
PRODUCT CATALOG

OVRH catalog

Surge protective devices



Surge Protective Devices (SPDs) are designed to protect against transient surge conditions. Lighting and utility power anomalies only account for 20% of transient surges, while the other 80% are produced internally in a facility.

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SPDs

Transient surges can reach values of hundreds of thousands of volts or instantaneous current flow of tens of thousands of amperes, but typically last less than one hundred microseconds in duration. These internally generated transients can be caused by switching power supplies (computers), electronic ballasts (building lighting) and variable frequency drives (air handlers, elevators, etc). The most destructive transient voltage surges can be attributed to lightning and utility load switching; however, experts predict that these two events account for 20% of all transient surge activity.

Reliable data sources suggest that lightning strikes have current magnitudes in excess of 200,000 amps. Moreover, lightning strikes are not single strike events. Strikes typically consist of four to six "hits" and sometimes can be as high as 40kA. Therefore, SPDs must be appropriately sized to provide adequate protection during multiple surge events.

Large transient surge conditions can damage printed circuit board traces and puncture semiconductors causing immediate or intermittent equipment failures. Continued exposure to surges can degrade printed circuit board traces or semiconductors resulting in seemingly random delayed equipment failures. Therefore, equipment failures cannot always be contributed to a single power quality event. Surge remnants on data lines can alter digital data and logic levels causing equipment failures and lockups.

Professionally installed ABB products provide superior protection against transient surges preventing unnecessary downtime and costly repairs.

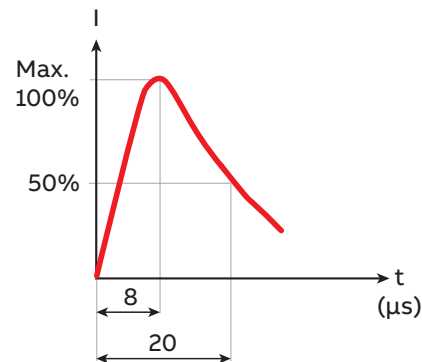
ISO 9001:2008 Certified
ISO 9001:2008 certification for our quality management system.

IEC and UL SPD test standards–terminology

IEC 61643-11 Terminology	Description	UL 1449 Terminology
I_{imp}	The maximum surge current rating for an SPD when subjected to a 10 x 350 μ s wave shape	No equivalent
I_{max}	The maximum surge current rating for an SPD when subjected to an 8 x 20 μ s wave shape	Single surge current rating
I_n	Nominal surge discharge current 8 x 20 μ s wave shape	I_N
I_{SCCR}	Short Circuit Current Rating (withstand)	SCCR
U_p	Voltage Protection Level, let thru voltage level of the SPD when subjected to a test surge	VPR
U_C	Maximum Continuous Operational Voltage SPD can be exposed to without failure.	MCOV
U_N	Nominal Operational Voltage, or application voltage	Operational voltage

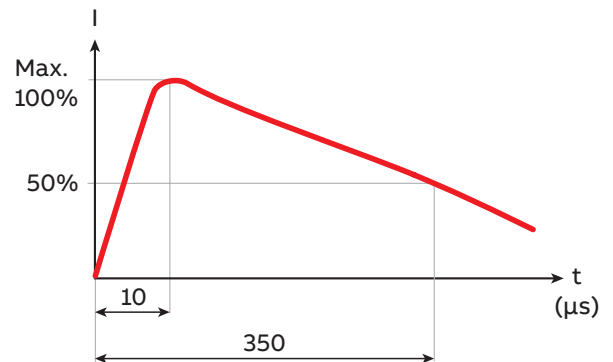
8 x 20 μ s wave shape

- Used for IEC Class II test (EN Type 2)
- I_{max} is the surge current value designation for IEC
- I_n is also tested using this wave shape
- UL single surge current rating



10 x 350 μ s wave shape (IEC only)

- Used for IEC 61643-11/ Class I tested SPD or EN 61643-11 Type 1
- SPD must survive 5 impulses increasing in magnitude to max I_{imp}
- I_{imp} is then the surge current value designation if SPD passes
- There is no equivalent test in the UL standard



UL Type 1 vs IEC Class I tested SPDs

UL Type 1 SPD (Line side)

Type 1 SPDs are permanently connected devices that can be installed anywhere between the secondary of the utility service transformer and the main distribution disconnect. A Type 1 SPD can also be installed anywhere on the load side of the main distribution and can be installed without the need for external over current protection (does not require an upstream fuse or breaker).



OVRHSP

IEC Class I SPD (EN Type 1)

Recommended for service sector and industrial buildings protected by a lightning protection system or a meshed cage. Protects against direct lightning strikes, but must be mounted inside another enclosure the distribution panel with external overcurrent protection for safe operation.



OVRT1



Wastewater

Wastewater treatment facilities are utilizing additional technologies to monitor and ensure clean water efficiently. Surge protection devices are necessary to provide confidence and reliability in today's personnel restricted environments.



Renewable energy

Today's technologies are rapidly developing innovative ways to harvest electricity. Surge protection devices provide protection against lightning and power quality anomalies caused by switching on the grid.



Type 2 vs Class II tested SPDs

UL Type 2 SPD (Load side)

Type 2 SPDs are permanently connected devices that must be installed on the load side of the main distribution disconnect. Type 2 devices may, or may not require external over current protection (may or may not require an upstream fuse or breaker).



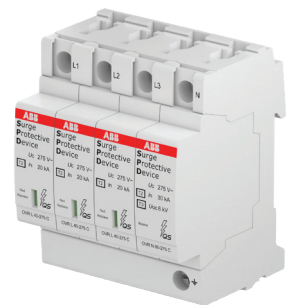
OVRHTE

IEC Class II tested SPD (EN Type 2)

The Type 2 SPD is the main protection system for all low voltage electrical installations. Installed in each electrical switchboard, it prevents the spread of overvoltages in the electrical installations and protects the loads.



