CS
Damped Capacitive Impulse Divider

Datasheet

Sold & Serviced in USA by:
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HAEFELY
Current and voltage – our passion
General Description

Damped-capacitive impulse voltage dividers series CS are optimized for high dynamic behaviour and can be used to measure full and tail chopped lightning impulse voltages, switching impulses and AC voltages.

They meet all requirements of IEC 60060-2 in particular those with respect to measuring accuracy and step response. The divider can also serve as a base load for the impulse voltage generator.

They are designed for indoor operation.

Depending on the voltage rating, the high voltage part of the dividers consists of one or several oil-filled capacitors which are housed in cylinders made from glass fiber reinforced epoxy resin.

For 600 kV and above rated lightning impulse voltages, the dividers are equipped with a toroidal high voltage electrode to guarantee corona-free operation.

The secondary unit consists of a capacitor and a damping resistor of low inductance both arranged in a coaxial design. The unit is fixed at the bottom of the divider and can easily be disassembled. The voltage divider is erected on a four-arm base equipped with castors.

<table>
<thead>
<tr>
<th>Type</th>
<th>Rated impulse voltage L.I. 1.2 / 50 µs</th>
<th>Rated impulse voltage S.I. 250 / 2500 µs</th>
<th>Rated AC * voltage, 50/60 Hz, cont. duty</th>
<th>Capacitance</th>
<th>Damping res. ext.</th>
<th>Clearance to walls and ceiling</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>kV</td>
<td>kV</td>
<td>kV RMS</td>
<td>pF</td>
<td>Ω</td>
<td>m</td>
</tr>
<tr>
<td>CS 100-1000</td>
<td>100</td>
<td>100</td>
<td>50**</td>
<td>1000</td>
<td>130</td>
<td>1.5</td>
</tr>
<tr>
<td>CS 200-1000</td>
<td>200</td>
<td>200</td>
<td>50**</td>
<td>1000</td>
<td>130</td>
<td>1.5</td>
</tr>
<tr>
<td>CS 300-1000</td>
<td>300</td>
<td>280</td>
<td>50**</td>
<td>1000</td>
<td>130</td>
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<td>CS 400-1000</td>
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<td>320</td>
<td>100</td>
<td>1000</td>
<td>150</td>
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<td>400</td>
<td>70**</td>
<td>500</td>
<td>270</td>
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<td>500</td>
<td>140</td>
<td>500</td>
<td>270</td>
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<td>140</td>
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<td>650</td>
<td>210**</td>
<td>670</td>
<td>230</td>
<td>3.5</td>
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<td>700</td>
<td>210**</td>
<td>670</td>
<td>230</td>
<td>3.5</td>
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<td>750</td>
<td>300</td>
<td>670</td>
<td>230</td>
<td>3.5</td>
</tr>
</tbody>
</table>

* with adequate additional secondary part for AC voltage measurements type SEK W
**HV units can be configured in different sizes and capacitances**

Divider ratio is designed to achieve an output voltage of approx. 1400 V at rated lightning impulse voltage. This value was chosen as the standard input voltage for impulse measuring systems from Haefely in order to reduce the influence of electromagnetic interferences.

Upon request the dividers can be supplied with other ratios or with an attenuator to match the input voltage of other measuring devices.
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V2020.03

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