1 Certifications, Ratings, Submittals

1.1 SPD shall meet UL 1449 -4th edition.
1.2 SPD shall bear the UL Mark and shall be listed to most recent editions of UL 1449. “Manufactured in accordance with” is not equivalent to UL listing and is not acceptable.
1.3 SPD shall be UL labeled with 200kA Short Circuit Current Rating (SCCR). Fuse ratings shall not be considered in lieu of demonstrated withstand testing of SPD, per NEC 285.6
1.4 The SPD’s ratings for a given manufacturer must be listed by specific mode on the UL “Online Certifications Directory” website. The website link is:
   http://database.ul.com/cgi-bin/XYV/cgifind.new/LISEXT/1FRAME/index.html
1.5 The UL Category is VZCA. Include this information in the submittals. The SPD information on the UL website takes precedence over the manufacturers’ own literature.
1.6 Submittals shall include UL 1449 Listing documentation verifying:
   - Short Circuit Current Rating (SCCR)
   - Voltage Protection Ratings (VPRs) for all modes
   - Maximum Continuous Operating Voltage rating (MCOV)
   - I-nominal rating (I-n)
   - Type 1 Device listing as required depending on the location of the device.
1.7 Submittals shall include:
   - Shop drawings with manufacturer installation instruction manual
   - Line drawings detailing dimensions and weight of enclosure
   - Internal wiring diagram illustrating all modes of protection in each type of SPD required
   - Wiring diagram showing all field connections and manufacturer’s recommended wire and breaker sizes

2 General

2.1 SPD to be Type 1 and be located on the load side of the main distribution switchboard main overcurrent device or line side of the main distribution switchboard main disconnecting means when an isolation breaker is present.
2.2 SPD to be mounted externally from the switchboard in its own enclosure (as recommended by IEEE). Lead lengths should be kept to a maximum of 36”. Use low impedance cable where required similar to ASCO AccuGuide Cable.
2.3 Each SPD to be equipped with its own disconnecting means when located on the line side of the main overcurrent protection.
2.4 Each SPD shall be include a surge counter.
2.5 Each SPD shall be fed from its own disconnecting means. In most cases this will be a main breaker, branch breaker or fusible switch
2.6 In general, SPDs shall be located in electrical equipment rooms or other equipment rooms designed for such
   2.6.1 These rooms shall be accessible by qualified personnel only and have corresponding signage stating such
2.7 SPDs shall not be located in corridors or other areas of public access
2.8 SPDs are to be remote mounted as close as possible to the Main Distribution Panel
2.9 SPDs are to be on the line side of the main overcurrent protective device
2.10 MOV’s shall have either overcurrent or over temperature protection or both.
2.11 I-nominal should be 20 kA per a UL test.
2.12 Minimum surge current capability 100kA / mode.
2.13 SCCR 200 kA
2.14 Each SPD to have a minimum ten (10) year warranty

3 Approved Manufacturers

- Advanced Protection Technologies (ASCO Power Technologies)
- Surge Suppression Inc. (SSI).
- Current Technologies
- Or equal
### 4 VPR (Voltage Let Thru)

<table>
<thead>
<tr>
<th>System Voltage</th>
<th>L-N</th>
<th>L-G</th>
<th>L-L</th>
<th>N-G</th>
</tr>
</thead>
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<td>208Y/120V</td>
<td>700V</td>
<td>700V</td>
<td>1200V</td>
<td>700V</td>
</tr>
<tr>
<td>480/277V</td>
<td>1200V</td>
<td>1200V</td>
<td>1800V</td>
<td>1200V</td>
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