OVR T1+2



OVR T2



Healthcare

Almost every piece of modern medical equipment depends on electrical power. The more sophisticated the technology, the more susceptible it is to the devastating effects of transient surge events.



Education

Most school systems utilize state of the art multi-media outlets which result in more computers in the classrooms. Surge protection devices helps to ensure these computers stay up and running, keeping growing minds energized!

Type 3 SPDs

UL Type 3 SPD

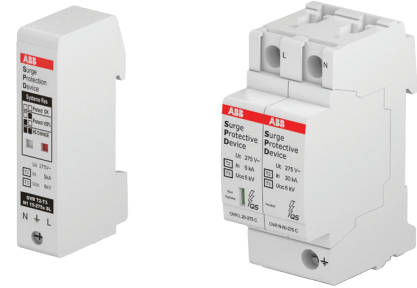
Type 3 SPDs are installed at a conductor length of 10 meters (30 feet) or more from the electrical panel they are protecting. These devices are typically cord connected, direct plug-in, receptacle type SPDs installed at the load equipment being protected.



No ABB offering

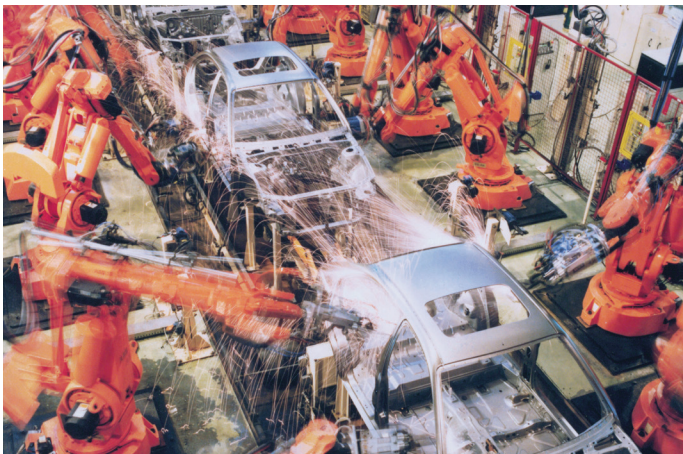
IEC Class III tested SPD (EN Type 3)

These SPDs have a low discharge capacity with better voltage protection levels in differential modes (Phase to Neutral). They must therefore mandatorily be installed as a supplement to Class II tested SPDs and in the vicinity of sensitive loads.



OVR T2-T3 SL

OVR T3



Manufacturing/Industrial

Improvements to manufacturing devices have migrated manufacturers to human machine combinations for maximizing the manufacturing output capacities of facilities. Surge protection devices protect this equipment from damage caused by large variations in the current and voltage, thus ensuring uptime in manufacturing production.



Commercial/Retail

Companies are now installing efficient ballasts, dimmers, and integrated renewable energy systems. Surge protection devices help protect these new technologies which are more susceptible to power quality events.

Type 4 and Type 5 SPDs

Type 4 SPD (UL only)

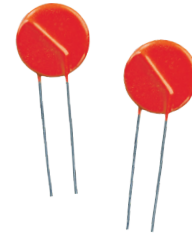
Type 4 SPDs are considered component SPDs. Component SPDs typically consist of one or more Type 5 components assembled together. Type 4 SPDs are not intended to be used by themselves, and must be integrated into other systems.

- Type 1 component assembly is a Type 4 SPD that once installed inside another piece of equipment would be tested as a Type 1 SPD (would not require external overcurrent protection).
- Type 2 component assembly is Type 4 SPD that once installed inside another piece of equipment would be tested as a Type 2 SPD. (would require external over current protection)



Type 5 SPD (UL only)

Type 5 SPDs are discrete component surge suppressors (such as MOVs) that may be mounted on a printed circuit board, connected by leads, or provided within an enclosure with mounting means and wiring terminations.



Transportation

Air traffic controls, radar systems, weather stations, electronic highway signs, and outside security cameras are among a handful of the critical loads that require protection from the devastating effects of transient surge events.

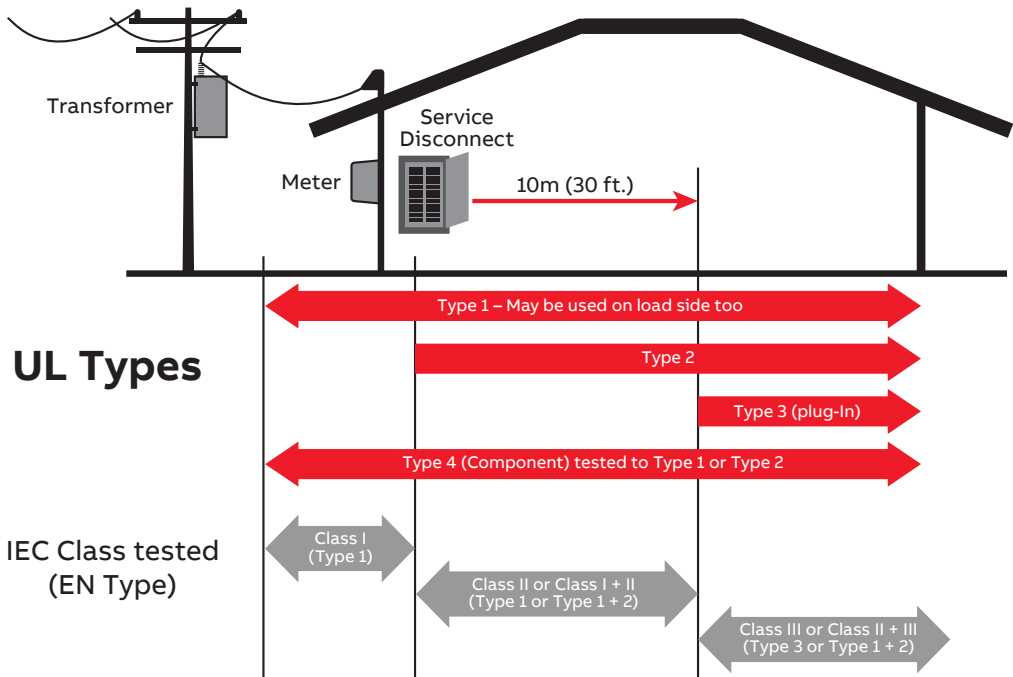


Information/Data Management

Data centers typically require an enormous amount of power equipment from transfer switches, to multiple remote power panels providing power to processing equipment. Surge protection devices can help to protect this equipment from costly downtime.



