



Surge arrester

3-electrode arrester

Series/Type: TC83-A230XF1
Ordering code: B88069X5611B502
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Features	Applications
<ul style="list-style-type: none"> ▪ Standard size ▪ Fast response time ▪ High current rating ▪ Stable performance over life ▪ Very low capacitance ▪ High insulation resistance ▪ Reliable failsafe device ▪ RoHS-compatible 	<ul style="list-style-type: none"> ▪ Branch exchange (MDF) ▪ Line protection ▪ Station protection

Electrical specifications

DC spark-over voltage ^{1) 2) 4)}	230 ± 20	V %
Impulse spark-over voltage ⁴⁾		
at 100 V/μs - for 99 % of measured values	< 450	V
- typical values of distribution	< 400	V
at 1 kV/μs - for 99 % of measured values	< 650	V
- typical values of distribution	< 600	V
Service life		
10 operations 50 Hz, 1 s ⁵⁾	10	A
1 operation 50 Hz, 0.18 s (9 cycles) ⁵⁾	40	A
10 operations [5x (+) & 5x (-)] 8/20 μs ⁵⁾	10	kA
1 operation 8/20 μs ⁵⁾	15	kA
1 operation 10/350 μs ⁵⁾	5	kA
300 operations, alternating 10/1000 μs	200	A
Insulation resistance at 100 V _{dc} ⁴⁾	> 10	GΩ
Capacitance at 1 MHz ⁴⁾	< 1.5	pF
Transverse delay time ³⁾	< 0.2	μs
Arc voltage at 1 A	~ 30	V
Glow to arc transition current	~ 1	A
Glow voltage	~ 200	V
Weight	~ 2	g
Storage temperature	-40 ... +90	°C
Climatic category (IEC 60068-1)	40/ 90/ 21	
Marking, red negative	EPCOS 230 YY O 230 - Nominal voltage YY - Year of production O - Non radioactive	

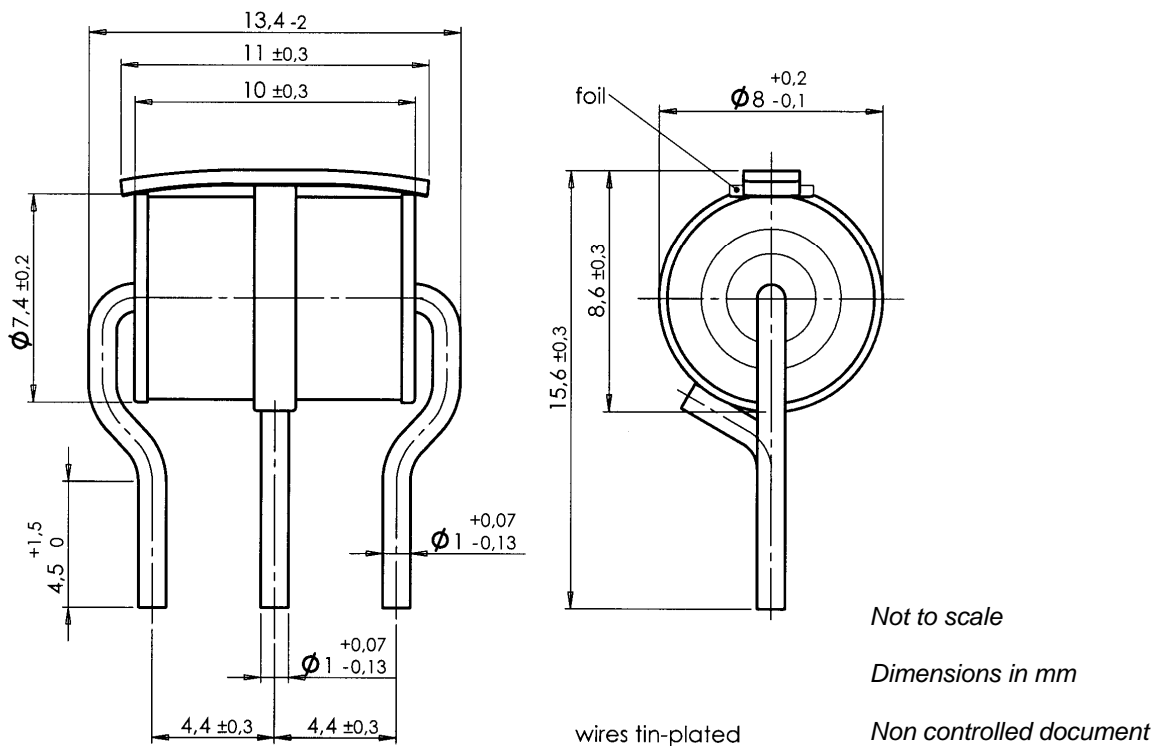
- 1) At delivery AQL 0.65 level II, DIN ISO 2859
- 2) In ionized mode
- 3) Test according to ITU-T Rec. K.12
- 4) Tip or ring electrode to center electrode
- 5) Total current through center electrode, half value through tip respectively ring electrode.

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

The arrester failsafe mechanism contains 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



Cautions and warnings

- The short-circuit spring does not trigger until 260 °C is reached depending on the material. care must be taken to limit the thermal radiation onto adjacent parts to safe values.
- 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.

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