receptacles in the industry. 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, a computer in your office, or the big screen TV in your living room.



Steve May/one for French Associates, Architects.



8490-R

### Surge Protective Receptacles

- Available in 15A, 125V and 20A, 125V ratings
- Tamper-Resistant versions have a shutter mechanism that prevents incidental contact with energized contacts
- Indicator light provides visual indication that equipment is being protected
- Single, Duplex and 4-in-1 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

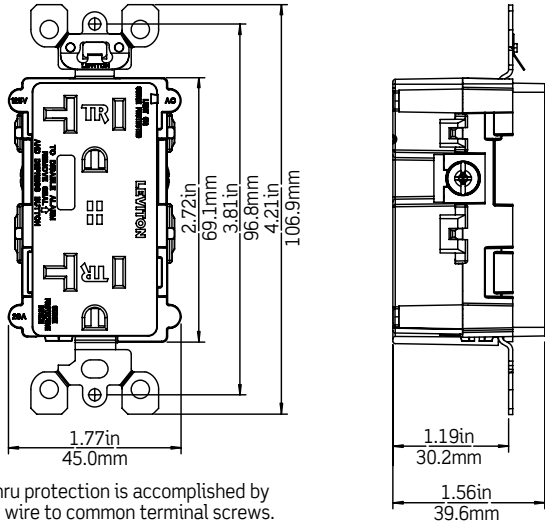
## Ordering Information

Commercial / Industrial Grade											
Decora® TR Surge Protective Receptacles											
Amp.	Outlet Configuration	Color									Features
		Brown	Ivory	White	Gray	Red	Blue	Black	Orange	Lt. Almond	
15A	Duplex	T5280	T5280-I	T5280-W	T5280-GY	—	T5280-B	T5280-E	—	T5280-T	■
15A	Duplex	—	T7280-I	T7280-W	—	—	T7280-B	T7280-E	—	T7280-T	■
15A	Duplex	—	T8280-I	T8280-W	—	T8280-R	T8280-B	—	—	T8280-T	■       ●
20A	Duplex	T5380	T5380-I	T5380-W	T5380-GY	—	T5380-B	T5380-E	—	—	■
20A	Duplex	—	T7380-I	T7380-W	—	—	T7380-B	T7380-E	—	—	■
20A	Duplex	—	T8380-I	T8380-W	T8380-GY	T8380-R	T8380-B	—	—	—	■       ●
Decora® Surge Protective Receptacles											
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											
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 Configuration	Color									Features
		Brown	Ivory	White	Gray	Red	Blue	Black	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											
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	—	▼ ■ ●

Key:	▼ Isolated Ground (IG)	■ Indicator Light
	Audible Alarm	● Hospital Grade

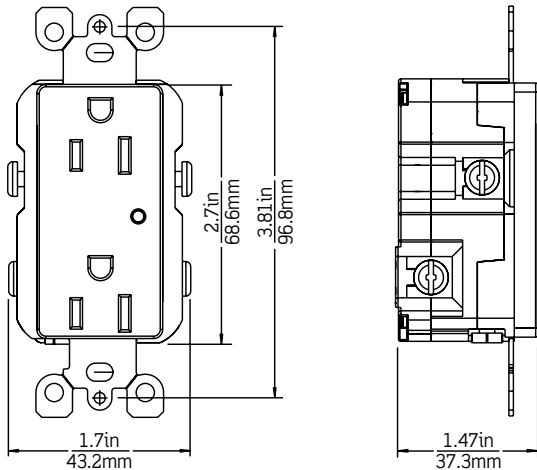
# Specifications and Dimensions for: Surge Protective Receptacles

## Common to Tamper-Resistant Receptacles

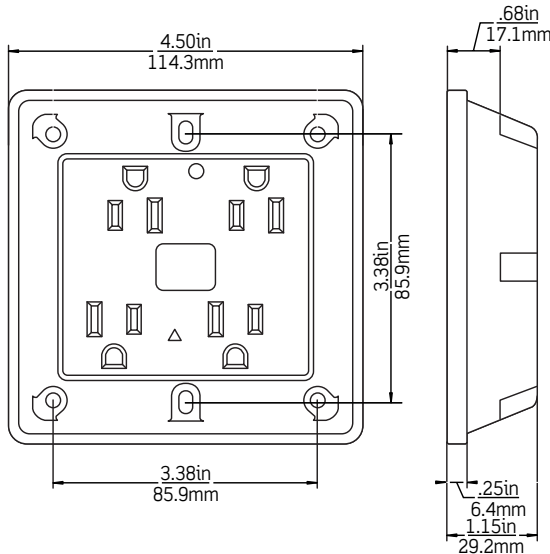


Feed-thru protection is accomplished by affixing wire to common terminal screws.

## Common to Non-Tamper-Resistant Receptacles



## Common to All 4-in-1 Receptacles



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	
Performance Data		
Maximum Continuous Operating Voltage (MCOV)	150V rms	
Maximum Surge Current, Per Mode	L-N: 18kA, L-G: 9kA, N-G: 9kA	
Noise Filtering	-30dB at 500kHz-30MHz	
Voltage Protection Rating (VPR)	All Single & Duplex Receptacles	L-N: 600V, L-G: 700V, N-G: 600V
	4-in-1 Receptacles	L-N: 500V, L-G: 600V, N-G: 500V
Diagnostics	Indicator Light, Audible Alarm (on select versions)	
Joules Rating	720	
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.	
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 (Tamper Resistant Versions)	Delrin® Acetal	
Standards & Certifications		
NEMA	WD-6	
ANSI	C-73	
Agency Certifications	UL 498, UL 1449 3rd Edition Listed and CSA C22.2 Certified Type 3	
NOM	057	
Warranty		
Product Warranty	10 Year Limited	

# Type 3 Surge Protective Devices

Leviton's family of medical grade power strips are designed explicitly for use in health care facilities, including patient care areas as defined by NEC (2011) Article 517. These devices also satisfy electrical safety requirements specified in NFPA 99 (2012): Health Care Facilities Code, allowing facility managers to ensure that their facilities are compliant with this safety regulation.



5306M-2S7

5304M-1S5

## Medical Grade Power Strips

- UL 60601-1, UL 1363A, and UL 60950-1 compliant to meet all major safety regulations required for health care facilities
- All outlets are hospital grade, ensuring dependable performance
- Surge-protective models are UL 1449 3rd edition compliant, providing the ultimate protection against voltage surges that can damage or diminish the performance of sensitive electronic equipment
- Heavy duty steel construction withstands the rigors of demanding environments
- Built-in overload protection shuts off the strip in case of excess power draw, and can be returned to service with the simple push of a button
- NAFTA Compliant
- Locking safety covers are splash-resistant and protect from incidental contact with unused outlets
- Indicator lights provide visual confirmation of power and surge protection (where applicable)
- LIMITED LIFETIME WARRANTY

## Ordering Information

Stock Configurations	Current Rating	AC Power Cord Length	Number of Outlets	Catalog Number
<b>Surge Protective Medical Grade Power Strips</b>	15A (12A max continuous load)	7 ft.	6	5306M-1S7
		15 ft.	4	5304M-1S5
			6	5306M-1S5
	20A (16A max continuous load)	7 ft.	6	5306M-2S7
		15 ft.	4	5304M-2S5
			6	5306M-2S5
<b>Medical Grade Power Strips</b>	15A (12A max continuous load)	7 ft.	4	5304M-1N7
		15 ft.	6	5306M-1N7
			4	5304M-1N5
	20A (16A max continuous load)	7 ft.	4	5304M-2N7
		15 ft.	6	5306M-2N7
			4	5306M-2N7
<b>Special Order Configurations*</b>	<b>Current Rating</b>	<b>AC Power Cord Length</b>	<b>Number of Outlets</b>	<b>Catalog Number</b>
<b>Surge Protective Medical Grade Power Strips</b>	15A (12A max continuous load)	7 ft.	2	5302M-1S7
			4	5304M-1S7
		15 ft.	2	5302M-1S5
	20A (16A max continuous load)	7 ft.	2	5302M-2S7
		15 ft.	4	5304M-2S7
			2	5302M-2S5
<b>Medical Grade Power Strips</b>	15A (12A max continuous load)	7 ft.	2	5302M-1N7
		15 ft.	2	5302M-1N5
			6	5306M-1N5
	20A (16A max continuous load)	7 ft.	2	5302M-2N7
		15 ft.	2	5302M-2N5
			4	5304M-2N5
			6	5306M-2N5

\*Minimum quantities apply.  
All items available with flying leads; surge-protective strips available with audible alarm as a special order – contact your Leviton sales representative for details.

## Specifications and Dimensions for: Medical Grade Power Strips

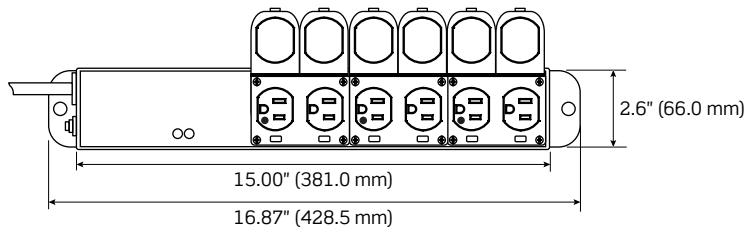
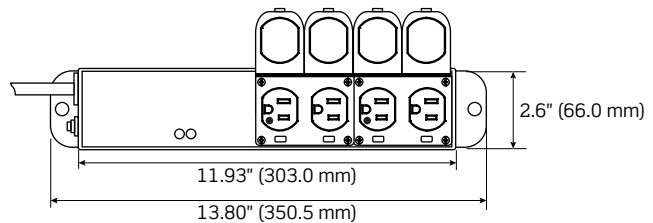
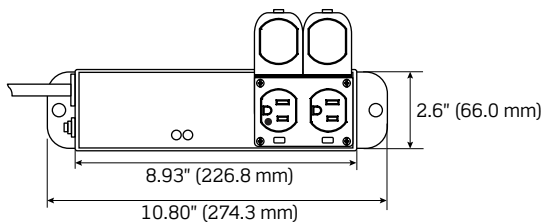
Medical Grade Power Strips		
Catalog Number	5302M-1N7 5304M-1N7 5306M-1N7 5302M-1N5 5304M-1N5 5306M-1N5	5302M-2N7 5304M-2N7 5306M-2N7 5302M-2N5 5304M-2N5 5306M-2N5
Electrical Specifications		
Current	15A (12A max continuous load)	20A (16A max continuous load)
Voltage	125V	125V
Frequency	60Hz	60Hz
Performance Data		
Maximum Leakage Current	<100µA	
Material Specifications		
Line Cord	#14/3 SJT	#12/3 SJT
Enclosure	Powder Coated Steel (18ga)*	
Outlet Covers	Polypropylene	
Mechanical Specifications		
HG Plug Configuration	NEMA 5-15P	NEMA 5-20P
HG Outlet Configuration	NEMA 5-15R	NEMA 5-20R
Environmental Specifications		
Operating Temperature	0°C to +40°C	
Storage Temperature	-10°C to +50°C	
Standards and Certifications		
UL/ CSA/ NOM	ETL listed to: UL 60601-1/ C22.2 No. 60601-1 UL 60950-1/ C22.2 No. 60950-1 UL 1363A/ C22.2 No. 21	
NFPA	NFPA 99 2012 ed	
Warranty		
Product Warranty	Limited Lifetime	