UL Types vs IEC Class tested SPDs and Locations



Where Surge Protective Devices are applied

SPD location	Recommended SPD	Protected equipment examples
Service Entrance/Main Distribution (1,000 Amps and higher)		
The point of entry for utility power. A unit installed here protects the facility from a large external event, such as lightning or grid switching.	OVRHSP 400 OVRHSP 300 OVRHSP 240 OVRHSP 200	<ul style="list-style-type: none"> • Electrical switchgear • Switchboard • Distribution • MCCs • Emergency power backup • Transfer switch • UPS system
Sub-Distribution		
	Mid-Level Distribution (1,000 – 400 Amps)	Panelboard (400 – 100 Amps)
Closer to the critical load. A unit installed here protects from internally generated surges and isolates critical equipment from faults.	OVRHSP 240 OVRHSP 200 OVRHSP 160 OVRHSP 120 OVRHSR 120 OVRHSR 160 OVRHTE 100 OVRHTE 80	OVRHSP 160 OVRHSP 120 OVRHSP 100 OVRHSP 80 OVRHSP 60 OVRHSR 120 OVRHSR 160 OVRHTE 100 OVRHTE 80 OVRHTE 50 OVRHT3B OVRHT3C OVRHS3U
		<ul style="list-style-type: none"> • Emergency power backup • Transfer switches • Control boxes • Switchgear • Generators • Computer servers • Building management systems • Surveillance equipment • Security systems • HVAC • Building management systems • Fire alarm panels • Copiers • Telephone systems • Fax machines
Equipment Level Protection (100 Amps and below)		
Installing surge protection at panel distribution extends unit longevity by absorbing mini surges that reduce equipment life.	OVRHSP 80 OVRHSP 60 OVRHTE 50 OVRHTE 25 OVRHT3B OVRHT3C OVRHS3U OVRHLD 20 OVRHLD 25 OVRHLD 30	<ul style="list-style-type: none"> • X-Ray • CAT-scan • Life support equipment • Medical instrumentation • Computer servers • Elevators • Parking lot lighting • Printers • Communication systems • Motors • Pumps • Drives

→
EMERGENCY

- Emergency Patient Parking
- ↑ Main Entrance
- Physician Parking



OVRH series product range



Name	OVRHSP (200, 240, 300, 400)	OVRHSP (120, 160)	OVRHSP (60, 80, 100)	OVRHSR (120, 160)	OVRHTE	OVRHT3B	OVRHT3C	OVRHS3U	OVRHLD
Connection Ampacity	1,000A and higher	1,000A and below	400A and below	1,000A and below	100–80kA 1,000A and below 50kA 400A and below 25kA 100A and below	400A and below	400A and below	400A and below	100A and below
SPD Type	Type 1	Type 1	Type 1	Type 1	Type 2	Type 1	Type 1	Type 1 and Type 2	Type 1
Certifications	UL 1449	UL 1449	UL 1449	UL 1449	UL 1449	UL 1449	UL 1449	UL 1449	UL 1449
Surge Ratings	200, 240, 300, 400kA per phase	120, 160kA per phase	60, 80, 100kA per phase	120, 160kA per phase	25, 50, 80 and 100 per mode	50kA per phase	50kA per phase	40kA per phase	20, 25, 30kA per phase
LEDs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dry Relay Contacts	Standard	Standard	Optional	Standard	Optional	Not available	Not available	Optional	Not available
EMI Filter	Optional	Optional	Optional	Optional	Optional	Not available	Not available	Not available	Not available
Surge Counter	Optional	Optional	Not available	Not available	Not available	Not available	Not available	Not available	Not available
Warranty	10-years	10-years	10-years	10-years	5-years	3-years	3-years	3-years	3-years



OVRHSP/OVRHSR

Facility Wide Protection – 4,000A and below



Available configurations

Model number	Voltage	Configuration OVRHSP and OVRHSR
OVRHSP(SR)xxx1201P	120V	1-phase, 2-wire + ground
OVRHSP(SR)xxx2401P	240V	1-phase, 2-wire + ground
OVRHSP(SR)xxx1202S	120/240V	2-phase, 3-wire + ground
OVRHSP(SR)xxx1203Y	120/208V	3-phase Wye, 4-wire + ground
OVRHSP(SR)xxx2203Y	220/380V	3-phase Wye, 4-wire + ground
OVRHSP(SR)xxx2403Y	240/415V	3-phase Wye, 4-wire + ground
OVRHSP(SR)xxx2773Y	277/480V	3-phase Wye, 4-wire + ground
OVRHSP(SR)xxx3473Y*	347/600	3-phase Wye, 4-wire + ground
OVRHSP(SR)xxx1203H	120/240V	3-phase High-Leg, 4-wire + ground
OVRHSP(SR)xxx2403D	240V	3-phase Delta, 3-wire + ground
OVRHSP(SR)xxx3803D*	380V	3-phase Delta, 3-wire + ground
OVRHSP(SR)xxx4803D*	480V	3-phase Delta, 3-wire + ground
OVRHSP(SR)xxx6003D*	600V	3-phase Delta, 3-wire + ground
OVRHSP: Where "xxx" can be 60, 80, 100, 120, 160, 200, 240, 300 or 400		
OVRHSR: Where "xxx" can be 120 or 160		

*Voltages not available with 60, 80 or 100kA units

Available options	Model number*
Add applicable suffix to end of numbers	
Advanced monitoring (available in 60–100kA units only) (Includes dry relay contacts, audible alarm, alarm silence button, fault light)	1
Transient filter* and advanced monitoring	A
Stainless steel enclosure and advanced monitoring	M
Stainless steel enclosure, transient filter* and advanced monitoring	N
Transient filter* (meets UL 1283) (All models)	3
Stainless steel enclosure (All models)	4
Transient filter* and surge counter (SP 120–400kA only)	B
Transient filter* and stainless steel enclosure (All models)	C
Surge counter and stainless steel enclosure (SP 120–400kA only)	D
Transient filter*, surge counter and stainless steel enclosure (SP 120–400kA only)	T

*Not recommended when using telecommunication rectifiers.

