

Surge Protection

Circuit Breaker and Surge Protective Device (SPD)

1 Features

- 2 inch wide plug-on design
 - Includes (2) 1 Pole circuit breakers
 - No loss of load center spaces
- Easy to install and perfect for retrofit
- LEDs provide protection status

Benefits

By installing a Siemens Circuit Breaker and Surge Protective Device (SPD) in the load center of the residence, surge protection is provided for all branch circuits[®].

Two green LED indicator lights are provided to show that surge protection is provided for all circuits connected to the load center. These breakers should be used for circuit protection of frequently used household or facility circuits because the lights and devices connected to these circuits provide an effective indication that surge protection is being provided.

The circuit breaker and SPD utilize Siemens-built 150V AC, 40mm, metal oxide varistors (MOVs). The maximum impulse rating for the SPD module is 40kA. The standard interrupting rating for the circuit breakers is 10k AIC. All Type QP circuit breakers and SPD are plug-on style, with load terminals provided. The devices are rated for 120/240V AC and are calibrated for 40 degrees C maximum ambient applications.

Breaker Type	Ampere Rating	Catalog Number	Surge Type
QP 1- Pole 120/240V AC 10K AIC	(2) 15	QSA1515SPD	SPD
	(2) 20	QSA2020SPD	SPD

Catalog Number	QSA1515SPD QSA2020SPD
Amperage	15 or 20 Amp
Number of Poles	(2) 1-Pole Circuit Breakers
Initial Clamping Level	240 Volts
Transient Energy Rating	360 Joules line-to-neutral 720 Joules line-to-line
Transient Suppression	500 volts peak, line-to-neutral
Voltage Rating	1000 volts peak, line-to-line
Peak Current Rating (impulse)	40,000 amperes
Discharge Voltage Characteristic	@ 1,500A, 600 volts @ 5,000A, 800 volts (both line-to-neutral)
Discharge Current Withstand Rating	10,000 amperes line-to-neutral
Circuit Breaker Interrupting Rating	10,000A, 120/240V AC
Listings/Certifications	UL, CSA Meets UL 1449 3rd Edition



© For warranty information please refer to the surge website www.usa.siemens.com/surge

Surge Protection

Power Service Entrance Surge Protection

SPD4home

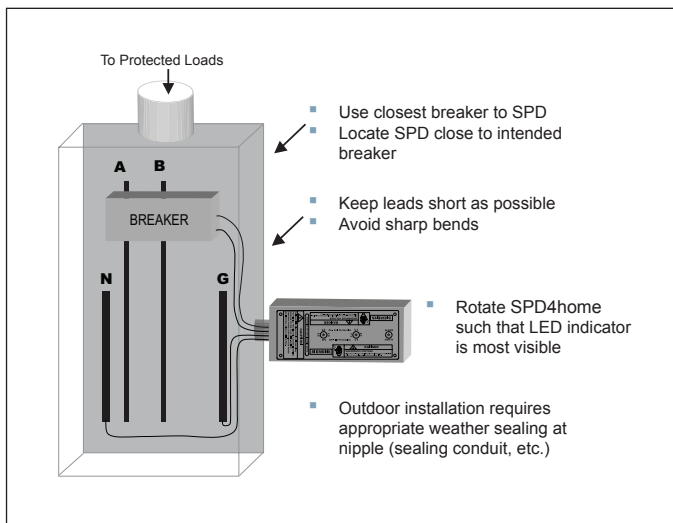
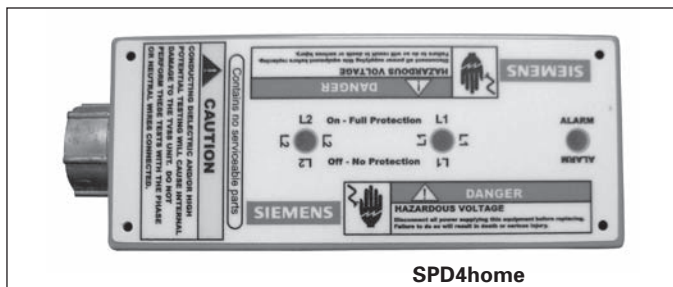
- UL 1449 3rd Edition Listed
- Rated for single phase panels up to 400 amps
- Installation Flexibility
- LED Indicators
- Audible Alarm
- Ground Integrity Monitoring (GIM) circuit
- 10 year product warranty*

* See website for warranty terms and conditions.

Siemens SPD4home stops power surges from entering your home when installed at the main incoming service load center connected via a 20A breaker. An additional power quality feature we include within this unit is Ground Integrity Monitoring circuit, which monitors the health of the electrical systems neutral to ground bond.

