Surge arrester

2-electrode arrester

Series/Type: A81-A500XB4
Ordering code: B88069X1813B352
Date: 2019-07-01
Version: 02
**Surge arrester**

**B88069X1813B352**

**2-electrode arrester**

**A81-A500XB4**

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**Features**

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

**Applications**

- Line protection
- Consumer electronics

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**Electrical specifications**

<table>
<thead>
<tr>
<th>DC spark-over voltage 1) 2)</th>
<th>500</th>
<th>V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tolerance</td>
<td>±20</td>
<td>%</td>
</tr>
<tr>
<td>Min.</td>
<td>400</td>
<td>V</td>
</tr>
<tr>
<td>Max.</td>
<td>600</td>
<td>V</td>
</tr>
</tbody>
</table>

**Impulse spark-over voltage**

- at 100 V/µs - for 99% of measured values
- < 1000 V
- < 900 V
- at 1 kV/µs - for 99% of measured values
- < 1100 V
- < 1000 V

**Service life 3)**

- 10 operations 50 Hz, 1 s
- 1 operation 50 Hz, 0.18 s (9 cycles)
- 10 operations 8/20 µs
- 250 operations 8/20 µs
- 1 operation 10/350 µs

<table>
<thead>
<tr>
<th>Insulation resistance at 250 V&lt;sub&gt;DC&lt;/sub&gt;</th>
<th>&gt; 10</th>
<th>GΩ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacitance at 1 MHz</td>
<td>&lt; 1.5</td>
<td>pF</td>
</tr>
<tr>
<td>Arc voltage at 1 A</td>
<td>~ 10</td>
<td>V</td>
</tr>
<tr>
<td>Glow to arc transition current</td>
<td>&lt; 0.8</td>
<td>A</td>
</tr>
<tr>
<td>Glow voltage</td>
<td>~ 60</td>
<td>V</td>
</tr>
<tr>
<td>Weight</td>
<td>~ 1.5</td>
<td>g</td>
</tr>
<tr>
<td>Operation and storage temperature</td>
<td>−40 ... +125</td>
<td>°C</td>
</tr>
<tr>
<td>Climatic category (IEC 60068-1)</td>
<td>40/125/21</td>
<td></td>
</tr>
</tbody>
</table>

**Certifications**

- UL 497B (E163070)
1) At delivery AQL 0.65 level II, DIN ISO 2859
2) In ionized mode
3) After service life:
   - DC spark-over voltage 500 ± 30%
   - Impulse spark-over voltage at 100 V/μs < 1150 V; at 1 kV/μs < 1250 V
   - Insulation resistance IR > 100 MΩ

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

**Dimensional drawing in mm**

**Ordering codes and packing advices**

*B88069X1813B352 = 350 pcs. in trays*
Soldering parameter

Wave soldering

![Soldering profile diagram]

<table>
<thead>
<tr>
<th>Wave profile features</th>
<th>Pb-free assembly</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.
- 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.
- If the contacts of the surge arresters are defective, current load can cause sparks and loud noises.
- Surge arresters must be handled with care and must not be dropped.
- Do not continue to use damaged surge arresters.

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