OVRHSR stand alone option (To be ordered as a separate item)

Flush-mount plate kit OVRHSR-FMP-120/160

EMI/RFI filter attenuation

Max. attenuation frequency 41dB @ 106kHz

Warranty

10-years

Product features

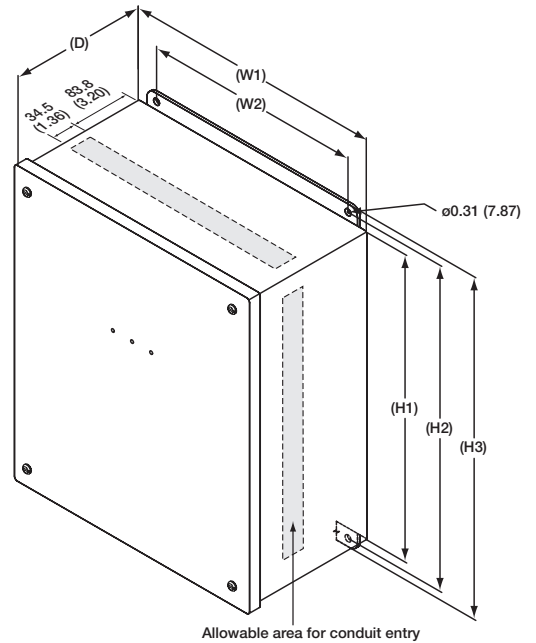
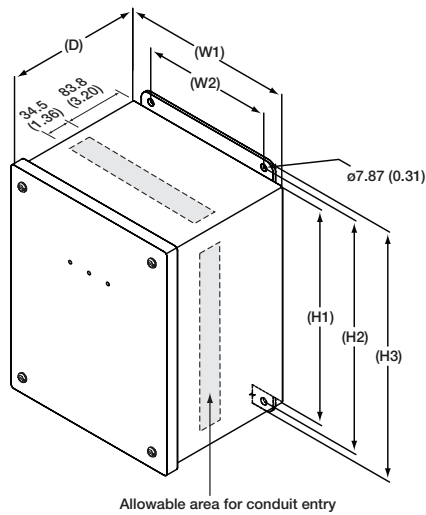
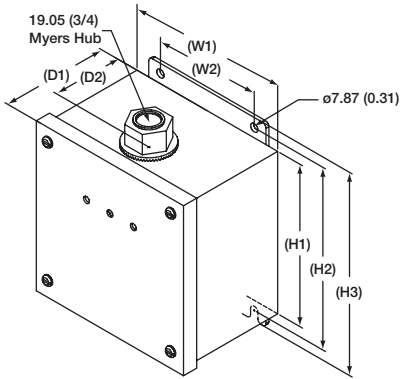
- UL Listed 1449 4th edition for Type 1 and Type 2 SPD applications.
- Fail-safe design with individually fused Metal Oxide Varistors (MOVs) eliminating single point failure, protecting against both overcurrent and overvoltage events.
- 200kAIC short circuit rating permits direct bus connection to most electrical services.
- Low let through voltage ensured by the lowest possible impedance path to ground and equal current sharing during surge events.
- All weather sealed, powder-coated NEMA 4/IP65 housing is designed for any orientation and indoor/outdoor applications.
- 10-year standard warranty.

Product specifications

Electrical	
Nominal discharge current rating (I-n)	10kA (60–100) 20kA (120–400)
Operating frequency	47–63Hz
Connection method	Parallel to electrical distribution system
Modes of protection	All modes (L-N, L-G, N-G, L-L)
Fault rating (SCCR)	200kAIC–no upstream over-current protection device (breaker or fuse) required
Response time	Less than 1 nanosecond
Standard monitoring (120–400kA)	Status indicator lights (one per phase) Standard dry (Form "C") relay contacts Audible alarm with silence button
Mechanical	
Weight	60, 80, 100kA: 4.5 kg (10 lbs.) 120, 160kA: 9 kg (20 lbs.) 200, 240, 300, 400 kA: 18 kg (40 lbs.)
Enclosure type	Powder coated, impact-resistance steel, weather-proof NEMA 4
Installation location	Indoor/outdoor
Mounting method	Dual mounting flanges
Operating environment	-40° to +70°C (-40° to +185°F)
Altitude	Up to 4000 m (13,000 ft.)
Product design	Parallel design with individually fused MOVs
Regulatory	
UL 1449 4th edition	Type 1
UL 1283	Yes
IEEE C62.41.1, .2, C62.45	Yes
Listed by	ETL: 60–100kA models UL: 120–400kA models



Dimensional specifications



**OVRHSP
60, 80, 100kA
400A and below**

Dim	Millimeters (Inches)
H1	152.4 (6.00)
H2	171.5 (6.75)
H3	190.5 (7.50)
W1	152.4 (6.00)
W2	101.6 (4.00)
D1	105.7 (4.16)
D2	50.8 (2.00)

