



## Surge arrester

### 3-electrode arrester

**Series/Type:** T83-A350XF1  
**Ordering code:** B88069X9410B502  
**Version/Date:** Issue 07 / 2009-04-30

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| Features  | Applications   |
|---|--|
| <ul style="list-style-type: none"> <li>▪ Standard size</li> <li>▪ Fast response time</li> <li>▪ High current rating</li> <li>▪ Stable performance over life</li> <li>▪ Very low capacitance</li> <li>▪ High insulation resistance</li> <li>▪ Reliable failsafe device</li> <li>▪ RoHS-compatible</li> </ul> | <ul style="list-style-type: none"> <li>▪ Branch exchange (MDF)</li> <li>▪ Line protection</li> <li>▪ Station protection</li> </ul> |

**Electrical specifications**

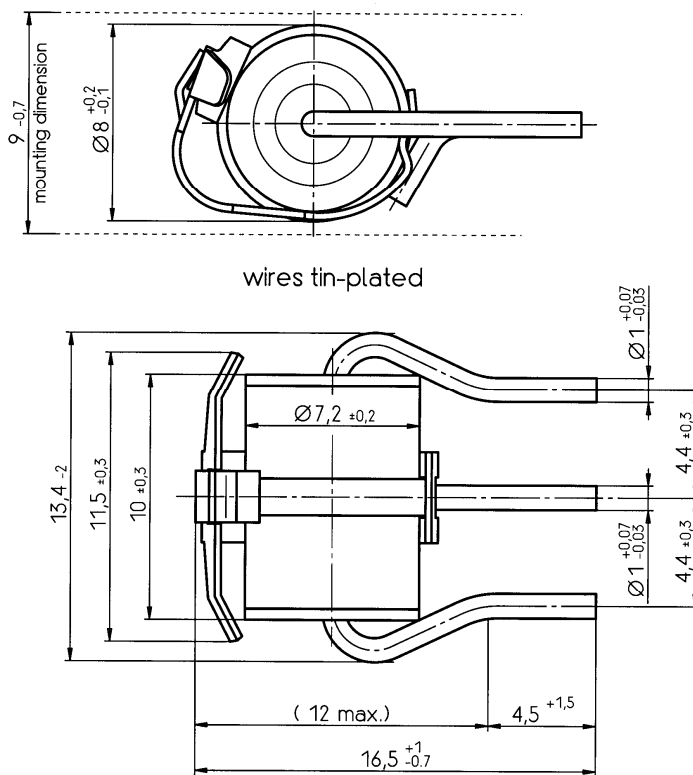
|   |  |        |
|---|--|--------|
| DC spark-over voltage <sup>1) 2) 4)</sup>                                     | 350<br>± 20  | V<br>% |
| Impulse spark-over voltage <sup>4)</sup>                                      |  |        |
| at 100 V/μs - for 99 % of measured values<br>- typical values of distribution | < 700<br>< 600   | V<br>V |
| at 1 kV/μs - for 99 % of measured values<br>- typical values of distribution  | < 900<br>< 800   | V<br>V |
| Service life  |  |        |
| 10 operations                      50 Hz, 1 s <sup>5)</sup>                   | 10   | A      |
| 1 operation                        50 Hz, 0.18 s (9 cycles) <sup>5)</sup>     | 40   | A      |
| 10 operations [5x (+) & 5x (-)]    8/20 μs <sup>5)</sup>                      | 10   | kA     |
| 1 operation                        8/20 μs <sup>5)</sup>                      | 20   | kA     |
| 1 operation                        10/350 μs <sup>5)</sup>                    | 2.5  | kA     |
| 300 operations [150x (+) & 150x (-)] 10/1000 μs <sup>5)</sup>                 | 200  | A      |
| Insulation resistance at 100 V <sub>dc</sub> <sup>4)</sup>                    | > 10   | GΩ     |
| Capacitance at 1 MHz <sup>4)</sup>  | < 1.5  | pF     |
| Transverse delay time <sup>3)</sup>   | < 0.2  | μs     |
| Arc voltage at 1 A  | ~ 10   | V      |
| Glow to arc transition current  | < 1  | A      |
| Glow voltage  | ~ 60   | V      |
| Weight  | ~ 2.2  | g      |
| Storage temperature   | -40 ... +90  | °C     |
| Climatic category (IEC 60068-1)   | 40/ 90/ 21   |        |
| Marking, red negative   | <b>EPCOS</b><br><b>350 YY O</b><br>350 - Nominal voltage<br>YY - Year of production<br>O - Non radioactive |        |

- 1) At delivery AQL 0.65 level II, DIN ISO 2859
- 2) In ionized mode
- 3) Test according to ITU-T Rec. K.12
- 4) Tip or ring electrode to center electrode
- 5) Total current through center electrode, half value through tip respectively ring electrode.

Terms in accordance with ITU-T Rec. K.12 and DIN 57845/VDE0845

The arrester failsafe mechanism contains a solder pellet with a melting temperature range from 230 to 240 °C.

### Dimensional Drawing



*Not to scale*

*Dimensions in mm*

*Non controlled document*

### Cautions and warnings

- The short-circuit spring does not trigger until 230 °C is reached depending on the material. Care must be taken to limit the thermal radiation onto adjacent parts to safe values.
- Depending on the incorporation position, the surge arrester may have to be additionally secured by mechanical means.
- Surge arresters must not be operated directly in power supply networks.
- Surge arresters may become hot in case of longer periods of current stress (danger of burning).
- Surge arresters may be used only within their specified values. In case of overload, the head contacts may fail or the component may be destroyed.
- Damaged surge arresters must not be re-used.
- Surge arrester with triggered short-circuit mechanisms must not be re-used.

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