\* Chromium-free paint - is also RoHS compliant

Surge Protective Medical Grade Power Strips		
Catalog Number	5302M-1S7 5304M-1S7 5306M-1S7 5302M-1S5 5304M-1S5 5306M-1S5	5302M-2S7 5304M-2S7 5306M-2S7 5302M-2S5 5304M-2S5 5306M-2S5
Electrical Specifications		
Current	15A (12A max continuous load)	20A (16A max continuous load)
Voltage	125V	125V
Frequency	60Hz	60Hz
Surge Technology	MOV	MOV
Performance Data		
Maximum Continuous Operating Voltage (MCOV)	150V	
Voltage Protection Rating (VPR)	L-N	600V
	L-G	600V
	N-G	500V
Maximum Surge Current, Per Mode (L-N)	27kA	
Noise Filtering	-6dB to -29dB (100kHz to 100MHz)	
Maximum Leakage Current	<100µA	
Total Joules	644J	
Material Specifications		
Line Cord	#14/3 SJT	#12/3 SJT
Enclosure	Powder Coated Steel (18ga)*	
Outlet Covers	Polypropylene	
Mechanical Specifications		
HG Plug Configuration	NEMA 5-15P	NEMA 5-20P
HG Outlet Configuration	NEMA 5-15R	NEMA 5-20R
Environmental Specifications		
Operating Temperature	0°C to +40°C	
Storage Temperature	-10°C to +50°C	
Standards and Certifications		
UL/ CSA/ NOM	ETL listed to: UL 60601-1/ C22.2 No. 60601-1 UL 60950-1/ C22.2 No. 60950-1 UL 1363A/ C22.2 No. 21 UL 1449 3rd Ed/ C22.2 No.8	
NFPA	NFPA 99 2012 ed	
ANSI/IEEE	Category A	
Warranty		
Product Warranty	Limited Lifetime	

\* Chromium-free paint - is also RoHS compliant

Typical for 2, 4 and 6 Outlet Configurations Respectively



## Type 3 Surge Protective Devices

Leviton's 5100 and 5300 Series surge protected power strips offer superior protection for any Commercial, Industrial, or Hospital application. Our Industrial strips feature robust construction, including durable metal housings while our Commercial Grade strips feature a durable thermoplastic housing. They are available in two performance levels to address surge protection needs in a variety of commercial and industrial environments. Our Hospital version strips feature tamper-resistant hospital grade receptacles.



Left: 5100-PS  
Center: 5300-HT2  
Right: 5100-IPS



### 5100 and 5300 Series, 6-Outlet Surge Protective Strips

- Multi-Line protection (L-N, L-G, N-G)
- 6 surge protected outlets
- LEDs indicate power and protection status
- Onboard resettable circuit breaker
- Limited Lifetime Product Warranty
- Limited Lifetime Connected Equipment Protection Policy

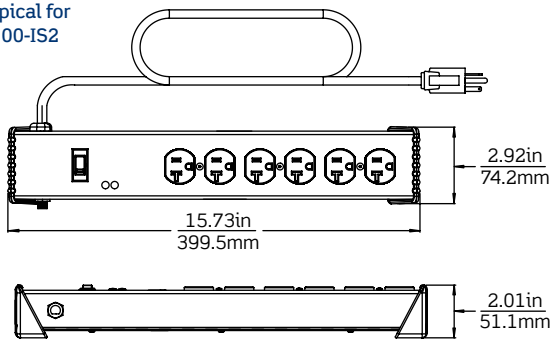
### Ordering Information

Catalog Number	Application	Maximum Input Current	Joules	Alarm	Enclosure	On/Off Switch	Cord Length
5100-PS	Commercial	15 Amp	720	—	ABS Plastic	Yes	6 Feet
5100-S15	Commercial	15 Amp	720	—	ABS Plastic	Yes	15 Feet
5300-PS	Commercial	15 Amp	1520	—	ABS Plastic	Yes	6 Feet
5300-S15	Commercial	15 Amp	1520	—	ABS Plastic	Yes	15 Feet
5100-IPS	Industrial	15 Amp	1330	Audible at Protection Loss	Steel	Yes	6 Feet
5100-IS2	Industrial	20 Amp	900	Audible at Protection Loss	Steel	Yes	6 Feet
5300-IPS	Industrial	15 Amp	1330	Audible at Protection Loss	Steel	Yes	6 Feet
5300-H15	Hospital	15 Amp	952	—	Steel	No	15 Feet
5300-HTS	Hospital	15 Amp	952	—	Steel	No	6 Feet
5300-HT2	Hospital	20 Amp	952	—	Steel	No	6 Feet

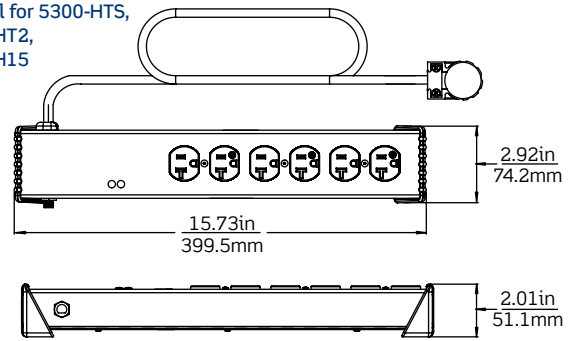
## Specifications and Dimensions for: 5100 & 5300 Series Surge Strips

Catalog Number	5100-IPS	5100-IS2	5300-IPS	5300-H15	5300-HTS	5300-HT2	5100-PS 5100-S15	5300-PS 5300-S15
Series	Industrial/Hospital						Commercial	
<b>Electrical Specifications</b>								
Voltage	125VAC	125VAC	125VAC	125VAC	125VAC	125VAC	125VAC	125VAC
Frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Surge Technology	MOV	MOV	MOV	MOV	MOV	MOV	MOV	MOV
Current	15A	20A	15A	15A	15A	20A	15A	15A
<b>Performance Data</b>								
Maximum Continuous Operating Voltage (MCOV)	150V	150V	130V	150V	150V	150V	150V	130V
Maximum Surge Current, Per Mode (L-N)	84kA	45kA	84kA	51kA	51kA	51kA	36kA	96kA
Noise Filtering	-5 to -25dB (@500K-100MHz)	-6 to -40dB (@50K-100MHz)	-6 to -40dB (@50K-100MHz)	-6 to -40dB (@50K-100MHz)	-6 to -40dB (@50K-100MHz)	-6 to -40dB (@50K-100MHz)	-5 to -25dB (@500K-100MHz)	-6 to -40dB (@50K-100MHz)
Voltage Protection Rating (VPR)	L-N	600V	600V	500V	500V	500V	500V	500V
	L-G	600V	700V	600V	700V	700V	600V	600V
	N-G	600V	700V	600V	700V	700V	700V	500V
Joules	1330J	900J	1330J	952J	952J	952J	720J	1520J
<b>Material Specifications</b>								
Enclosure	Powder Coated Steel						ABS	
<b>Standards &amp; Certifications</b>								
Agency Certification	cULus 1449 3rd Edition Listed Type 3 and UL1363							
ANSI/IEEE Category A,B & C	C62.41.1, C62.41.2 & C62.45							
<b>Warranty</b>								
Product Warranty	Lifetime Limited							

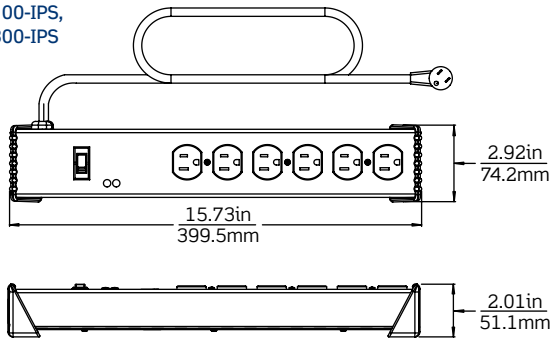
Typical for 5100-IS2



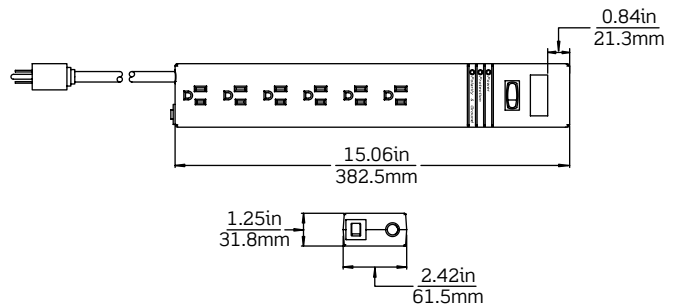
Typical for 5300-HTS, 5300-HT2, 5300-H15



Typical for 5100-IPS, 5300-IPS



Typical for 5100-PS, 5100-S15, 5300-PS, 5300-S15



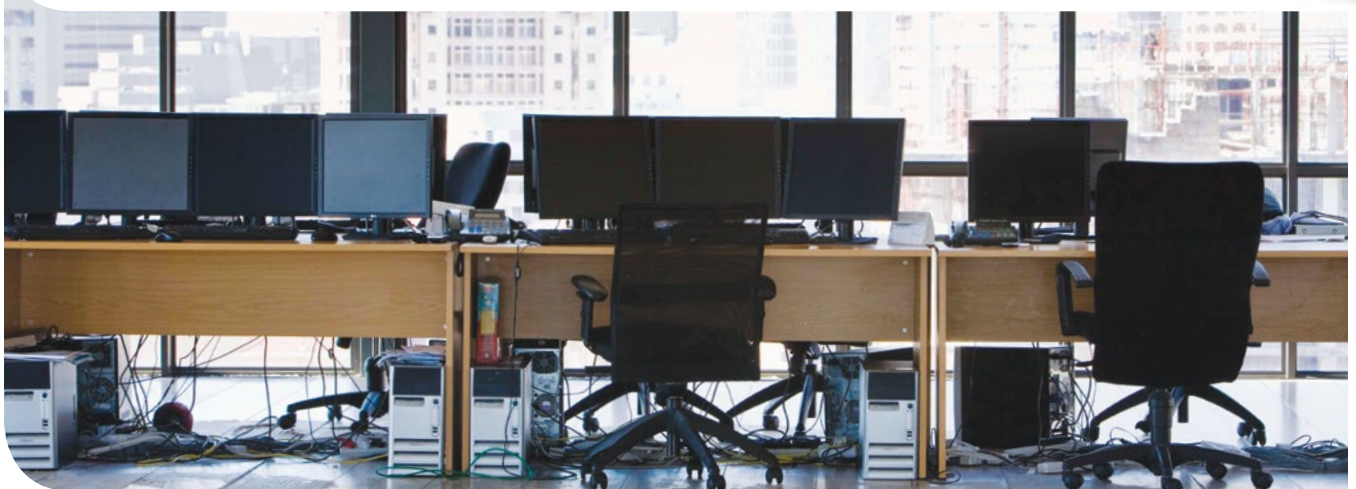


## Type 3 Surge Protective Devices

Leviton's S1000 and S2000 Series Surge Protected Strips provide superior protection for everyday use in professional work areas and home offices, protecting computers, peripherals and other electronic devices from damaging surges, voltage transients and noise spikes.