Surge Type	Catalog Number
SPD	SPD4HOME

AC Surge Protection	
Inominal (I_n) Rating	5kA
SPD Type Rating	Type 2
Thermal Fusing	Yes
Single Current Rating per Phase	40kA
Line Voltage	120/240 1 Phase 50/60 Hz
UL 1449 3rd Edition VPR	700V
MCOV	150V
Response Time	<1 nanosecond
NEMA 4X Enclosure	Standard
UL/cUL Listings	1449 SPD
Product Warranty	10 years



1
LOAD CENTERS &
CIRCUIT BREAKERS

Type 1, $I_n=20kA$ SPD, Surge Arrestor Replacement

TPS3 03

- UL 1449 3rd Edition – 2009, cUL
- Type 1 SPD (Type 2 cUL)
- Mounts external to electrical distribution equipment
 - Recommended for Line or Load Side Applications
- Mounting options – chase nipple, bracket, or DIN RAIL
- 20kA I_n (most models)
- 200kA SCCR (most models)
- All UL required OCP & safety coordination included
- UL96A Lightning Protection Master Label compliant (@20kA I_n)

Per Phase	L-N (L-G: Delta)
50kA	50kA

When UL 1449 3rd Edition went into effect in 2009, low voltage surge and lightning arrestors were obsoleted. They were replaced with a TPS3 03 style surge protector, which is Type 1 Surge Protective Device (SPD) having an I-nominal of 20kA for most models.

Phase	Catalog Number
1	TPS3A03050
3	TPS3C03050



Ordering Information

Catalog # TPS3 03

Voltage Code A = 120/240V, 10, 3W B = 120/240V, 30, 4W C = 120/208V, 30, 4W D = 240V, 30, 3W E = 277/480V, 30, 4W F = 480V, 30, 3W G = 600V, 30, 3W K = 380/220V, 30, 4W L = 600/347V, 30, 4W	Surge Current (kA) 05 = 50kA per phase	Options D = Dry contact & Audible Alarm
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Example - TPS3C03050D = Type 1 SPD for a 208/120V application with a surge current capacity of 50kA per phase, in a standard NEMA 4X enclosure with dry contacts and audible alarm option.

When an option is not selected, include a zero (0) in the field.

Available Accessories: Ordered Separately
RMSIE - Remote monitor

Surge Protection

Telephone Service Entrance Surge Protection

SPD4tel & SPD4telkit

- UL and cUL listed
- Hardwired Telephone/Modem/Fax/DSL protection
- Exceptionally fast response time
- Low insertion loss
- Available with or without enclosure
- 5 Year product warranty*

* See website for warranty terms and conditions.

SPD4tel is a 2-pair hardwired telephone service entrance surge protector designed to stop surges from entering your home via your incoming telephone service. The SPD4tel is designed for indoor applications or can be mounted inside another weatherproof enclosure for outdoor mounting applications when housed within the SPD4telkit.

When combined with the SPD4home and SPD4coax, all primary surge entry points into the home are protected providing comprehensive whole house protection.



AC Surge Protection	
Catastrophic Surge Circuit	Yes
Spike Capacity	200 Amps
Let Through Voltage	<270V
Overcurrent Protection	Yes
Response Time	<1 nanosecond
Environmentally Sealed	Yes
UL/cUL Listings	497A
Meets Telcordia (formally Bellcore) GR-974-CORE Requirements for Telecommunications Line Protectors	Yes
Product Warranty	5 years

Surge Type	Catalog Number
Telco	SPD4TEL
Telco	SPD4TELKIT

Coaxial Service Entrance Surge Protection

SPD4coax

- UL and cUL listed
- Rated for CATV, DSS, TV, VCR, and Cable Modem
- Easy to install
- Standard Female to Female F connector
- Low insertion loss
- Automatic recovery
- 5 Year product warranty*

* See website for warranty terms and conditions.

SPD4coax is a coaxial service entrance surge protector designed to stop surges from entering your home via your incoming coax TV service. SPD4coax includes a section of coaxial cable with female to female splice for line side application.

When combined with the SPD4home and SPD4tel, all primary surge entry points into the home are protected providing comprehensive whole house protection.



AC Surge Protection	
Frequency Range	DC thru 1.5 GHz
Catastrophic Surge Circuit	Yes
Spike Capacity	5000 Amps, 8/20 μSec
Impedance	75 Ohms
Overcurrent Protection	Yes
Return Loss	30dB @ 1 GHz
Insertion Loss	<0.1dB
UL/cUL Listings	497B
Meets IEEE C62.41.1 Requirements	Yes
Product Warranty	5 Years

Surge Type	Catalog Number
Coaxial	SPD4COAX