Purpose specific device provides reliable, long-life performance.

The need for quality power has never been greater. This has led to an increase in the use of capacitor banks to improve power factor. The Southern States CapSwitcher® high voltage capacitor switching device has been specifically developed to provide restrike free switching of capacitor banks. This reliable, long-life, special purpose SF₆ capacitor switch utilizes closing resistors for mitigating voltage transients and current inrush.

**FEATURES**

- Closing resistors minimize voltage and current transients
- Design virtually eliminates restrikes
- Simple, cost effective, mechanical design that provides repeatability
- Long Life (10,000 operations)
- Eliminates need for inrush reactors
- Interrupting rating allows use as protective device

**SPECIFICATIONS**

**Maximum Voltage Ratings**
- 38 kV – 145 kV (Grounded & Ungrounded Banks)
- 170 kV (Grounded Banks only)

**Capacitive Current Switch Rating**
- 600 A (38 kV to 72.5 kV)
- 650 A (123 kV to 170 kV)

**Primary Interrupting Ratings**
- 25 kA RMS Sym (38 kV to 72.5 kV)
- 40 kA RMS Sym (123 kV to 170 kV)

**Short Time Withstand Ratings**
- 50 kA RMS Sym (1 sec) (38 kV to 72.5 kV)
- 63 kA RMS Sym (18 cycles) (123 kV to 170 kV)

**Application**
- Single Bank or Back-to-Back
CapSwitcher
Capacitor Switching Device
38 kV – 170 kV

**Key Advantages**

- Makes and breaks circuit in SF₆
- Designed and tested for restrike-free performance
- Closing resistors provide reliable and consistently repeatable transient suppression
- Multiple resistor sizes allow performance optimization
- Closing resistor eliminates need for inrush reactors
- Common gas system with pressure gauge, density switch, low pressure alarm and trip on low gas pressure contacts provides both local visual and remote status indication
- Simple, easy erection minimizes field installation time
- Straightforward mechanical design insures long life, repeatable operation

**Rated Duty Cycle:**

CO – 5 min – CO – 5 min – CO

Note: The 5 minutes is to allow the substation capacitor bank to discharge

The actual spring charge time is 15 seconds

---

**Ratings**

<table>
<thead>
<tr>
<th>Maximum Voltage Rating (kV)</th>
<th>38</th>
<th>48.3</th>
<th>72.5</th>
<th>123</th>
<th>145</th>
<th>170*</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIL (kV)</td>
<td>200</td>
<td>250</td>
<td>350</td>
<td>550</td>
<td>650</td>
<td>750</td>
</tr>
<tr>
<td>Continuous Current</td>
<td>600 A</td>
<td>650 A</td>
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<td></td>
</tr>
<tr>
<td>Primary Fault Interrupting Rating</td>
<td>25 kA RMS **</td>
<td>40 kA RMS (standard)</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>18 kA (optional -50°C)***</td>
<td>25 kA RMS (optional -50°C)***</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Short-Time Symmetrical Withstand</td>
<td>50 kA RMS (1 sec)</td>
<td>40 kA RMS (3 sec)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>63 kA RMS (18 cycles)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Endurance Life</td>
<td>10,000 operations</td>
<td>10,000 operations</td>
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<td></td>
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<tr>
<td>Ambient Temp Rating</td>
<td>-40°C to +50°C (standard)</td>
<td>-40°C to +50°C (optional)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-50°C to +50°C (optional)</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

* Suitable for use on grounded capacitor banks only
** 31.5 kA rating available (Max 3 full fault interruptions)
*** Design has SF₆/N₂ gas mixture

**Capacitor Switching Ratings (IEEE C37.09a-2005)**

<table>
<thead>
<tr>
<th>Maximum Voltage Rating (kV)</th>
<th>38</th>
<th>48.3</th>
<th>72.5</th>
<th>123</th>
<th>145</th>
<th>170</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continuous Switching Current</td>
<td>600 A</td>
<td>650 A</td>
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</tr>
<tr>
<td>High Frequency Transient Making Current</td>
<td>18 kA peak at 4630 Hz</td>
<td>20 kA peak at 4600 Hz</td>
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</tr>
<tr>
<td>Closing Resistor Value</td>
<td>Matched to bank size for optimum performance*</td>
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<td></td>
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</tr>
</tbody>
</table>

* See Application Guide Documents