

# Surge arrester

3-electrode arrester

Series/Type: T83-A230XF1
Ordering code: B88069X9420B502

Version/Date: Issue 09 / 2007-11-22

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3-electrode arrester T83-A230XF1

Features	Applications	
<ul> <li>Standard size</li> </ul>	Branch exchange (MDF)	
<ul> <li>Fast response time</li> </ul>	Line protection	
<ul> <li>High current rating</li> </ul>	Station protection	
<ul> <li>Stable performance over life</li> </ul>		
<ul> <li>Very low capacitance</li> </ul>		
<ul> <li>High insulation resistance</li> </ul>		
<ul> <li>Reliable failsafe device</li> </ul>		
<ul> <li>RoHS-compatible</li> </ul>		

### **Electrical specifications**

DC spark-over voltage	e <sup>1) 2) 4)</sup>		230 ± 20	V %
Impulse spark-over voltage <sup>4)</sup> at 100 V/µs - for 99 % of measured values - typical values of distribution		< 450 < 400	V	
at 1 kV/µs	<ul><li>for 99 % of measured values</li><li>typical values of distribution</li></ul>		< 650 < 600	V V
Service life				
10 operations	5	50 Hz, 1 s <sup>5)</sup>	10	Α
1 operation		50 Hz, 0.18 s (9 cycles) 5)	40	Α
10 operations	S (5x (+) & 5x (-))	8/20 μs <sup>5)</sup>	10	kA
1 operation		8/20 μs <sup>5)</sup>	15	kA
1 operation		10/350 μs <sup>5)</sup>	5	kA
Insulation resistance	at 100 V <sub>dc</sub> <sup>4)</sup>		> 10	$G\Omega$
Capacitance at 1 MHz	z <sup>4)</sup>		< 1.5	pF
Transverse delay time	e <sup>3)</sup>		< 0.2	μs
Arc voltage at 1 A Glow to arc transition Glow voltage	current		~ 25 < 1 ~ 200	V A V
Weight			~ 2.2	g
Storage temperature			-40 +90	°C
Climatic category (IEC	C 60068-1)		40/ 90/ 21	- 1
Marking, red negative			EPCOS 230 YY O 230 - Nominal voltage YY - Year of production O - Non radioactive	

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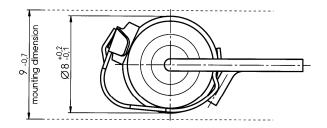
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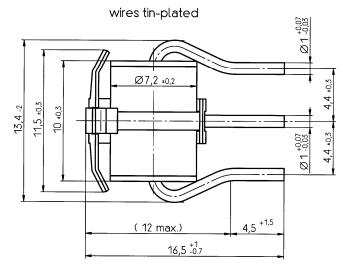
- 1) At delivery AQL 0.65 level II, DIN ISO 2859
- 2) In ionized mode
- Test according to ITU-T Rec. K.12
- 4) Tip or ring electrode to center electrode
- Total current through center electrode, half value through tip respectively ring electrode.

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 193 to 203 °C.

#### **Dimensional Drawing**





Not to scale

Dimensions in mm

Non controlled document

## **Cautions and warnings**

- The short-circuit spring does not trigger until 190 °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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