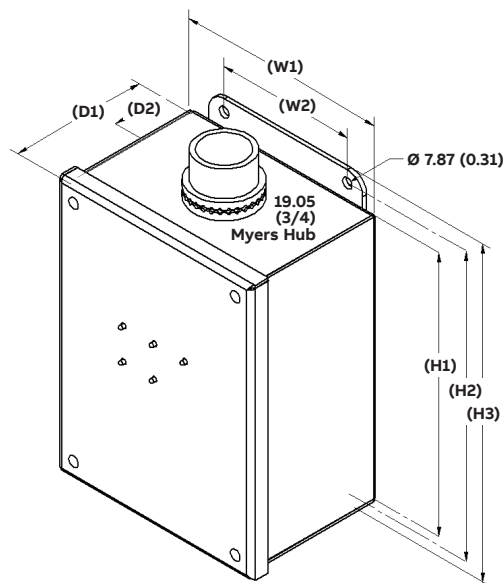
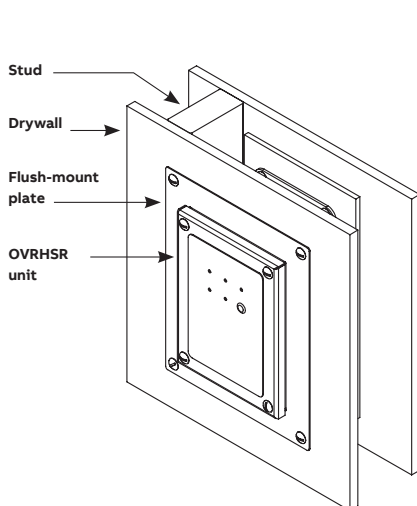
**OVRHSP
120, 160kA
1,000A and below**

Dim	Millimeters (Inches)
H1	254.0 (10.00)
H2	273.1 (10.75)
H3	292.1 (11.50)
W1	203.2 (8.00)
W2	152.4 (6.00)
D	157.5 (6.20)

**OVRHSP
200, 240, 300, 400kA
1,000A and higher**

Dim	Millimeters (Inches)
H1	355.6 (14.00)
H2	374.7 (14.75)
H3	393.7 (15.50)
W1	304.8 (12.00)
W2	254.0 (10.00)
D	157.5 (6.20)

The OVRHSR compact design allows for it to be recessed into the wall.



**OVRHSR
120, 160kA
1,000A and below**

Dim	Millimeters (Inches)
H1	254.0 (10.00)
H2	273.1 (10.75)
H3	292.1 (11.50)
W1	203.2 (8.00)
W2	152.4 (6.00)
D1	106.9 (4.20)
D2	50.8 (2.00)

OVRHTE

Sub and Mid-Level Distribution – 1,000A and below



Available configurations

Model number	Voltage	Configuration
OVRHTExx1201P	120V	1-phase, 2-wire + ground
OVRHTExx2401P	240V	1-phase, 2-wire + ground
OVRHTExx1202S	120/240V	2-phase, 3-wire + ground
OVRHTExx1203Y	120/208V	3-phase Wye, 4-wire + ground
OVRHTExx2203Y	220/380V	3-phase Wye, 4-wire + ground
OVRHTExx2403Y	240/415V	3-phase Wye, 4-wire + ground
OVRHTExx2773Y	277/480V	3-phase Wye, 4-wire + ground
OVRHTExx3473Y	347/600V	3-phase Wye, 4-wire + ground
OVRHTExx1203H	120/240V	3-phase Hi-Leg, 4-wire + ground
OVRHTExx2403D	240V	3-phase Delta, 3-wire + ground
OVRHTExx3803D	380V	3-phase Delta, 3-wire + ground
OVRHTExx4803D	480V	3-phase Delta, 3-wire + ground

Model number: Where "xx" can be 25, 50, 80, or 100

OVRHTE/100–80kA/1,000A and below

OVRHTE/50kA/400A and below

OVRHTE/25kA/100A and below

Available option	Model number*
Dry Form "C" relay contacts	5

*Add applicable suffix to the end of Model number.

Example: OVRHTE251201P5

EMI/RFI filter attenuation	
Max. attenuation frequency	50dB @ 100kHz

Warranty	
5-years	

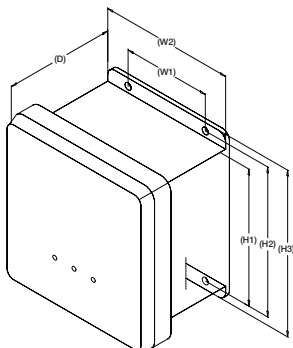
Product features

- UL Listed 1449 4th edition for Type 2 SPD applications.
- Protects facilities and equipment against the harmful effects of lightning strikes and internally generated electrical transients.
- Includes pre-wired pigtail conductors to streamline installation.
- Features internal copper bus conduction path to minimize system impedances, lowering clamping voltage and increasing protection.

Product specifications

Electrical	
Nominal discharge current rating (I-n)	20kA
Operating frequency	47–63Hz
Connection methods	Parallel to load (shunt) 609.6mm (24") 5mm ² (#10 AWG) wires through 20A (max) breaker
Modes of protection	L-L, L-N, L-G, N-G
Fault rating (SCCR)	65kAIC–upstream over-current protection device (breaker or fuse required)
Response time	Less than 1 nanosecond (one per phase)
Standard monitoring	LED status indicator lights
Mechanical	
Weight	5.8 kg (12.7 lbs.)
Enclosure type	NEMA 4X fiberglass-reinforced polyester (FRP) surface-mount, non- removable cover
Installation location	Indoor/outdoor
Mounting methods	Dual mounting flanges
Operating environment	40° to +60°C (-40° to +140°F)
Altitude	Up to 5000 m (16,400 ft.)
Product design	No internal fusing
Regulatory	
UL 1449 4th edition	Type 2
UL 1283	Yes
IEEE C62.41.1, .2, C62.45	Yes
Listed by	UL

Dimensional specifications



Dim	Millimeters (Inches)
H1	156.7 (6.17)
H2	171.5 (6.75)
H3	190.4 (7.50)
W1	101.9 (4.01)
W2	155.4 (6.12)
D	127.5 (5.01)



