High Power Switches

Medium voltage disconnectors

HAS Range
12 kV, 24 kV, 36 kV
400 A to 1 000 A - up to 175 Hz
Number of poles: 1, 2, 3, ...

- Large isolation air and creepage path
- Self-cleaning blade contacts
- True opening and visible distance
- Rugged anti-torsion construction
- Large customisation with:
  - Manual, motor, pneumatic drives
  - Auxiliary switches, blocking magnets
- According to IEC 62271-102
- Dimensions Fitting

Electrical Characteristics

<table>
<thead>
<tr>
<th>Rated thermal current A</th>
<th>12 kV</th>
<th>24 &amp; 36 kV</th>
</tr>
</thead>
<tbody>
<tr>
<td>400</td>
<td>RMS 1 sec short-time withstand current kA 20</td>
<td>Rated peak current kA 50</td>
</tr>
<tr>
<td></td>
<td>RMS 1 sec short-time withstand current kA 26</td>
<td>Rated peak current kA 65</td>
</tr>
<tr>
<td>630</td>
<td>RMS 1 sec short-time withstand current kA 20</td>
<td>Rated peak current kA 50</td>
</tr>
<tr>
<td></td>
<td>RMS 1 sec short-time withstand current kA 26</td>
<td>Rated peak current kA 65</td>
</tr>
<tr>
<td>1000</td>
<td>RMS 1 sec short-time withstand current kA 40</td>
<td>Rated peak current kA 100</td>
</tr>
<tr>
<td></td>
<td>RMS 1 sec short-time withstand current kA 30</td>
<td>Rated peak current kA 75</td>
</tr>
</tbody>
</table>

Dielectric withstand voltage 1 min/50Hz (kV)

<table>
<thead>
<tr>
<th>[kV]</th>
<th>Phase to earth and between poles (kV)</th>
<th>Across the isolating distance (kV)</th>
<th>Rated impulse withstand voltage BIL (kV)</th>
<th>Phase to earth and between poles (kV)</th>
<th>Phase to earth and distance (kV)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>28</td>
<td>32</td>
<td>75</td>
<td>85</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>50</td>
<td>60</td>
<td>125</td>
<td>145</td>
<td></td>
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<tr>
<td>36</td>
<td>70</td>
<td>80</td>
<td>170</td>
<td>195</td>
<td></td>
</tr>
</tbody>
</table>

- No-load operation
- Indoor type - only vertical mounting
- Mechanical endurance: 50 000 cycles for I>1kA; 25 000 cycles for I<kA; 1 cycle = open + close
- Maximum temperature withstand at 130° C without damages to the switch
- Electrical contact by contact knives with pressed on hard silver contact rivets and silver-plated electrolytic copper plates
- Small making / breaking capacity (on demand)
- Supporting insulators made of cast epoxy resin (fire classification according to UL94-V1)
### Medium voltage disconnectors

#### HAS 400 A to 1000 A

<table>
<thead>
<tr>
<th>KV</th>
<th>Amp</th>
<th>No of poles</th>
<th>B =B1</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>FØ</th>
<th>G</th>
<th>H</th>
<th>J</th>
<th>K</th>
<th>L</th>
<th>M</th>
<th>N</th>
<th>RØ</th>
<th>S</th>
<th>T</th>
<th>UØ</th>
<th>V</th>
<th>Drive</th>
</tr>
</thead>
<tbody>
<tr>
<td>400</td>
<td>630</td>
<td>1</td>
<td>142</td>
<td>320</td>
<td>340</td>
<td>358</td>
<td>450</td>
<td>92</td>
<td>253</td>
<td>-</td>
<td>30</td>
<td>6</td>
<td>15</td>
<td>11</td>
<td>180</td>
<td>16</td>
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<tr>
<td>1000</td>
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<td>2</td>
<td>590</td>
<td>320</td>
<td>340</td>
<td>358</td>
<td>450</td>
<td>540</td>
<td>245</td>
<td>261</td>
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<td>40</td>
<td>20</td>
<td>14</td>
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<tr>
<td>400</td>
<td>630</td>
<td>3</td>
<td>790</td>
<td>320</td>
<td>340</td>
<td>358</td>
<td>450</td>
<td>740</td>
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Ferraz Shawmut offers customized solutions to meet your most specific requirements:
- Adapted drives or control units
- Technical performance specifications (short-circuit current capability, endurance, small load make / break capacity)