S1000-PS



### S1000 and S2000 Series Surge Protective Strips

- Diagnostic LEDs for Surge Protection, Polarity, and Ground
- Resettable circuit breaker and internal fusing circuit protection
- Audible alarm indicates loss of surge protection
- Multi-line protection (L-N, L-G, N-G)
- Velcro straps provided for cord management
- Mounting template provided for easy installation
- Optional Coax and Telco surge protection
- All units feature right angle NEMA 5-15P Plug
- Limited Lifetime Product Warranty and Connected Equipment Protection Policy



S2000-PS

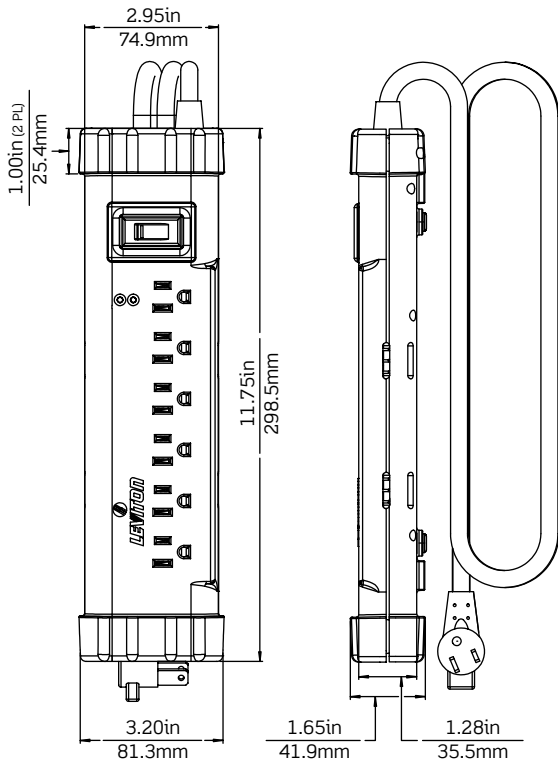
### Ordering Information

Catalog Number	Maximum Input Current	Joules	Data Protection	Enclosure	Number of Outlets	Cord Length
S1000-PS	15 Amp	1010J	—	ABS Plastic	6	6 Feet
S1000-S15	15 Amp	1010J	—	ABS Plastic	6	15 Feet
S1000-PTC	15 Amp	1010J	RJ-11, Coax	ABS Plastic	6	6 Feet
S2000-PS	15 Amp	2020J	—	ABS Plastic	9	6 Feet
S2000-S15	15 Amp	2020J	—	ABS Plastic	9	15 Feet
S2000-PTC	15 Amp	2020J	RJ-45, Coax	ABS Plastic	9	6 Feet

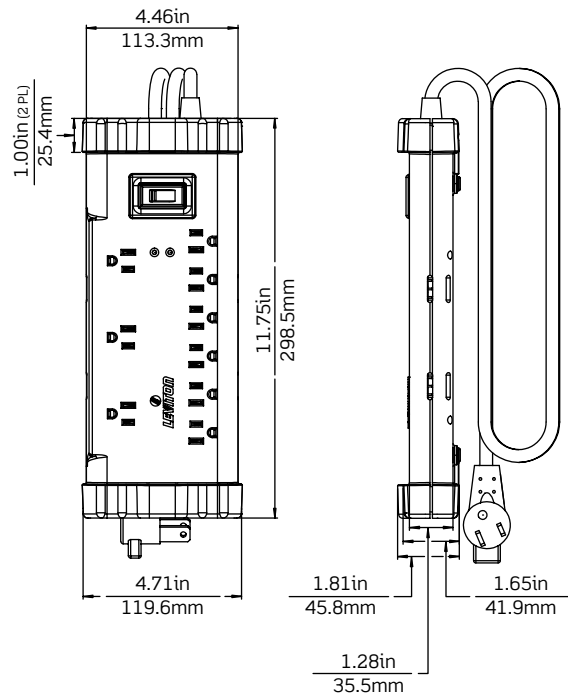
## Specifications and Dimensions for: S1000 & S2000 Series Surge Strips

Catalog Number	S1000-PS, S1000-S15, S1000-PTC	S2000-PS, S2000-S15, S2000-PTC	
<b>Electrical Specifications</b>			
Voltage	120V	120V	
Frequency	50/60 Hz	50/60 Hz	
Surge Technology	MOV	MOV	
Amperage	15A	15A	
<b>Performance Data</b>			
Maximum Continuous Operating Voltage (MCOV)	150V	150V	
Maximum Surge Current, Per Mode (L-N)	25kA	62.5kA	
Voltage Protection Rating (VPR)	L-N	600V	500V
	L-G	700V	700V
	N-G	700V	700V
Noise Filtering	-8dB to -25dB (@100K-100MHz)	-10dB to -20dB (@5M-100MHz)	
Joules	1010J	2020J	
<b>Material Specifications</b>			
Enclosure	ABS Plastic		
<b>Standards &amp; Certifications</b>			
Agency Certifications	cULus 1449 3rd Edition Listed Type 3, NOM 057 and UL1363		
ANSI/IEEE Category A, B & C	C-62.41 & C-62.45		
<b>Warranty</b>			
Product Warranty	Limited Lifetime		
Connected Equipment Warranty	Limited Lifetime		

### Common to S1000 Series



### Common to S2000 Series



## Type 3 Surge Protective Devices

Leviton's Plug-In Surge units plug directly into a standard wall outlet to provide surge protection for up to six devices. They are ideal for immediate surge protection in tight spaces such as behind desks, book cases, sofas, and media equipment.



### 3500 Series Wall-Mount Surge Protectors

- 6 surge protected outlets
- Noise filtering for reduced EMI
- Multi-line protection (L-N, LG, and N-G)
- Illuminated LED confirms surge protection; audible alarm at protection loss
- Available in standard, telecommunications and CATV versions
- 10-Year Limited Product Warranty / Lifetime Limited Connected Equipment Warranty



3500-P



3500-PC



3500-PT

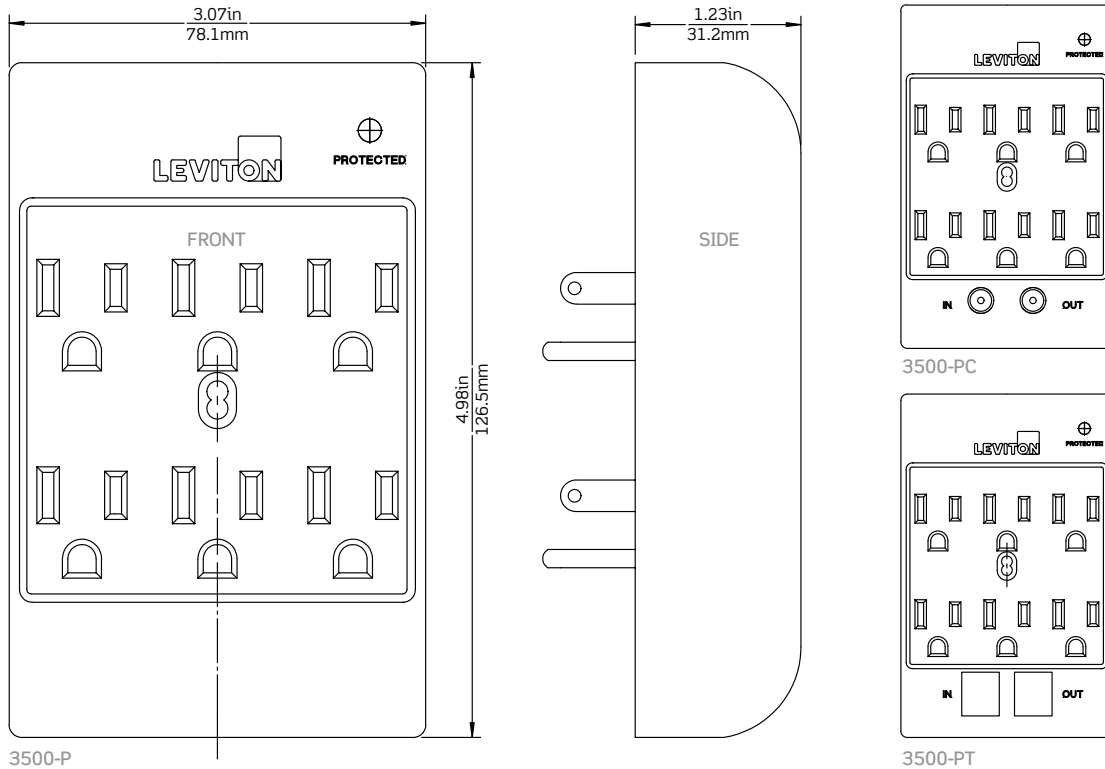
### Ordering Information

Catalog Number	Data Line Protection
3500-P	None
3500-PC	Coax
3500-PT	Telco

## Specifications and Dimensions for: 3500 Series Wall-Mount Surge Protectors

Catalog Number	3500-P	3500-PC	3500-PT
<b>Electrical Specifications</b>			
Voltage	120V	120V	120V
Frequency	50/60Hz	50/60Hz	50/60Hz
Surge Technology	MOV	MOV	MOV
Current	15A	15A	15A
<b>Performance Data</b>			
Maximum Continuous Operating Voltage (MCOV)	130V	130V	130V
Maximum Surge Current, Per Mode	36kA	36kA	36kA
Noise Filtering	-10 to -45dB (@50KHz to 100MHz)	-10 to -45dB (@50KHz to 100MHz)	-10 to -45dB (@50KHz to 100MHz)
Voltage Protection Rating (VPR)	L-N	600V	600V
	L-G	700V	700V
	N-G	700V	700V
Joules	570	570	570
<b>Material Specifications</b>			
Enclosure	ABS Plastic	ABS Plastic	ABS Plastic
<b>Standards and Certifications</b>			
Agency Certification	cULus 1449 3rd Edition Listed Type 3		
ANSI/IEEE Category A,B & C	C-62.41 & C-62.45		
<b>Warranty</b>			
Product Warranty	10 Year Limited		
Connected Equipment Warranty	Limited Lifetime		

### Common to 3500 Series





## Type 4 Surge Protective Devices

Component Assemblies - Component assembly consisting of one or more Type 5 components — discrete component surge suppressors, such as MOVs that may be mounted on a PWB, connected by its leads or provided within an enclosure with mounting means and wiring terminations — together with a disconnect (integral or external).