OVRHT3B

Sub Distribution and Panelboard – 400A and below



Available configurations

Model number	kA per phase	Voltage	Configuration
OVRHT3B501201P	50kA	120V	1-phase, 2-wire + ground
OVRHT3B502401P	50kA	240V	1-phase, 2-wire + ground
OVRHT3B502771P	50kA	277V	1-phase, 2-wire + ground
OVRHT3B504801P	50kA	480V	1-phase, 2-wire + ground
OVRHT3B501202S	50kA	120/240V	2-phase, 3-wire + ground
OVRHT3B502402S	50kA	240/480V	2-phase, 3-wire + ground
OVRHT3B502403H	50kA	120/240V	3-phase High-Leg, 4-wire + ground
OVRHT3B501203Y	50kA	120/208V	3-phase Wye, 4-wire + ground
OVRHT3B502203Y	50kA	220/380V	3-phase Wye, 4-wire + ground
OVRHT3B502303Y	50kA	230/400V	3-phase Wye, 4-wire + ground
OVRHT3B502403Y	50kA	240/415V	3-phase Wye, 4-wire + ground
OVRHT3B502773Y	50kA	277/480V	3-phase Wye, 4-wire + ground
OVRHT3B503473Y	50kA	347/600V	3-phase Wye, 4-wire + ground
OVRHT3B502403D	50kA	240V	3-phase Delta, 3-wire + ground
OVRHT3B503803D	50kA	380V	3-phase Delta, 3-wire + ground
OVRHT3B504003D	50kA	400V	3-phase Delta, 3-wire + ground
OVRHT3B504803D	50kA	480V	3-phase Delta, 3-wire + ground
OVRHT3B506003D	50kA	600V	3-phase Delta, 3-wire + ground

Earthing Systems

OVRHT3B502301PI	50kA	230V	1-phase, 2-wire + ground (for TNC earthing systems)
OVRHT3B502301PJ	50kA	230V	1-phase, 2-wire + ground (for TNS earthing systems)
OVRHT3B502301PK	50kA	230V	1-phase, 2-wire + ground (for IT earthing systems)
OVRHT3B502301PL	50kA	230V	1-phase, 2-wire + ground (for TT earthing systems)

Warranty

3-years

Product features

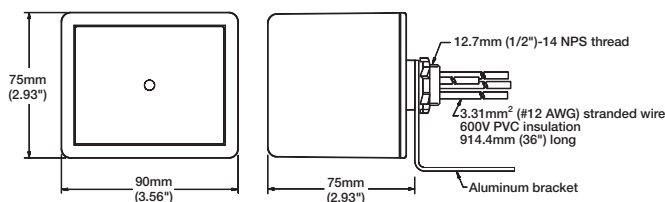
- UL Listed 1449 4th edition for Type 1 SPD applications.
- 50kA per phase protection.
- Individual thermally fused and protected MOVs.
- Includes pre-wired pigtail conductors.
- Multiple MOVs per phase eliminates single point failure.

Product specifications

Electrical	
Nominal discharge current rating (I-n)	20kA (Earthing Systems 10kA)
Operating frequency	47–63Hz
Connection methods	Parallel to load 914.4mm (36") of 3.31mm ² (#12 AWG) wires
Modes of protection	Model dependent
Fault rating (SCCR)	100 kAIC
Response time	Less than 1 nanosecond (one per phase)
Standard monitoring	LED status indicator lights
Mechanical	
Weight	.23 kg (.5 lbs.)
Enclosure type	NEMA 4X, non-metallic
Installation location	Indoor/Outdoor
Mounting method	12.7mm (1/2")–14 NPT thread
Operating environment	-35° to +80°C (-31° to +176°F)
Altitude	Up to 5000 m (16,400 ft.)
Product design	Individual thermally fused and protected MOVs
Regulatory	
UL 1449 4th edition	Type 1
UL 96A	Yes
IEEE C62.41.1, .2, C62.45	Yes
Listed by	UL



Dimensional specifications



Dim	Millimeters (Inches)
W	90.0 (3.36)
D	75.0 (2.93)
H	75.0 (2.93)

OVRHT3C

Sub Distribution and Panelboard – 400A and below



Available configurations

Model number	kA per phase	Voltage	Configuration
OVRHT3C501201P	50kA	120V	1-phase, 2-wire + ground
OVRHT3C502401P	50kA	240V	1-phase, 2-wire + ground
OVRHT3C502771P	50kA	277V	1-phase, 2-wire + ground
OVRHT3C504801P	50kA	480V	1-phase, 2-wire + ground
OVRHT3C501202S	50kA	120/240V	2-phase, 3-wire + ground
OVRHT3C502402S	50kA	240/480V	2-phase, 3-wire + ground
OVRHT3C502403H	50kA	120/240V	3-phase High-Leg, 4-wire + ground
OVRHT3C501203Y	50kA	120/208V	3-phase Wye, 4-wire + ground
OVRHT3C502203Y	50kA	220/380V	3-phase Wye, 4-wire + ground
OVRHT3C502303Y	50kA	230/400V	3-phase Wye, 4-wire + ground
OVRHT3C502403Y	50kA	240/415V	3-phase Wye, 4-wire + ground
OVRHT3C502773Y	50kA	277/480V	3-phase Wye, 4-wire + ground
OVRHT3C503473Y	50kA	347/600V	3-phase Wye, 4-wire + ground
OVRHT3C502403D	50kA	240V	3-phase Delta, 3-wire + ground
OVRHT3C503803D	50kA	380V	3-phase Delta, 3-wire + ground
OVRHT3C504003D	50kA	400V	3-phase Delta, 3-wire + ground
OVRHT3C504803D	50kA	480V	3-phase Delta, 3-wire + ground
OVRHT3C506003D	50kA	600V	3-phase Delta, 3-wire + ground

Earthing Systems

OVRHT3C502301PI	50kA	230V	1-phase, 2-wire + ground (for TNC earthing systems)
OVRHT3C502301PJ	50kA	230V	1-phase, 2-wire + ground (for TNS earthing systems)
OVRHT3C502301PK	50kA	230V	1-phase, 2-wire + ground (for IT earthing systems)
OVRHT3C502301PL	50kA	230V	1-phase, 2-wire + ground (for TT earthing systems)

Warranty

3-years

Product features

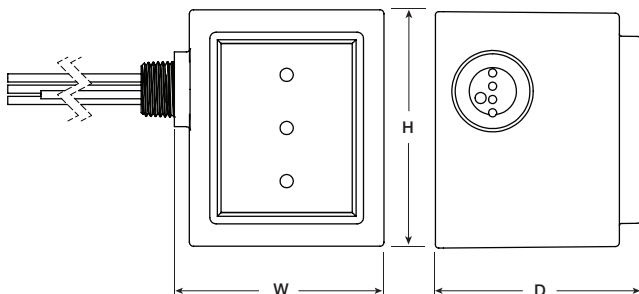
- UL Listed 1449 4th edition for Type 1 SPD applications.
- 50kA per phase protection.
- Individual thermally fused and protected MOVs.
- Includes pre-wired pigtail conductors.
- Multiple MOVs per phase eliminates single point failure.

