Surge arrester

3-electrode arrester

Series/Type: **T83-A90XF1**
Ordering code: **B88069X8430B502**

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

Electrical specifications

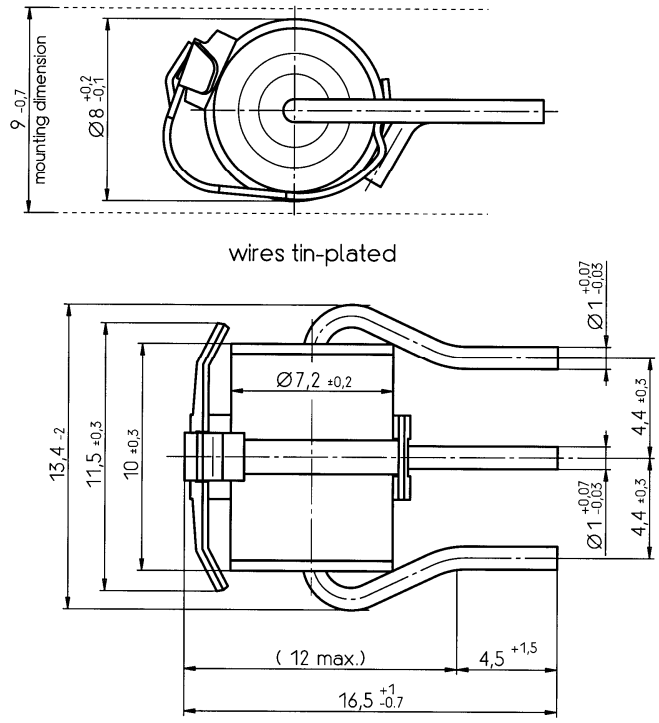
DC spark-over voltage [1) 2) 4)]		90 ± 20	V %
Impulse spark-over voltage [4)]			
at 100 V/µs	- for 99 % of measured values	< 400	V
	- typical values of distribution	< 300	V
at 1 kV/µs	- for 99 % of measured values	< 450	V
	- typical values of distribution	< 350	V
Service life			
10 operations	50 Hz, 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
Insulation resistance at 50 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 Glow to arc transition current Glow voltage		~ 10 < 1 ~ 60	V A V
Weight		~ 2.2	g
Storage temperature		-40 ... +90	°C
Climatic category (IEC 60068-1)		40/ 90/ 21	
Marking, red negative		**EPCOS** **90 YY O** 90 - 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 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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