# Type 4 Surge Protective Devices

Leviton's 51000 Series Surge Protective Devices provide point-of-use surge protection for industrial applications such as factory automation servo motors, drives and PLCs. Available in models with maximum load currents of 5 to 16 amps and in both wall-mounted and DIN rail mounted configurations.



51020-DIN

## 51000 Series UL Recognized Components

- Protection for up to 52,000 amps of surge current per mode
- Tested to ANSI/IEEE C62.41 and C62.45 standards for category A & B applications
- Type 4 Surge Protected Devices (SPD) evaluated for use in Type 3 SPD applications
- C Sinewave Tracking provides enhanced EMI/RFI filtering
- Visual and Audible Alarms if surge protection is lost
- Dry contacts for remote monitoring
- Manufactured to ISO 9001 standards
- 10-year Limited Product Warranty



51005-DIN

## Ordering Information

Catalog Number	Description	Amperage	Voltage Rating	Joules	MCOV	Enclosure
51005-DIN	Single-phase, 2-Wire + Ground, DIN-rail mounted	5 Amp	120VAC	672J	150V	Polycarbonate
51005-WM	Single-phase, 2-Wire + Ground	5 Amp	120VAC	672J	150V	Polycarbonate
51010-DIN	Single-phase, 2-Wire + Ground, DIN-rail mounted	10 Amp	120VAC	672J	150V	Polycarbonate
51010-WM	Single-phase, 2-Wire + Ground	10 Amp	120VAC	672J	150V	Polycarbonate
51015-WM	Single-phase, 2-Wire + Ground	15 Amp	120VAC	1360J	150V	Extruded Aluminum
51020-DIN	Single-phase, 2-Wire + Ground, DIN-rail mounted	16 Amp	120VAC	1360J	150V	Extruded Aluminum
51020-WM	Single-phase, 2-Wire + Ground	16 Amp	120VAC	1360J	150V	Extruded Aluminum
51240-DIN	Single-phase, 2-Wire + Ground, DIN-rail mounted	16 Amp	240VAC	2600J	270V	Extruded Aluminum
51240-WM	Single-phase, 2-Wire + Ground	16 Amp	240VAC	2600J	270V	Extruded Aluminum

# Type 4 Surge Protective Devices

Leviton's 3800 Series surge protective devices are designed to provide wired-in surge protection for devices in industrial and commercial equipment cabinets. These devices are suitable for 125V AC applications. Available in standard equipment or DIN rail mount with terminal block for connections, or standard equipment mount with 6" long wire leads for termination and remote LED.



3800-DIN



3800-WM



3800-OEM

## 3800 Series UL Recognized Components

- MOV-based suppression circuitry provides optimum clamping
- Type 4 Surge Protected Devices (SPD) evaluated for use in Type 2 SPD applications
- Tested to ANSI/IEEE C62.41 and C62.45 standards for category A & B applications
- Terminal-Block accepts 14 AWG or 12 AWG conductors
- Manufactured to ISO 9001 standards
- 10-year Limited Product Warranty

## Ordering Information

Catalog Number	Description
3800-DIN	Terminal Block Connection, DIN rail mounted
3800-WM	Terminal Block Connection
3800-OEM	Pigtail Connection w/ 6" leads

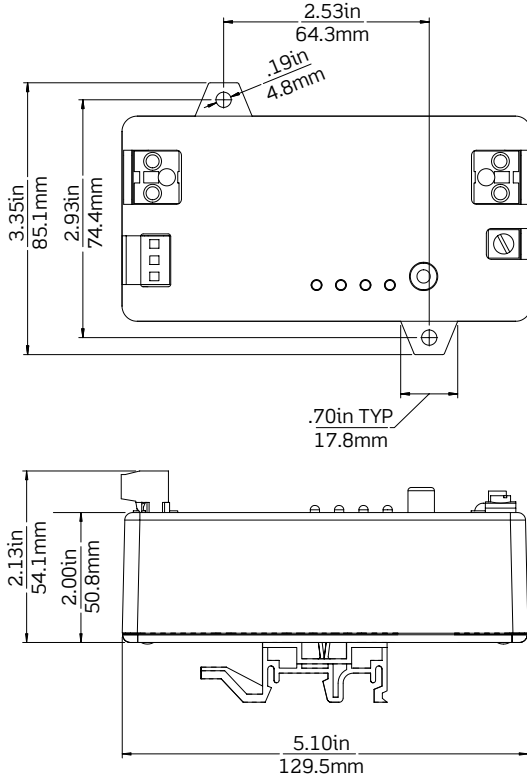
## Specifications for: 3800 & 51000 Series

Catalog Number	51005-DIN 51005-WM	51010-DIN 51010-WM	51015-WM	51020-DIN 51020-WM	51240-DIN 51240-WM	3800-DIN 3800-WM 3800-OEM
<b>Electrical Specifications</b>						
Voltage	120VAC	120VAC	120VAC	120VAC	240VAC	125V AC
Frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Surge Technology	MOV	MOV	MOV	MOV	MOV	MOV
Amperage	5 Amp	10 Amp	15 Amp	16 Amp	16 Amp	N/A
<b>Performance Data</b>						
Nominal Discharge Current (I <sub>n</sub> )	N/A	N/A	N/A	N/A	N/A	3kA
Maximum Continuous Operating Voltage (MCOV)	150V	150V	150V	150V	270V	130V
Maximum Surge Current, Per Phase	L-N: 26kA, L-G: 13kA (39kA)	L-N: 26kA, L-G: 13kA (39kA)	L-N: 48kA, L-G: 24kA (72kA)	L-N: 48kA, L-G: 24kA (72kA)	L-N: 40kA, L-G: 20kA (60kA)	L-N: 24kA, L-G: 12kA (36kA)
Protection Mode	3 Mode	3 Mode	3 Mode	3 Mode	3 Mode	3 Mode
Noise Filtering	-20dB to -40dB (@50K-100MHz)	-20dB to -40dB (@50K-100MHz)	-20dB to -40dB (@50K-100MHz)	-20dB to -40dB (@50K-100MHz)	-20dB to -40dB (@50K-100MHz)	-10dB to -15dB (@100K-100MHz)
Voltage Protection Rating (VPR)	L-L	—	—	—	700V	—
	L-N	500V	500V	400V	400V	700V
	L-G	600V	600V	500V	500V	700V
	N-G	500V	500V	500V	500V	600V
Joules	672J	672J	1360J	1360J	2600J	600J
Diagnostics	Indicator lights and sound alarm for loss of protection					Indicator lights and sound alarm for loss of protection
<b>Material Specifications</b>						
Enclosure	Polycarbonate housing	Polycarbonate housing	Extruded Aluminum	Extruded Aluminum	Extruded Aluminum	Polycarbonate
Connection Type	Hard wired; Accommodate 12 to 20 AWG wire	Hard wired; Accommodate 12 to 20 AWG wire	Hard wired; Accommodate 8 to 12 AWG wire	Hard wired; Accommodate 8 to 12 AWG wire	Hard wired; Accommodate 8 to 12 AWG wire	-DIN and -WM models: terminal block - accommodates 12 or 14 awg wire -OEM model: 6" pigtails
Remote Monitoring	Rated 0.46 A, 150VAC or 1A, 30Vdc Dry contact					—
<b>Environmental Specifications</b>						
Flammability	Polycarbonate enclosures (51005 and 51010) - V-2 rated					Rated V-0 per UL 94
Operating Temperature	-10°C to 60°C					14°F to 140°F/ -10°C to 60°C
Storage Temperature	-20°C to 85°C					-4°F to 185°F/ -20°C to 85°C
Relative Humidity	5% to 95% (non-condensing)					Condensing: 5% to 95%
<b>Standards &amp; Certifications</b>						
Agency Certification	cURus 1449 3rd Edition Listed Type 3 Recognized Components					UL & CSA Recognized Components
ANSI/IEEE Category A & B	C-62.41 & C-62.45					C-62.41 & C-62.45
NOM	N/A					ETL Certified to NOM-001
<b>Warranty</b>						
Product Warranty	10-Year Limited					10-Year Limited

