

# RECLOSER CONTROLLER SIMULATED SURGE ARRESTER OPERATION TEST REPORT

**Client:** Schweitzer Engineering Laboratories, Inc., 2350 NE Hopkins Court, Pullman, WA – 99163, USA

**Test Date:** 16 November and 17 November, 2010  
**Project:** 20380-27

### Nameplate Data:

**Three-Phase Recloser Controller:**
- **Manufacturer:** Schweitzer Engineering Laboratories, Inc., Pullman, WA, USA  
- **Model:** SEL-351R  
- **Part No.:** 0351R21X81X15XXXX  
- **Serial No.:** 2010286307

**Three-Pole Recloser:**
- **Manufacturer:** Cooper Power Systems, South Milwaukee, WI, USA
- **Model:** Kyle Recloser Type "Nova27"  
- **Impulse Level (BIL):** 150 kV<sub>peak</sub>  
- **Rated Voltage:** 27 kV<sub>rms</sub>  
- **Rated Current:** 630 A<sub>rms</sub> / 12.5 kA<sub>ms</sub> interrupting  
- **Serial No.:** CP571178011-DH

### Test Witnesses:

Mark Feltis, Schweitzer Engineering Laboratories, Inc., Pullman, WA, USA

### Test Standard:


### Atmospheric Conditions:

<table>
<thead>
<tr>
<th></th>
<th>16 November 2010</th>
<th>17 November 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Temperature</strong></td>
<td>16.4 °C</td>
<td>16.5 °C</td>
</tr>
<tr>
<td><strong>Relative Humidity</strong></td>
<td>47.3 %</td>
<td>38 %</td>
</tr>
<tr>
<td><strong>Barometric pressure</strong></td>
<td>751.5 mmHg</td>
<td>745.3 mmHg</td>
</tr>
</tbody>
</table>

### Nominal Test Voltage and Current:

- **Test Configurations Tested** (in accordance with the above standard):
  - **A** – Five surges of positive polarity and five surges of negative polarity were applied to each of the three source bushing with the recloser open (total ten surges per bushing).
  - **B** – Five surges of positive polarity and five surges of negative polarity were applied to each of the three source bushing with the recloser closed (total ten surges per bushing).
  - **C** – Five surges of positive polarity and five surges of negative polarity were applied to each of the three load bushing with the recloser closed (total ten surges per bushing).
  - **D** – 15 surges of positive polarity and 15 surges of negative polarity were applied to a properly rated transformer with the recloser closed.
  - **E** – 15 surges of positive polarity and 15 surges of negative polarity were applied to a properly rated transformer with the recloser open.

### Test Results:

The controller and switch complied with the requirements of IEEE Std C37.60-2003, Clause 6.13.2, configurations A to E.

### Remarks:

None

Tested by:  
Reviewed by:  

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R.G. Pollock,  
Senior Projects Specialist  

A.J. Vandermaar, P.Eng.  
Manager, High Voltage Laboratory

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