Surge arrester

2-electrode arrester

Series/Type: EF1500X8S
Ordering code: B88069X8741****
Date: 2019-07-11
Version: 04
Surge arrester

2-electrode arrester

Features
- Standard size
- High follow current capability
- Very fast response time
- Stable performance over life
- Very low capacitance
- High insulation resistance
- RoHS-compatible

Applications
- Application with high follow current
- Power supply
- Consumer electronics
- AC power line devices

Electrical specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Min.</th>
<th>Max.</th>
<th>V</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC spark-over voltage (Tolerance) 1) 2)</td>
<td>±20</td>
<td>1500</td>
<td>1200</td>
</tr>
<tr>
<td>Impulse spark-over voltage at 100 V/µs</td>
<td></td>
<td>&lt; 1800</td>
<td></td>
</tr>
<tr>
<td>- for 99% of measured values</td>
<td></td>
<td>&lt; 1700</td>
<td></td>
</tr>
<tr>
<td>- typical values of distribution</td>
<td></td>
<td>&lt; 2000</td>
<td></td>
</tr>
<tr>
<td>Impulse spark-over voltage at 1 kV/µs</td>
<td></td>
<td>&lt; 1800</td>
<td></td>
</tr>
<tr>
<td>- for 99% of measured values</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- typical values of distribution</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service life</td>
<td>10 operations</td>
<td>50 Hz, 1 s</td>
<td>5</td>
</tr>
<tr>
<td>1 operation</td>
<td>35</td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>10 operations [5× (+) &amp; 5× (−)]</td>
<td>8/20 µs</td>
<td>5</td>
<td>kA</td>
</tr>
<tr>
<td>1 operation</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. follow current during one voltage half cycle at 50 Hz 3)</td>
<td>200</td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>Insulation resistance at 100 V&lt;sub&gt;DC&lt;/sub&gt;</td>
<td>&gt; 10</td>
<td></td>
<td>GΩ</td>
</tr>
<tr>
<td>Capacitance at 1 MHz</td>
<td>&lt; 1.5</td>
<td></td>
<td>pF</td>
</tr>
<tr>
<td>Arc voltage at 1 A</td>
<td>~ 30</td>
<td></td>
<td>V</td>
</tr>
<tr>
<td>Glow to arc transition current</td>
<td>&lt; 0.3</td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>Glow voltage</td>
<td>~ 90</td>
<td></td>
<td>V</td>
</tr>
<tr>
<td>Weight</td>
<td>~ 1.5</td>
<td></td>
<td>g</td>
</tr>
<tr>
<td>Operation and storage temperature</td>
<td>−40 ... +125</td>
<td></td>
<td>°C</td>
</tr>
<tr>
<td>Climatic category (IEC 60068-1)</td>
<td>40/125/21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marking, red positive</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Certification</td>
<td>UL 1449 (E319264)</td>
<td>UL 1449 (E319264)</td>
<td></td>
</tr>
</tbody>
</table>

1) At delivery AQL 0.65 level II, DIN ISO 2859
2) In ionized mode
3) Follow current has to be limited by an appropriate varistor in series.

Terms in accordance with ITU-T Rec. K.12 and IEC 61643-311.
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Dimensional drawing in mm

Ordering codes and packing advices

*B88069X8741S102* = 100 pcs. on 5 taped stripes  
*B88069X8741T502* = 500 pcs. on tape and reel

Important notes at the end of this document.
Soldering parameter

Wave soldering

Wave profile features

<table>
<thead>
<tr>
<th>Feature</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solder</td>
<td>Sn 95.5 / Ag 3.8 / Cu 0.7</td>
</tr>
<tr>
<td>Solder bath temperature</td>
<td>263 (±3) °C</td>
</tr>
<tr>
<td>Dwell time</td>
<td>&lt; 3 s</td>
</tr>
</tbody>
</table>

Soldering profile applied to a single soldering process.

Cautions and warnings

- Do not operate surge arresters in power supply networks, whose maximum operating voltage exceeds the minimum spark-over voltage of the surge arresters.
- The follow current must be limited (see values on page 2) so that the arrester can be properly extinguished when the surge has decayed. The arrester might otherwise heat up and ignite adjacent components.
- Surge arresters may become hot in the event of longer periods of current stress (burn risk). In the event of overload the connectors may fail or the component may be destroyed.
- Surge arresters must be handled with care and must not be dropped.
- Do not continue to use damaged surge arresters.

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