Product specifications

Electrical	
Nominal discharge current rating (I-n)	20kA (Earthing Systems 10kA)
Operating frequency	47–63Hz
Connection methods	Parallel to load 914.4mm (36") of 3.31mm ² (#12 AWG) wires
Modes of protection	Model dependent
Fault rating (SCCR)	100 kAIC
Response time	Less than 1 nanosecond (one per phase)
Standard monitoring	LED status indicator lights
Mechanical	
Weight	.23 kg (.5 lbs.)
Enclosure type	NEMA 4X, non-metallic
Installation location	Indoor/Outdoor
Mounting method	12.7mm (1/2")–14 NPT thread
Operating environment	-35° to +80°C (-31° to +176°F)
Altitude	Up to 5000 m (16,400 ft.)
Product design	Individual thermally fused and protected MOVs
Regulatory	
UL 1449 4th edition	Type 1
UL 96A	Yes
IEEE C62.41.1, .2, C62.45	Yes
Listed by	UL



Dimensional specifications



Dim	Millimeters (Inches)
H	90.4 (3.56)
W	80.8 (3.18)
D	78.7 (3.10)

OVRHS3U

Sub Distribution and Panelboard – 400A and below



Available configurations

Model number	kA per Phase	Voltage	Configuration
Type 1			
OVRHS3U401201P	40kA	120V	1-phase, 2-wire + ground
OVRHS3U401202S	40kA	120/240V	2-phase, 3-wire + ground
OVRHS3U402403D	40kA	240V	3-phase Delta, 4-wire + ground
OVRHS3U401203Y	40kA	120/208V	3-phase Wye, 4-wire + ground
Type 2			
OVRHS3U402401P	40kA	240V	1-phase, 2-wire + ground
OVRHS3U801202SR	80kA	120/240V	2-phase, 3-wire + ground
OVRHS3U404803D	40kA	480V	3-phase Delta, 3-wire + ground
OVRHS3U401203H	40kA	120/240V	3-phase High-Leg, 4-wire + ground
OVRHS3U402773Y	40kA	277/480V	3-phase Wye, 4-wire + ground
OVRHS3U402303Y	40kA	230/400V	3-phase Wye, 4-wire + ground
Available options (Not available on OVRHS3U802402SR unit)			Model number*
1 set of dry relay contacts (all models)			5
1 set of dry relay contacts + mounting bracket (only on OVRHS3U402401P and OVRHS3U402303Y models)			P
*Add applicable suffix to the end of Model number Example: OVRHS3U401201P5			
Warranty			
3-years			

Product features

- UL Listed 1449 4th edition for Type 1 and Type 2 SPD applications.
- Individual fusing for each Metal Oxide Varistors (MOVs).
- LED indicates proper functioning of L-N and N-G MOVs.

Product specifications

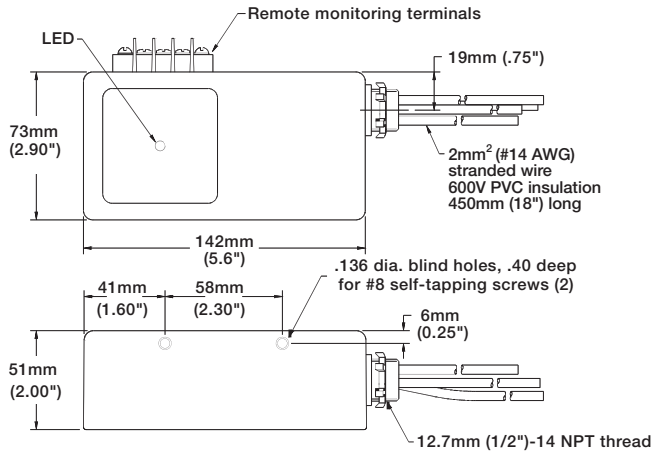
Electrical	
Nominal discharge current rating (I-n)	20kA
Operating frequency	47–63Hz
Connection methods	Parallel to load (shunt) 2mm ² (#14 AWG) wires
Modes of protection	Model dependent
Fault rating (SCCR)	100kAIC
Response time	Less than 1 nanosecond (one per phase)
Standard monitoring	LED status indicator lights
Mechanical	
Weight	.9 kg (2 lbs.)
Enclosure type	NEMA 1, non-metallic
Installation location	Indoor
Mounting method	12.7mm (1/2")–14 NPT thread (Aluminum bracket optional)
Operating environment	-40° to +80°C (-40° to +176°F)
Altitude	Up to 5000 m (16,400 ft.)
Product design	Individually fused MOVs
Regulatory	
UL 1449 4th edition	Type 1 and Type 2
UL 1283	Only for model number OVRHS3U802402SR
IEEE C62.41.1, .2, C62.45	Yes
Listed by	UL



See Dimensional specifications on following page.