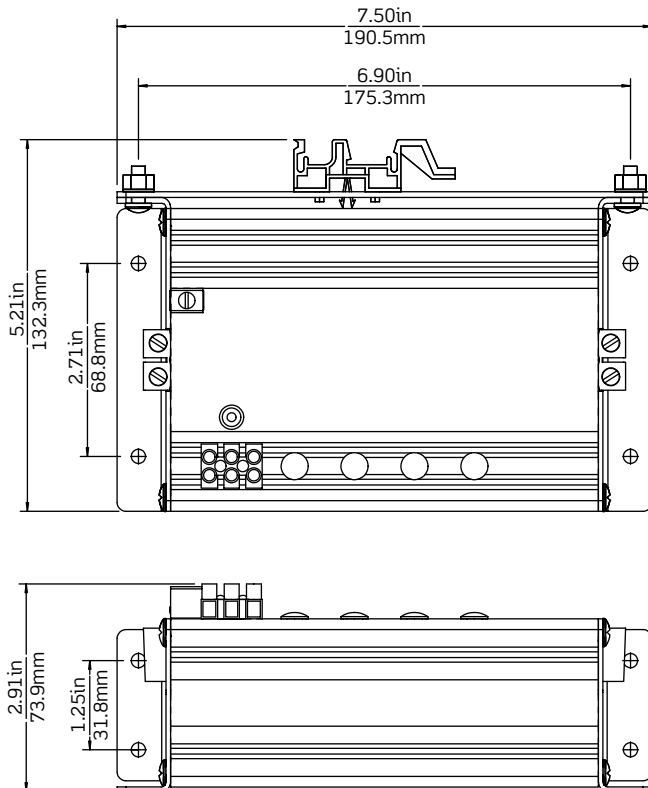


## Dimensions for: 3800 & 51000 Series

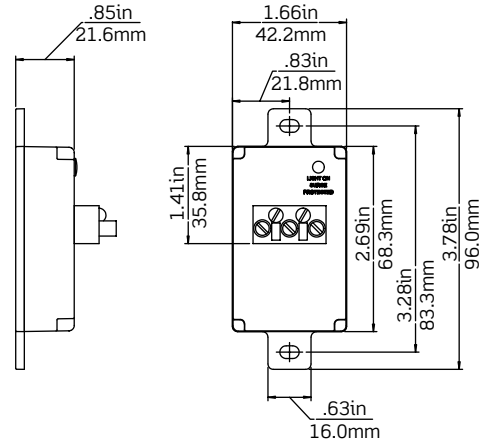
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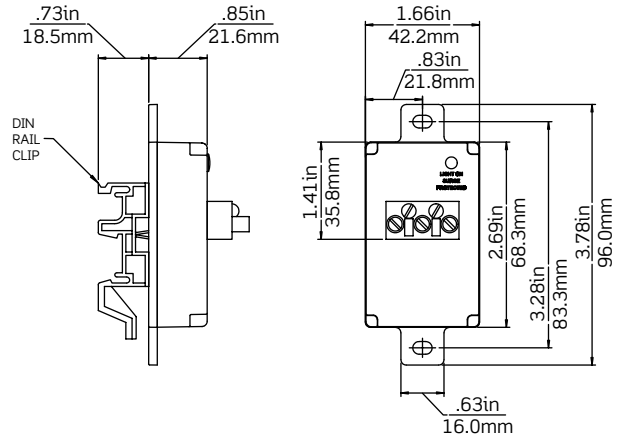
### Catalog Number 51020-WM



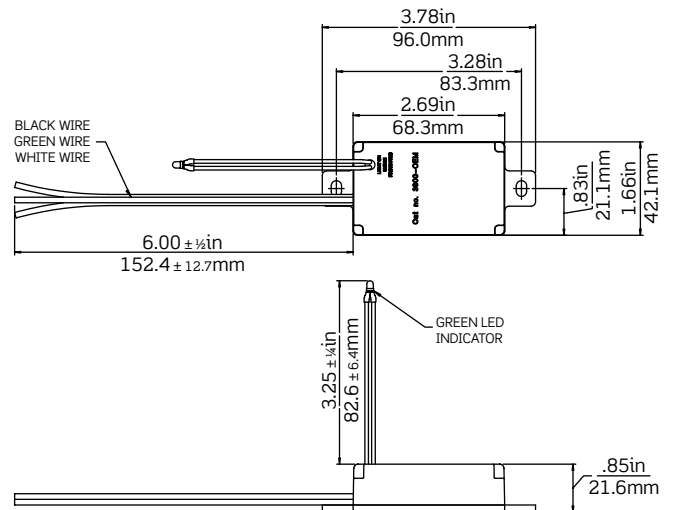
### Catalog Number 3800-WM



### Catalog Number 3800-DIN



### Catalog Number 3800-OEM



# DIN Rail Mount Receptacles

The DIN Rail Series provide mounting in equipment cabinets where convenient plug-in surge protection is needed. Available in 120V single and duplex outlet configurations.



## Single or Duplex Receptacles

- Provide MOV-based normal mode and common mode L-N, L-G, N-G surge protection
- Hospital Grade Receptacle ensures a secure plug-to-receptacle connection (3880-DIN only)
- LED indicator light goes off when surge protection is lost
- Audible alarm with disable/quiet switch also indicates loss of surge protection (3880-DIN only)
- Outlet continues to provide power to connected load in the event of a loss of protection

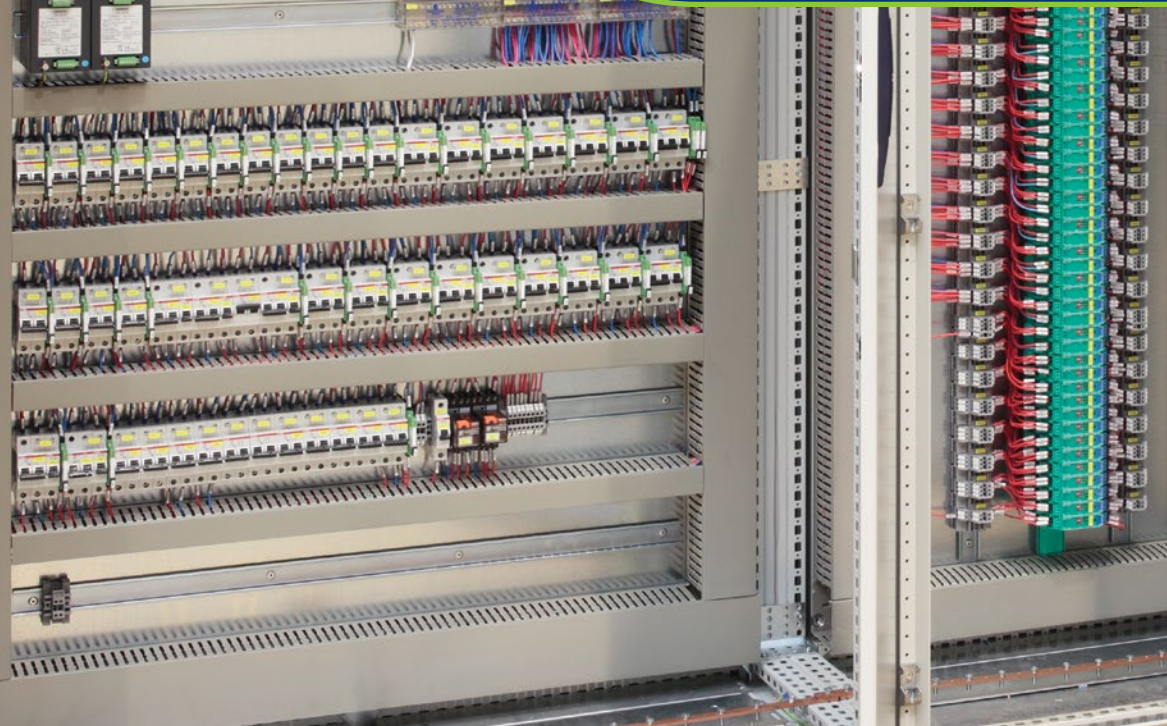
Catalog Number	3880-DIN	3801-DIN
<b>Electrical Specifications</b>		
Volts	120V AC	120V AC
Dielectric Voltage	Withstands 2000V per UL498	Withstands 2000V per UL498
Amps	15A	10A
Current Limiting	Full Rated Current	Full Rated Current
Temperature Rise	Max 30C after 250 cycles OL at 200% rated current	Max 30C after 250 cycles OL at 200% rated current
<b>Performance Data</b>		
Nominal Discharge Current (I <sub>n</sub> )	3kA	NA
Maximum Continuous Operating Voltage (MCOV)	150V	150V
Maximum Surge Current, Per Mode (Per Phase)	9kA (18kA)	9kA (18kA)
Short Circuit Current Rating (SCCR)	NA	NA
Noise Filtering	-20db to -40dB	-20db to -40dB
Voltage Protection Rating (VPR)	L-N: 500V, L-G: 600V, N-G: 600V	L-N: 500V, L-G: 600V, N-G: 600V
Protection Modes	3	3
Diagnostics	Indicator Light, Audible Alarm	Indicator Light
Joules Rating	560	560
<b>Mechanical Specifications</b>		
Terminal Accom.	#12-#18 AWG	#20-#16 AWG
<b>Environmental Specifications</b>		
Flammability	94V-2	94V-2
Operating Temperature	-10C to 60C	-10C to 60C
Storage Temperature	-20C to 85C	-20C to 85C
<b>Material Specifications</b>		
Face Material	Polycarbonate	Polycarbonate
Body Material	Polycarbonate	Polycarbonate
Line Contacts	Nickel-plated brass	Brass
<b>Standards &amp; Certifications</b>		
Agency Certifications	UL 498, UL 1449 3rd Edition Recognized Component	UL 498, cURus 1449 3rd Edition Listed
NEMA	WD-6	WD-6
ANSI	C-73	C-73
NOM	57	57
<b>Warranty</b>		
Product Warrant	10-Year Limited	

## Ordering Information

Catalog Number	Description
3880-DIN	Hospital Grade Surge Protective Duplex Receptacle, Single-phase, DIN rail mount
3801-DIN	Surge Protective Single Receptacle, Single-phase, DIN rail mount



## Low-Voltage (DC) Surge Protection Modules



# Low Voltage (DC) Power Surge Protective Modules

Leviton's 3800 Series DC surge protective devices are designed for mounting in standard equipment cabinets where surge suppression is desired for the enclosed equipment. Compact black-box styling coordinates with other mounted equipment. The MOV-based suppression circuitry provides optimum clamping. Available in standard equipment mount and DIN-rail mount configurations.



