Raychem Metal-Oxide
Low Voltage Arresters
Raychem low voltage surge arresters provide protection for low-voltage overhead lines, consumer in-house supplies, distribution transformers and other systems. The gapless metal-oxide varistor incorporated in the surge arrester reliably imposes low-value limits on surges caused by atmospheric overvoltages and switching transients, thus protecting the insulation of the consumer-side networks and equipment. The varistor has a very short response time (typically <100 ns) and can safely handle high-current impulses up to 100 kA, 4/10 μs. The arrester’s nominal discharge current is 10 kA. The metal-oxide varistor is enclosed in a sturdy, weatherproof polymer housing. Numerous tests have confirmed the durability of the housing, even when exposed to extreme temperature fluctuations and contamination. The LVA surge arresters are in compliance with requirements Class II as defined by IEC 61643-1.

They are designed for applications in which protection against direct contact is not necessary. Special insulated adapter modules are available for use in insulated overhead-line systems and the low-voltage bushings of distribution transformers.

The integral disconnector disconnects the arrester from the network if an overload occurs, caused, for example, by a lightning strike in the vicinity or an impermissible voltage excursion in the system. If this happens the rating plate on the underside of the arrester dislocates and remains dangling from a holding wire. The ground connection itself remains securely in position.

**Product features:**

- Suitable for indoor and outdoor use
- Integrated disconnector and 1 m line lead
- Overhead lines housing and lead are flame retardant and UV resistant
- Easy to identify failure indicator
- Easy to install (no tools required)
- Large selection of standard accessories
- CE certified
- Tested according IEC 61643-1 + Amd.1 and EN 61643-11
**Technical data**

<table>
<thead>
<tr>
<th>Type</th>
<th>Continuous voltage $U_c$ (V)</th>
<th>Lightning current impulse 8/20 μs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 kA</td>
<td>2 kA</td>
</tr>
<tr>
<td>LVA-280 B</td>
<td>280</td>
<td>0.73</td>
</tr>
<tr>
<td></td>
<td>280</td>
<td>0.76</td>
</tr>
<tr>
<td>LVA-440 B</td>
<td>440</td>
<td>1.26</td>
</tr>
<tr>
<td></td>
<td>440</td>
<td>1.29</td>
</tr>
</tbody>
</table>

**Metal-oxide surge arresters (SPD)**

Class II (IEC 61643-1)

- Nominal discharge current $I_n$: 10 kA
- Maximum discharge current $I_{\text{max}}$: 40 kA
- High current impulse 4/10 μs: 100 kA*
- Energy absorption capability: $4.1 \, \text{J/V} \cdot U_c$
- Rated frequency: 48 - 62 Hz a.c.
- Ambient temperature: -40 ... +70 °C
- Max. altitude: 2000 m
- * Test as per IEC 60099-4

**Ordering information**

**Dimensions (mm)**

- LVA-280B: Width: 15 mm, Height: 56 mm, Diameter: 68 mm

**Accessories for LVA arresters**

**Line connection**

- A: Line connection
- B: Ground lead
- C: Surge arrester continuous/rated voltage (V)
- D: Ordering example: LVA-280B-BL

**Surge arrester continuous/rated voltage (V)**

- LVA-280: 280 V
- LVA-440: 440 V

**Ground lead**

- L: Length: 1000, 6 mm²

**Ordering example: LVA-280B-BL**

Surge arrester for continuous/rated voltage 280V for connection to bare conductor and with insulated stranded earth wire (6 mm²)

Contact us for further information at: surgearrester@te.com
## Other products available from TE Energy

### Asset protection
Insulation enhancement systems for substations and overhead lines. Designed to prevent unplanned outages due to accidental bridging and to help upgrade insulation levels at critical points in systems.

Contact us at: assetprotection@tecom

### Low-voltage surge arresters
LV arresters are used to provide protection for LV overhead lines, consumer in-house supplies, distribution transformers and other appliances.

Contact us at: surgearresters@te.com

### Medium-voltage surge arresters
Metal oxide varistor distribution arresters for indoor and outdoor applications for protection of overhead lines, DC locomotives and switchgear applications.

Contact us at: surgearresters@te.com

### High-voltage surge arresters
Porcelain and polymeric series parallel and single column constructed arresters for protection of transmission systems up to 550 kV.

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### Polymeric insulators
Insulators and insulating components/housings providing reliable solutions for power utilities and railway customers with installations in high pollution environments and applications up to 400 kV.

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### Porcelain insulators
Insulators for applications up to system voltages of 132 kV. This range of insulators offers a cost-effective solution for low and medium polluted environments.

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