



## Surge arrester

3-electrode arrester

**Series/Type:** T32-A230XF1  
**Ordering code:** B88069X2320B502  
Version/Date: Issue 04 / 2007-08-10

| Features   | Applications   |
|--|--|
| <ul style="list-style-type: none"> <li>▪ Very small size</li> <li>▪ Extremely fast response time</li> <li>▪ High current rating</li> <li>▪ Stable performance over life</li> <li>▪ Extremely low capacitance</li> <li>▪ High insulation resistance</li> <li>▪ RoHS-compatible</li> </ul> | <ul style="list-style-type: none"> <li>▪ Line protection</li> <li>▪ Station protection</li> <li>▪ Base stations</li> </ul> |

**Electrical specifications**

|   |  |        |
|---|--|--------|
| DC spark-over voltage <sup>1) 2) 4)</sup>                                 | 230<br>± 20  | V<br>% |
| Impulse spark-over voltage <sup>4)</sup>                                  |  |        |
| at 100 V/μs - for 99 % of measured values                                 | < 400  | V      |
| - typical values of distribution  | < 350  | V      |
| at 1 kV/μs - for 99 % of measured values                                  | < 450  | V      |
| - typical values of distribution  | < 420  | V      |
| Service life  |  |        |
| 10 operations                      50 Hz; 1 s <sup>5) 6)</sup>            | 10   | A      |
| 1 operation                        50 Hz; 0.18 s (9 cycles) <sup>5)</sup> | 30   | A      |
| 10 operations [5x (+) & 5x (-)] 8/20 μs <sup>5)</sup>                     | 10   | kA     |
| 1 operation                        8/20 μs <sup>5)</sup>                  | 10   | kA     |
| 1 operation                        10/350 μs <sup>5)</sup>                | 2  | kA     |
| 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  | ~ 30   | V      |
| Glow to arc transition current  | ~ 1  | A      |
| Glow voltage  | ~ 200  | V      |
| Weight  | ~ 1.4  | g      |
| Storage temperature   | -40 ... +90  | °C     |
| Climatic category (IEC 60068-1)   | 40/ 90/ 21   |        |
| Marking, blue negative  | <b>EPCOS</b><br><b>230 YY O</b><br>230 - Nominal voltage<br>YY - Year of production<br>O - Non radioactive |        |

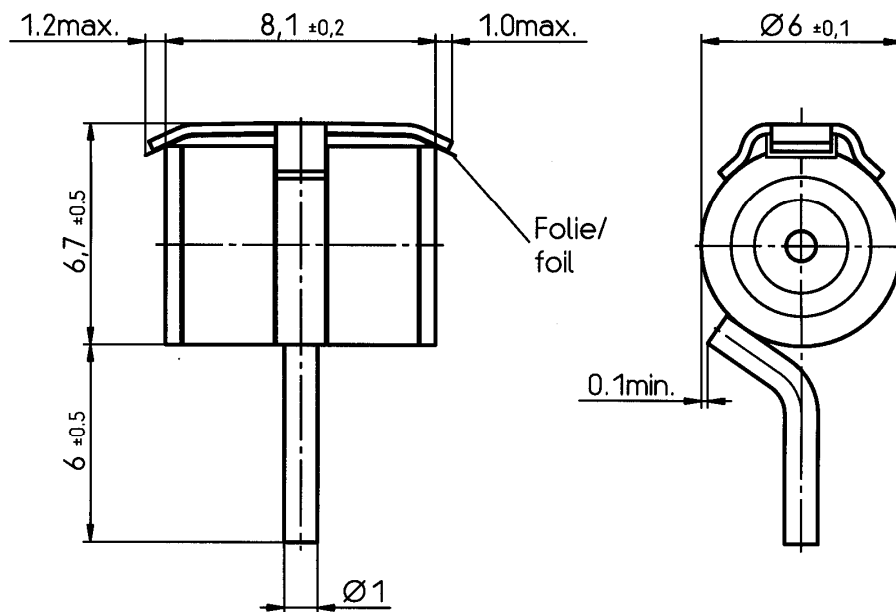
- 1) At delivery AQL 0.65 level II, DIN ISO 2859
- 2) In ionized mode
- 3) Test according to ITU-T Rec. K.12
- 4) Tip or ring electrode to center electrode
- 5) Total current through center electrode, half value through tip respectively ring electrode.
- 6) Voltage of the current source  $230 V_{rms}$

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

The arrester failsafe mechanism contains an insulating foil with a melting temperature of 260 °C.

Arrester failsafe works at temperatures > 260 °C. The arrester has to be fixed mechanically, if the arrester is contacted by soldering and if the solder temperature is less than 260 °C.

### Dimensional drawing



*Not to scale*

*Dimensions in mm*

tin-plated

*Non controlled document*

### Cautions and warnings

- The short-circuit spring does not trigger until 260 °C is reached depending on the sensor material. Care must be taken to limit the thermal radiation onto adjacent parts to safe values.
- If the contacts of the surge arresters are defective, current stress can lead to the formation of sparks and loud noises (bang).
- 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.

## Important notes

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