3848-WM



3848-DIN



3848-OEM

## 3800 Series UL Recognized Components

- MOV-based suppression circuitry provides optimum clamping
- Wired-in equipment cabinet surge protection for 12V, 24V and 48V DC applications
- Terminal Block connections for 22AWG to 14AWG conductors
- Manufactured to ISO 9001:2000 standards
- 10-year Limited Product Warranty

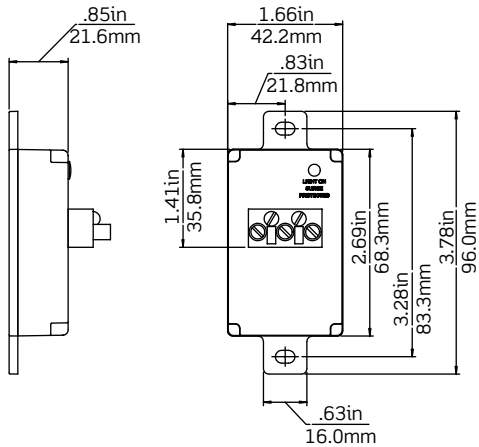
## Ordering Information

Catalog Number	Voltage Rating	Connection
3812-DIN	12V DC	Terminal Block, DIN rail Mount
3824-DIN	24V DC	Terminal Block, DIN rail Mount
3824-WM	24V DC	Terminal Block, Standard Equipment Mount
3848-DIN	48V DC	Terminal Block, DIN rail Mount
3848-WM	48V DC	Terminal Block, Standard Equipment Mount
3848-OEM	48V DC	Pigtail Connection, Standard Equipment Mount

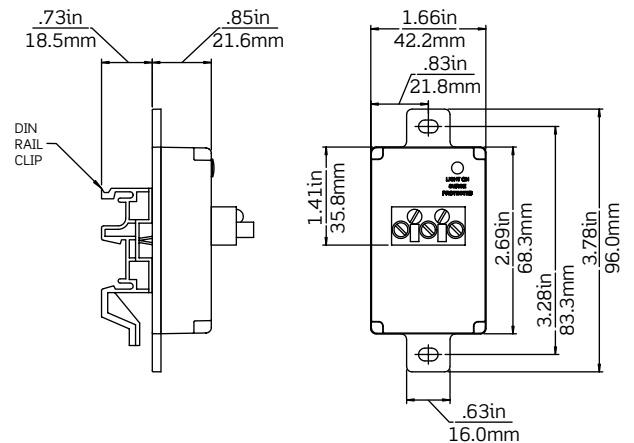
## Dimensions and Specifications for: 3800 Low Voltage Power Series

Catalog Number	3812-DIN	3824-DIN 3824-WM	3848-DIN 3848-WM 3838-OEM*
<b>Performance Data</b>			
Maximum DC Operating Voltage	13.2VDC	26.4VDC	52.8V
Breakdown Voltage 100V/ $\mu$ sec	14.7 – 19.8 V	33.1 – 38.2 V	51.8 – 71.8 V
Maximum Surge Current 10 x 1000 $\mu$ sec	10A	10A	10A
Maximum Capacitance	4.8 $\mu$ f	4.8 $\mu$ f	4.8 $\mu$ f
UL497B Clamping	21V	37V	71V
<b>Material Specifications</b>			
Case Material	Polycarbonate		
DIN Rail Material	Polycarbonate		
<b>Environmental Specifications</b>			
Operating Temperature	-10°C to 60°C		
Storage Temperature	-20°C to 85°C		
Relative Humidity	20% - 90% non-condensing		
Altitude	15,000 ft		
<b>Standards &amp; Certifications</b>			
UL	497B		
CSA	C22.2		
<b>Warranty</b>			
Product Warranty	10-Year Limited		

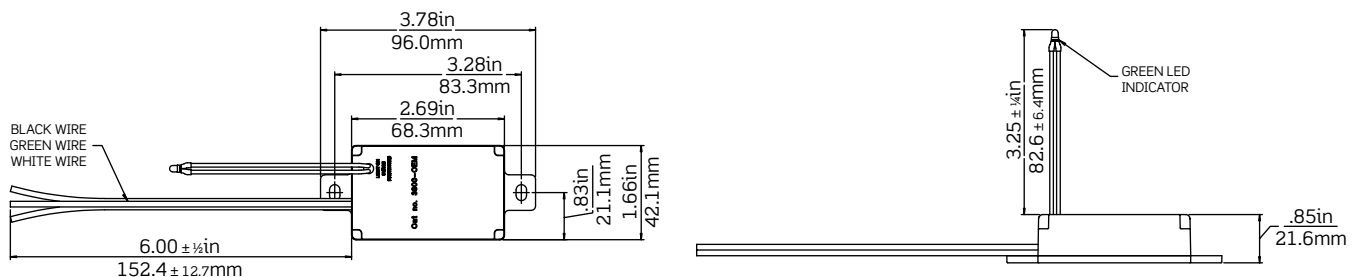
Catalog Number  
38xx-WM



Catalog Number  
38xx-DIN



Catalog Number  
38xx-OEM



# Low-Voltage (DC) Data Line Surge Protective Modules

Leviton's 3400/3800 Series surge protective modules are designed to provide application-specific surge protection for factory automation and industrial control devices. They are available in various DC voltage configurations, connection types and mounting styles.



## 3400/3800 Series Modules

- Designed for mounting in standard equipment cabinets
- Wired-in surge protection for PLCs and other data networking devices
- Withstands surges at PLC devices in harsh industrial and high EMI environments
- Low clamping voltage
- Manufactured to ISO 9001:2000 standards
- 10-Year Limited Product Warranty

## Ordering Information

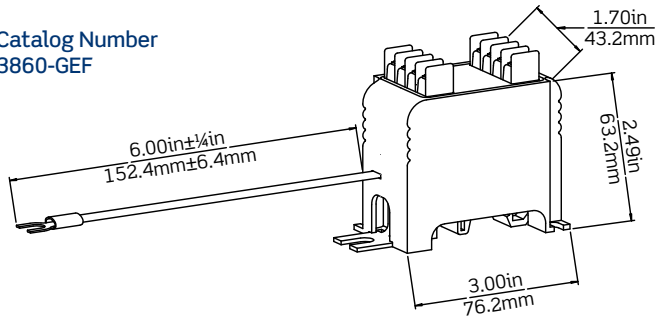
Catalog Number	Description	Voltage Rating	Application
3420-9	SPD with 3-Pin Header Connector, Surface Mount	9.6V DC	Devices operating on Allen-Bradley 4-20ma Signal Loop networks and other related protocols, 9V
3420-35	SPD with 3-Pin Header Connector, Surface Mount	38.5V DC	Devices operating on Allen-Bradley 4-20ma Signal Loop networks and other related protocols, 35V
3803-485	SPD with 6-Pin Header Connector, Surface Mount	9.6V DC	Devices operating on Allen-Bradley DH-485 networks and other related protocols
3803-DHP	SPD with 3-Pin Header Connector, Surface Mount	9.6V DC	Devices operating on Allen-Bradley "Blue Hose" networks and other related protocols
3803-MOD	SPD with 3-Pin Header Connector, Surface Mount	9.6V DC	Devices operating on Modbus and Modbus Plus networks and other related protocols
3860-GEF	SPD with 4-Position Terminal Block, Surface & DIN Rail Mount	100V DC	Devices operating on GE Fanuc Control Bus networks and other related protocols
3861-ETH	SPD with RJ-45 Connector, Surface & DIN Rail Mount	19.8V DC	Devices operating on Allen-Bradley Ethernet PLC ports and CAT 3 networks and other related protocols
3862-CON	SPD with BNC Connector, Surface & DIN Rail Mount	9.18V DC	Devices operating on Allen-Bradley ControlNet networks, CCTV and other related protocols
3863-DEV	SPD with 5-Pin Header Connector, Surface & DIN Rail Mount	19.8V DC	Devices operating on DeviceNet networks and other related protocols

## Specifications for: 3400/3800 Series Low Voltage Data Line Surge Protection Modules

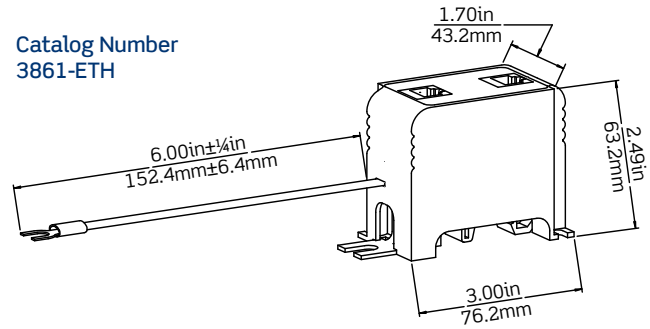
Catalog Number	3420-9	3420-35	3803-485	3803-DHP	3803-MOD	3860-GEF	3861-ETH	3862-CON	3863-DEV
<b>Performance Data</b>									
Maximum DC Operating Voltage	(-)4.5 to 4.5	30VDC (V+ to G)	(-)4.5 to 4.5	(-)4.5 to 4.5	(-)4.5 to 4.5	100.4VDC (L-G) 16.4VDC (L-Shield)	19.8VDC (L-G) 5.6VDC (L-L)	9.18VDC (L-G) 9.18VDC (L-Shield)	19.8VDC (L-G) 5.6VDC (L-L)
Clamping Voltage	12Vpk	48Vpk	12Vpk	12Vpk	12Vpk	205.4Vpk (L-G) 60.7Vpk (L-Shield)	119Vpk (L-G) 56Vpk (L-L)	62.4Vpk (L-G) 36.8Vpk (L-Shield)	119Vpk (L-G) 56Vpk (L-L)
Maximum Surge Current	1kA	1kA	1kA	1kA	1kA	1kA	1kA	1kA	1kA
Maximum Capacitance	53pF (L-G) 53pF (L-L)	53pF (L-G) 53pF (L-L)	53pF (L-G) 53pF (L-L)	14.48pF (L-G) 7.48pF (L-L)	73pF (L-G) 2.2pF (L-L)	20pF (L-G) 20pF (L-L)	20pF (L-G) 20pF (L-L)	30pF (L-L)	20pF (L-L)
<b>Material Specifications</b>									
Case Material	ABS	ABS	ABS	ABS	ABS	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate
Base-Plate Material				Brushed Brass	Brushed Brass	—	—	—	—
DIN Rail Material	—	—	—	—	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate
Ground Tab Material	Plated Steel	Plated Steel	Plated Steel	Plated Steel	—	Tin-plated Brass	Tin-plated Brass	Tin-plated Brass	Tin-plated Brass
<b>Environmental Specifications</b>									
Operating Temperature	-40°C to 60°C	-40°C to 60°C	-40°C to 60°C	-40°C to 60°C	-40°C to 60°C	-10°C to 85°C	-10°C to 85°C	-10°C to 85°C	-10°C to 85°C
Storage Temperature	-40°C to 90°C	-40°C to 90°C	-40°C to 90°C	-40°C to 90°C	-40°C to 90°C	-20°C to 85°C	-20°C to 85°C	-20°C to 85°C	-20°C to 85°C
Relative Humidity	0 to 95% Non-Condensing								
Altitude	-1,000ft to 15,000ft								
<b>Standards &amp; Certifications</b>									
UL	497B Listed								
CE	Marked								
<b>Warranty</b>									
Product Warranty	10-Year Limited								