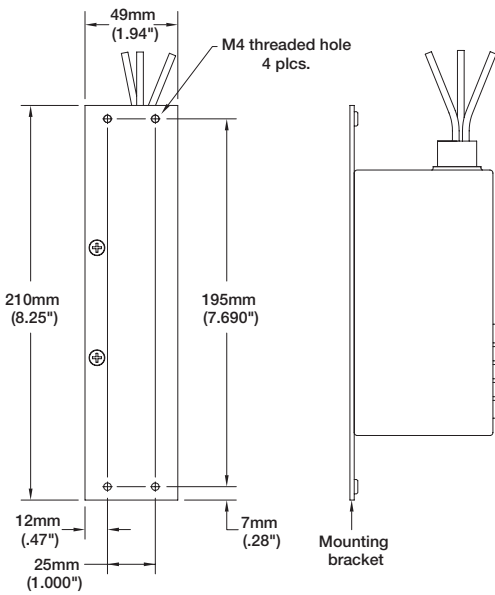
OVRHS3U Dimensional specifications

DRY RELAY CONTACTS, 5 OPTION



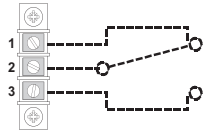
Dim	Millimeters (Inches)
W	73.0 (2.90)
D	51.0 (2.00)
H	142.0 (5.60)

MOUNTING BRACKET AND DRY RELAY CONTACTS, P OPTION

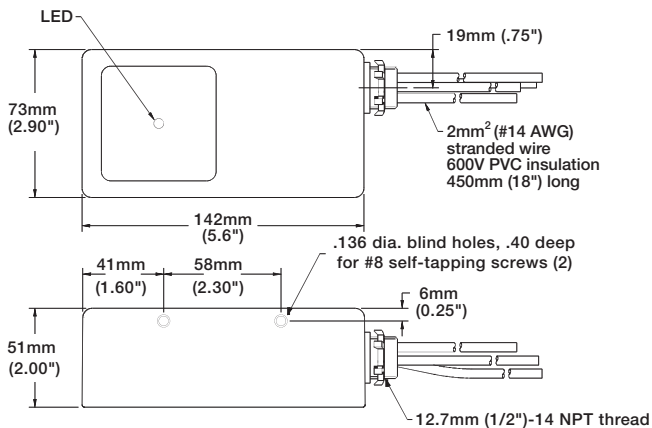


Dim	Millimeters (Inches)
W	49.0 (1.94)
H	210.0 (8.25)

Alarm relay contacts shown with power on



MODELS WITHOUT DRY RELAY CONTACTS



Dim	Millimeters (Inches)
W	73.0 (2.90)
D	51.0 (2.00)
H	142.0 (5.60)

OVRHLD

Equipment Level Protection – 100A and below



Available configurations

Model number	Description
OVRHLDxx-yyy-1	xxkA, yyyV, L-N, N-G (1 LED)
OVRHLDxx-yyy-2	xxkA, yyyV, L1-N, L2-N (2 LEDs)
OVRHLDxx-yyy-3	xxkA, yyyV, L1-G, L2-G (2 LEDs)
OVRHLDxx-yyy-4	xxkA, yyyV, L1-G, N-G (1 LED)
OVRHLDxx-yyy-5	xxkA, yyyV, L-N, L-G (2 LEDs)
OVRHLDxx-yyy-6	xxkA, yyyV, L-N (1 LED)
OVRHLDxx-yyy-7	xxkA, yyyV, L-G (1 LED)
OVRHLDxx-yyy-8	xxkA, yyyV, N-G (0 LED)
OVRHLDxx-yyy-9	xxkA, yyyV, L1-L2 (1 LED)

Model number: Where “xx” can be 20, 25 or 30 and “yyy” can be 120, 127, 230, or 277

Description: Where “xx” can be 20, 25 or 30 and “yyy” can be 120, 127, 230, or 277

Available option	Model number*
Mounting bracket	6

*Add applicable suffix to the end of Model number.
Example: OVRHLD20-120-16

Warranty
3-years

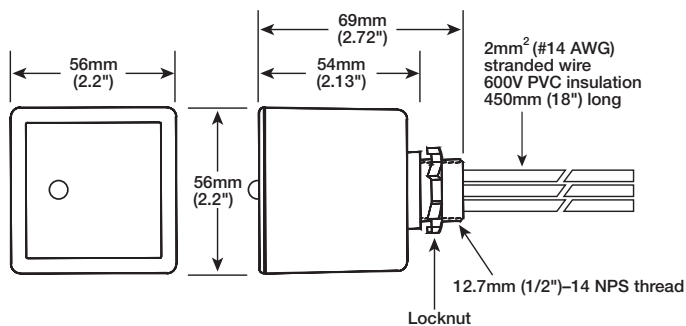
Product features

- UL Listed 1449 4th edition for Type 1 SPD applications.
- Multiple Metal Oxide Varistors (MOVs), with individual current fusing and thermal disconnects for each MOV.
- LED indicates proper functioning of L-N MOVs.

Product specifications

Electrical	
Nominal discharge current rating (I-n)	10kA
Operating frequency	47–63Hz
Connection methods	Parallel to load (shunt) 457.2mm (18") 2mm ² (#14 AWG) wires Direct connect or breaker
Modes of protection	L-N, L-G, N-G
Fault rating (SCCR)	65kAIC
Response time	Less than 1 nanosecond
Standard monitoring	LED status indicator lights (one per phase)
Mechanical	
Weight	.5 kg (1 lb.)
Enclosure type	NEMA 1, non-metallic
Installation location	Indoor
Mounting method	NPS thread and aluminum bracket
Operating environment	-40° to +80°C (-40° to +176°F)
Altitude	Up to 5000 m (16,400 ft.)
Product design	Individually fused MOVs Overcurrent fusing Thermal fusing
Regulatory	
UL 1449 4th edition	Type 1
UL 1283	No
IEEE C62.41.1, .2, C62.45	Yes
Listed by	ETL

Dimensional specifications



Dim	Millimeters (Inches)
W	56.0 (2.20)
D1	54.0 (2.13)
D2	69.0 (2.72)
H	56.0 (2.20)

ABB Power Protection LLC

EPSB

Low Voltage Products

5900 Eastport Blvd.

Richmond, VA 23231, USA

new.abb.com/low-voltage/products



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