Two-pole UL Type 4 surge arresters for control voltage applications

Control voltage system arresters
The features of these two-pole devices are for use in coordination with other upstream SPDs in UL 508A Applications*.

- Surge arrester according to UL 1449 4th Edition, Type 4 Component Assembly for Type 3 applications helps meet UL 508A requirements
- Proven MOV and GDT hybrid technology for reliable surge protection
- Module locking system with module release button make module replacement easy without tools
- Remote signaling of all protection modules make status monitoring easy and accurate in any monitoring scheme
- No upstream overcurrent protection necessary to make installation easier and more economical
- Vibration and shock tested according to EN 60068-2 to withstand harsh environments

Remote contact signaling
The three-pole terminal remote contact signaling has a floating changeover contact for use as a break or make contact, according to circuit concept.

Specifications:
System volts
- 24Vac/dc to 120Vac/dc (See ordering information table)

System types
- AC and DC control voltage systems up to 120Vac/dc

Agency information
- CE
- CSA
- KEMA
- UL/cUL
- RoHS complaint

Mounting
- 35mm DIN-Rail

Warranty
- Five years

* UL 1449 4th Edition not applicable to DC voltages.
Dimensions - mm:

- Module circuit diagram:
  Shown with optional remote contact signaling.

- MOV
- Gas discharge tube (single)

Shown with optional remote contact signaling.
## Ordering information:

<table>
<thead>
<tr>
<th>System voltage (50-60Hz)</th>
<th>24Vac/dc</th>
<th>48Vac/dc</th>
<th>120Vac/dc</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Continuous Operating Voltage (MCOV) ([V_C]) 50-60Hz</td>
<td>30Vac/dc</td>
<td>60Vac/dc</td>
<td>150Vac/dc</td>
</tr>
<tr>
<td>Catalog numbers (base + modules)</td>
<td>BSPH2A24D24LV</td>
<td>BSPH2A48D48LV</td>
<td>BSPH2A150D150LV</td>
</tr>
<tr>
<td>Replacement modules</td>
<td>BPHA24D24LV</td>
<td>BPHA48D48LV</td>
<td>BPHA150D150LV</td>
</tr>
</tbody>
</table>

### Specifications

- **Nominal AC voltage \([V_C]\) (50-60Hz):**
  - 24V
  - 48V
  - 120V

- **Max. continuous operating voltage \([V_C]\):**
  - AC (50-60Hz): 30V
  - DC: 30V

- **Nominal load current AC \([I_L]\):**
  - 25A

- **Nominal discharge current (8/20µs) \([I_{LN}]\):**
  - 1kA

- **Total discharge current (8/20µs) L+N-Gnd \([I_{total}]\):**
  - 4kA

- **Combined impulse \([U_{IC}]\):**
  - 2kV

- **Voltage protection level \([VPR]\):**
  - L-N: ≤ 180V
  - L/N-Gnd: ≤ 630V

- **Max lineside overcurrent protection \([I_{SCCR}]\):**
  - 6kA

- **SPD according to:**
  - EN 61643-11 Type 3, IEC 61643-11 Class III

- **Response time \([t_A]\):**
  - L-N: ≤ 25 ns
  - L/N-Gnd: ≤ 100 ns

- **Operating environment \([T_U]\):**
  - -40°C to +80°C, 5% to 95% RH

- **Operating state/fault indication:**
  - Green (good) / Red (replace)

- **Number of ports:**
  - 1

- **Conductor cross-sectional area Min. Max.**
  - 0.5mm\(^2\) / 18AWG solid / flexible 4mm\(^2\) / 10AWG solid, 2.5mm\(^2\) / 12AWG flexible

- **For mounting on:**
  - 35mm DIN-Rail per EN 60715

- **Enclosure material:**
  - Thermoplastic, UL 94V0

- **Location category:**
  - Indoor

- **Degree of protection:**
  - IP20 (built-in)

- **Capacity (DIN 43880):**
  - 1 Mod.

- **Agency information:**
  - UL / cUL, CSA, KEMA

- **Product warranty:**
  - Five years**

## Remote contact signaling

- **Remote contact signaling type:**
  - Changeover contact

- **Switching capacity (volts/amps):**
  - AC: 250V / 0.5A
  - DC: 250V / 0.1A, 125V / 0.2A, 75V / 0.5A

- **Conductor ratings and cross-section area:**
  - 60/75°C Max. 1.5mm\(^2\) / 14AWG solid / flexible

- **Ordering information:**
  - Order from catalog numbers above

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* Agency information not applicable to DC ratings.
** See Bussman series SPD limited warranty statement (3A1502) for details at Eaton.com/bussmannseries.
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