Dimensions for: 3400/3800 Series Surge Protection Modules

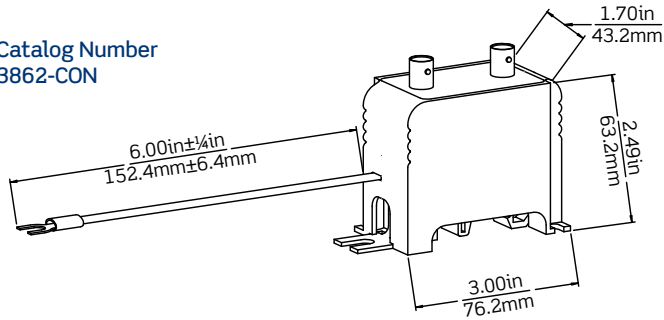
Catalog Number  
3860-GEF



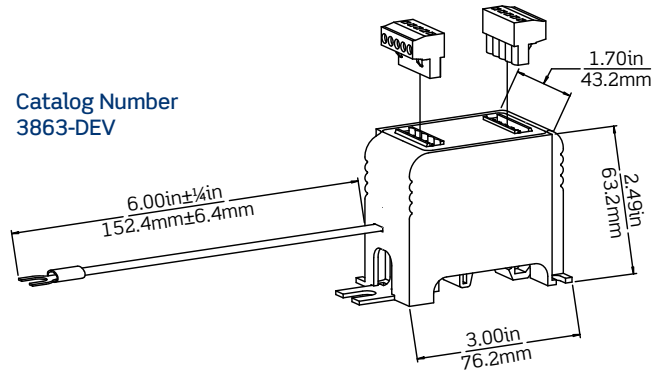
Catalog Number  
3861-ETH



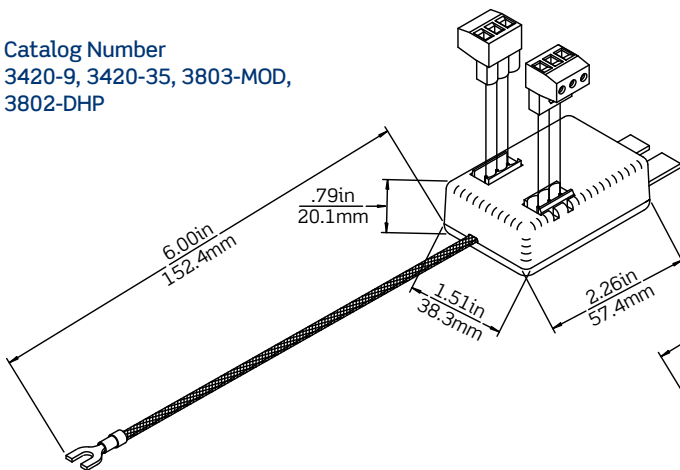
Catalog Number  
3862-CON



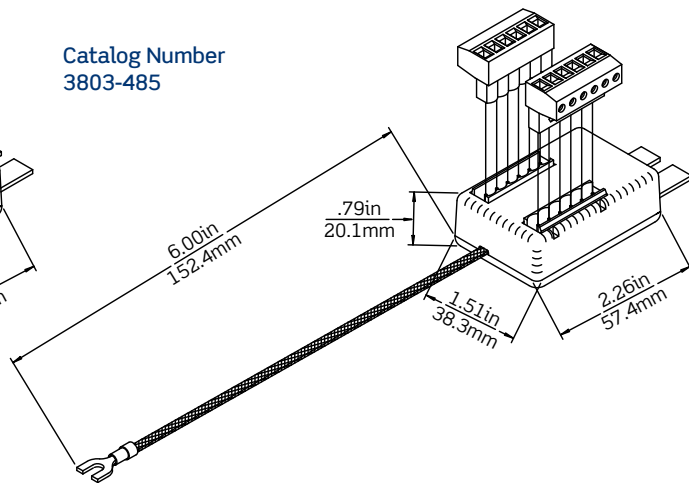
Catalog Number  
3863-DEV



Catalog Number  
3420-9, 3420-35, 3803-MOD,  
3802-DHP



Catalog Number  
3803-485







**Technical Reference  
Materials**



## What is a Medical Grade Power Strip?

It is a power strip for use with medical equipment and with medical approval under the UL guidelines. They are intended for use inside Patient Care Areas and specifically within the 6 foot perimeter of the patient, known as the Patient Care Vicinity. Medical Grade Power Strips must meet the following criteria:

- Approval to one or more of the following safety standards: UL 60601-1, IEC 60601-1-1, EN 60601-1, CAN/CSA C22.2 No.601-1-M90, CAN/CSA C22.2 No.601.1S1-94, and CAN/CSA C22.2 No.601.1B-98
- Contain splash-resistant outlet covers that can only be opened with the use of tools (for patient safety), as required by UL to prevent the inadvertent connection of equipment with standard plugs by unqualified personnel
- Verify that leakage current and other critical specifications meet medical standards; if there are no leakage-current specifications, the strips may not be approved for medical use

Medical Grade Power Strips should **NOT** be confused with power strips that simply contain hospital grade plugs and receptacles. However, those types of strips may be used outside of Patient Care Areas within a health care facility.

**Leviton's Medical Grade Power Strips conform to the guidelines and specifications prescribed in all applicable Codes & Standards, including the provisions within UL 60601-1 that require specific performance within the Patient Care Vicinity.**



## Codes & Standards

### NFPA 99 – Health Care Facilities Code

Establishes criteria for levels of health care services or systems based on risk to the patients, staff, or visitors in health care facilities to minimize the hazards of fire, explosion, and electricity. Requirements address installation, inspection, testing, maintenance, performance, and safe practices for facilities, material, equipment, and appliances.

### NFPA 70 (National Electric Code) Article 517 – Health Care Facilities

The provisions of this article shall apply to electrical construction and installation criteria in health care facilities that provide services to human beings. The requirements not only apply to single-function buildings but are also intended to be individually applied to their respective forms of occupancy within a multifunction building.

### UL 60601-1, CSA C22.2 No. 60601-1 – Medical Electrical Equipment, Part 1: General Requirements for Safety

Specifies general requirements for the safety of MEDICAL ELECTRICAL EQUIPMENT and to serve as the basis for the safety requirements of Particular Standards.

### UL 60950-1, CSA C22.2 No. 60950-1 – Information Technology Equipment – Safety, Part 1: General Requirements

Specifies requirements intended to reduce risks of fire, electric shock or injury for the OPERATOR and layman who may come into contact with the equipment and, where specifically stated, for SERVICE PERSONNEL.

### UL 1363A, CSA C22.2 No. 21 – Special Purpose Relocatable Power Taps

These requirements cover Special Purpose Relocatable Power Taps intended for indoor use only, with medical equipment, where the medical equipment is intended to be used in General Patient Care Areas or Critical Patient Care Areas as defined by Article 517 of the National Electrical Code for Health Care Facilities, to supply power to plug-connected components of a movable equipment assemblies that is rack-, table-, or pedestal-mounted.

### UL 1449 3rd Edition, CSA C22.2 No. 8 – Surge Protective Devices

These requirements cover Surge Protective Devices designed for repeated limiting of transient voltage surges as specified in the standard on 50 or 60 Hz power circuits not exceeding 1000 V.

### NOM (Norma Oficial Mexicana) – Mexican Electrical Code

## Patient Care Vicinity (Illustrated below)

A space, within a location intended for examination and treatment of patients, extending 6 feet (1.8 m) beyond the normal location of the bed, chair, table, treadmill, or other device that supports the patient during examination and treatment and extending vertically 7.5 feet (2.3 m) above the floor.



## Patient Care Room

Any room of a health care facility wherein patients are intended to be examined or treated.

**Patient Care Rooms can be divided into several categories:**

### ■ Basic Care Room

Room in which failure of equipment or a system is not likely to cause injury or death of patients or caregivers. This includes examination or treatment rooms in clinics, medical and dental offices, nursing homes, and limited care facilities.

### ■ General Care Room

Room in which failure of equipment or a system is likely to cause minor injury or death of patients or caregivers. This includes inpatient bedrooms, dialysis rooms, procedural rooms, and similar rooms.

### ■ Critical Care Room

Room in which failure of equipment or a system is likely to cause major injury or death of patients or caregivers. This includes rooms where patients are typically intended to be subjected to invasive procedures and are connected to line-operated, patient care related appliances. Examples are intensive care or critical care rooms, operating rooms, delivery rooms, trauma rooms and similar rooms.

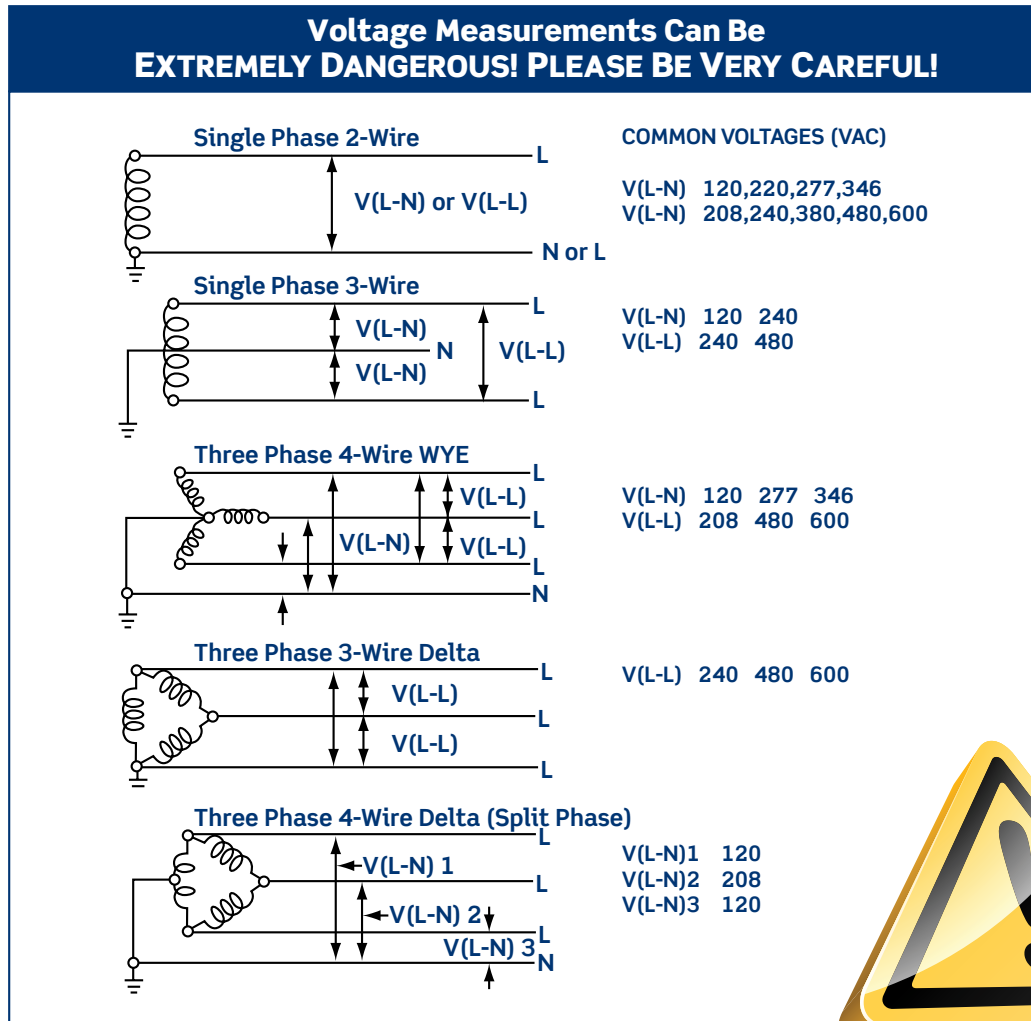
### ■ Support Room

Room in which failure of equipment or a system is not likely to have a physical impact on patients or caregivers. This includes waiting rooms, utility rooms, laboratories, morgues and similar rooms.

