# Surge Protection

## Circuit Breaker and Surge Protective Device (SPD)

### 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.

<table>
<thead>
<tr>
<th>Breaker Type</th>
<th>Ampere Rating</th>
<th>Catalog Number</th>
<th>Surge Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>QP 1-Pole</td>
<td>15</td>
<td>QSA1515SPD</td>
<td>SPD</td>
</tr>
<tr>
<td>120/240V AC</td>
<td>(2) 20</td>
<td>QSA2020SPD</td>
<td>SPD</td>
</tr>
</tbody>
</table>

- **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](http://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.

<table>
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<tr>
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<th>Catalog Number</th>
<th>SPD4HOME</th>
</tr>
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</table>

AC Surge Protection

- Innominal ($I_{\text{nom}}$) Rating: 5kA
- SPD Type Rating: Type 2
- Thermal Fusing: Yes
- Single Current Rating per Phase: 40kA
- Line Voltage: 120/240V 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

Type 1, $I_{\text{nom}}$=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 $I_{\text{nom}}$ (most models)
- 200kA SCCR (most models)
- All UL required OCP & safety coordination included
- UL96A Lightning Protection Master Label compliant (@20kA $I_{\text{nom}}$)

<table>
<thead>
<tr>
<th>Per Phase</th>
<th>Voltage Code</th>
<th>Options</th>
<th>Catalog #</th>
</tr>
</thead>
<tbody>
<tr>
<td>50kA</td>
<td>A: 120/240V, 10, 3W</td>
<td>D = Dry contact &amp; Audible Alarm</td>
<td>TPS3A03050</td>
</tr>
<tr>
<td>50kA</td>
<td>B: 120/240V, 30, 4W</td>
<td></td>
<td>TPS3C03050</td>
</tr>
<tr>
<td></td>
<td>C: 120/240V, 30, 4W</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>D: 240V, 30, 3W</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>E: 277/480V, 30, 4W</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>F: 480V, 30, 3W</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>G: 600V, 30, 3W</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>H: 380/220V, 30, 4W</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>I: 600/347V, 30, 4W</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 $I_{\text{nom}}$ of 20kA for most models.

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<tr>
<td>1</td>
<td>TPS3A03050</td>
</tr>
<tr>
<td>3</td>
<td>TPS3C03050</td>
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</tbody>
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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.

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.

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