## Accurate Assessment of Electrical Systems

Precise identification of the electrical system is critical in the proper selection and application of the most effective surge protective device. Since SPD performance is directly related to nominal line-voltage parameters, line voltage measurements should always be taken by a qualified electrician before the SPDs are specified and installed. Measurements should be taken even when the electrical system configuration is known.

The figure below shows some common electrical systems used throughout the USA and Canada. Specific systems present in a given facility should be identified by measuring with a voltage meter across each line to neutral, and line to line. The readings should be written down and referred to when ordering the required SPDs.



## Surge Current Capacity

The surge current capacity of an SPD is the maximum surge current the SPD device is capable of surviving on a single impulse basis without suffering degradation of performance of more than 10 percent. It is required to be listed by mode (in kA), since the number and type of components in any SPD may vary by mode. It can also be stated by phase.

## Modes of Protection - Per Mode and Per Phase

A "mode" is a potential path for a surge to be diverted to (e.g. L-N, L-G, N-G). The number of modes depends on the configuration of the electrical system (single phase, 3-phase WYE, 3-phase Delta, etc.). The per-phase rating is the total surge current capacity connected to a given phase conductor.

## Calculating "surge current per phase"

The per-phase rating is the total surge current capacity connected to a given phase conductor. For example in a WYE system, L1-N and L1-G modes are added together because surge current can flow on either parallel path. If the device has only one mode (e.g., L1-G), then the per-phase rating is equal to the per-mode rating because there is no protection on the L1-N mode. The industry standard is to publish surge current "per phase" by summing modes L-N + L-G in a WYE system and L-L + L-G in Delta systems.

## Clamping Voltage (Also known as Let-Through Voltage)

The voltage at which a surge suppressor performs its suppression tasks such as diverting (shunt) the surge from line to ground or absorbing the excessive energy.

## Common Mode

When relating to SPDs, common mode refers to surge protection components provided between L-G and N-G modes.

## Maximum Continuous Operating Voltage (MCOV)

The maximum voltage that can be continuously applied to each mode of the SPD without degradation.

## Maximum Surge Current Rating

The maximum 8x20us Surge Current Amps an SPD can withstand 1 time without performance degradation of more than 10%.

## Nominal Discharge Current ( $I_N$ )

The peak value of an 8/20  $\mu$ s current waveform, selected by the manufacturer, for which an SPD (Type 1 or Type 2 only) remains functional after 15 surges - Type 1 devices require testing at 10 or 20 kA and Type 2 devices can be tested using a 3, 5, 10 or 20 kA.

## Normal Mode

When relating to SPDs, normal mode refers to surge protection components provided between L-L and L-N modes.

## Per Mode

A "mode" is a potential path for a surge to be diverted to (such as L-N, L-G, N-G).

## Per Phase

The maximum amount of surge current a SPD can shunt to ground during a surge event on one phase.

## Short Circuit Current Rating (SCCR)

The suitability of an SPD for use on an AC power circuit that is capable of delivering not more than a declared current at a declared voltage during a short circuit condition.

## Surge

A short-duration overvoltage spike or disturbance on the ac power line, having duration of a few milliseconds or less.

## Suppression Voltage Rating (SVR)

Term used to define the clamping voltage when subjected to the UL 1449 2nd Edition Measured Limited Voltage Test - this test has proven insufficient to adequately evaluate SPD performance, and has been replaced by the Voltage Protection Rating (VPR).

## Temporary Overvoltage (TOV)

An overvoltage on the AC power line that is at a given location of relatively long duration (seconds, even minutes).

## Type 1 Surge Protection Device

Permanently connected SPDs intended for installation between the secondary of the service transformer and the line side of the service equipment overcurrent device, as well as the load side, including watt-hour meter socket enclosures and intended to be installed without an external overcurrent protective device.

## Type 2 Surge Protection Device

Permanently connected SPDs intended for installation on the load side of the service equipment over current device; including SPDs located at the branch panel.

## Type 3 Surge Protection Device

Point of utilization SPDs, installed at a minimum conductor length of 10 meters (30 feet) from the electrical service panel to the point of utilization, for example cord connected, direct plug-in, receptacle type and SPDs installed at the utilization equipment being protected.

## Type 4 Surge Protection Device

Component assembly consisting of one or more Type 5 components together with a disconnect (integral or external) or a means of complying with the limited current tests.

## Type 5 Surge Protection Device

Discrete component surge suppressors, such as MOVs that may be mounted on a PWB, connected by its leads or provided within an enclosure with mounting means and wiring terminations.

## Voltage Protection Rating (VPR)

The new terminology for what was previously known as clamping voltage, suppression voltage rating (SVR), or let-through voltage. It represents the clamping voltage when subjected to the UL 1449 3rd Edition Measured Limited Voltage Test. This newly modified test is performed at significantly higher currents (6kV @ 3000A vs 6kV 500A) to more accurately reflect real world performance.

Leviton Surge Protective Device product warranties are summarized in Table 1. For a select group of products, Leviton also provides connected equipment coverage via a “True Whole House Surge Protection” Limited Warranty. The details are summarized in Table 2.

## True Whole House Surge Protection

Leviton’s True Whole House Surge Protection Limited Warranty covers both the Surge Protection Device and properly connected equipment.

## Product Coverage

For the selected products, Leviton provides a Limited Lifetime Product Warranty. This warranty covers all defects in workmanship or materials. If the Surge Protective Device (SPD) is damaged by a power surge and Leviton determines that such damage was caused by the performance failure of the Leviton SPD, Leviton will, at its option, repair or replace the device.

## Connected Equipment Coverage

In addition to the Product Warranty, Leviton provides connected equipment coverage for properly connected residential equipment. If properly connected equipment is damaged by a surge event as the result of SPD failure, you may be eligible for up to \$25,000 maximum to repair or replace the damaged equipment.

For warranty details, please visit [www.leviton.com](http://www.leviton.com), or contact Leviton Customer Support at 1.800.323.8920.

The warranty information on Leviton.com supersedes printed warranty information.

**Table 1**

Product Family	Product Series	Product Warranty
Meter Socket Surge Arrester	50240 Series	Lifetime Limited Product Warranty
Secondary Surge Arrester	55000 Series	Lifetime Limited Product Warranty
Surge Panels	74000 Series	Lifetime Limited Product Warranty
	75000 Series	Lifetime Limited Product Warranty
	57000 Series	Lifetime Limited Product Warranty
	52000 Series	Lifetime Limited Product Warranty
	47000 Series	Lifetime Limited Product Warranty
	37000 Series	Lifetime Limited Product Warranty
	42000 Series	Lifetime Limited Product Warranty
	32000 Series	Lifetime Limited Product Warranty
	51120 Series	Lifetime Limited Product Warranty
	51110 Series	10-Year Limited Product Warranty
Surge Receptacles	5280, 7280, 8280, 8281, 5380, 7380, 8380 & 8381 Series	10-Year Limited Product Warranty
	Four-In-One (5480, 5490, 8480 & 8490 Series)	10-Year Limited Product Warranty
Wall Plug-Ins	3500 Series	10-Year Limited Product Warranty
Surge Strips	S1000 Series	Lifetime Limited Product Warranty
	S2000 Series	Lifetime Limited Product Warranty
	5100 Series	Lifetime Limited Product Warranty
	5300 Series	Lifetime Limited Product Warranty
Surge Modules	51005, 51010, 51015, 51020, 51240 & 3800 Series	10-Year Limited Product Warranty

**Table 2**

Product Family	Product Series	Connected Equipment Policy Duration	Connected Equipment Coverage Maximum
Meter Socket Surge Arrester	50240-MSA	Lifetime Limited	\$10,000
Secondary Surge Arrester	55240	Lifetime Limited	\$10,000
Surge Panels	51120-1, 51120-3R	Lifetime Limited	\$25,000
Surge Strips	S1000 Series	Lifetime Limited	\$10,000
	S2000 Series	Lifetime Limited	\$25,000
	5100 Series	Lifetime Limited	\$5,000
	5300 Series	Lifetime Limited	\$25,000
Wall Plug-Ins	3500 Series	Lifetime Limited	\$5,000

# The Good, Better, Best Approach to “Whole House” Surge Protection



## Good

Surge Protective Plug-Ins or Strips to plug your tablet, refrigerator, or even your HDTV into.



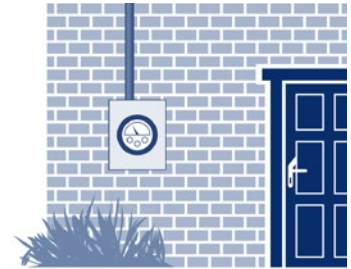
## Better

Surge Protective Plug-Ins or Strips **AND** a Surge Protective Panel that protects your main electrical panel.



## Best

Surge Protective Plug-Ins or Strips **AND** a Surge Protective Panel that protects your main electrical panel **AND** a Meter Socket Adapter you would install by your main service entrance (between the utility pole and where your electricity enters your service panel).



With the popularity of home automation devices, smart appliances, and other electronic equipment in today's homes, the requirement for “whole house” surge protection has become a necessity.

The bottom line is surges or spikes can actually destroy any sensitive electronics within the device we use in our homes - such as high-definition TVs, computers, refrigerators, microwave ovens and more. Damage can range from complete failure to a reduction in useful life.

So how do you protect your home from these damaging surges? You need to implement “Whole House Surge Protection”. Whole house surge protection includes 3 Types of surge protective devices at 3 levels within the home. At the meter, the panel and the device, Leviton can protect you with a whole house surge protection network. Please note, that while we recommend the best practice of whole house surge protection, it is not necessary to employ all 3 levels for the “True Whole House Surge Protection” warranty to be valid. For more information, please visit [www.leviton.com/wholehousesurge](http://www.leviton.com/wholehousesurge)



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