



Surge arrester

3-electrode arrester

Series/Type:	T93-A90X
Ordering code:	B88069X3663B502
Date:	2019-08-17
Version:	02

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3-electrode arrester

T93-A90X

Features

- Small size
- Fast response time
- High current rating
- Stable performance over life
- Very low capacitance
- High insulation resistance
- RoHS-compatible

Applications

- Branch exchange (MDF)
- Line protection
- Station protection

Electrical specifications

DC spark-over voltage ^{1) 2) 3)}	90	V
Tolerance	±20	%
Min.	72	V
Max.	108	V
Impulse spark-over voltage ³⁾		
at 100 V/μs - for 99% of measured values	< 450	V
- typical values of distribution	< 350	V
at 1 kV/μs - for 99% of measured values	< 600	V
- typical values of distribution	< 500	V
Service life		
10 operations 50 Hz; 1 s ⁴⁾	10	A
10 operations [5× (+) & 5× (-)] 8/20 μs ⁴⁾	10	kA
1 operation 10/350 μs ⁴⁾	1	kA
300 operations (+/- alternating) 10/1000 μs ⁴⁾	200	A
DC holdover voltage ⁵⁾		
at 52 V _{DC} / 200 Ω	< 150	ms
Insulation resistance at 50 V _{DC} ³⁾	> 1	GΩ
Capacitance at 1 MHz ³⁾	< 1.5	pF
Transverse delay time ⁶⁾	< 0.2	μs
Arc voltage at 1 A	~ 10	V
Glow to arc transition current	< 1	A
Glow voltage	~ 65	V
Weight	~ 0.8	g
Operation and storage temperature	-40 ... +125	°C
Climatic category (IEC 60068-1)	40/125/21	
Marking, blue negative	EPCOS 90 YY O 90 - Nominal voltage YY - Year of production O - Non radioactive	

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Certifications

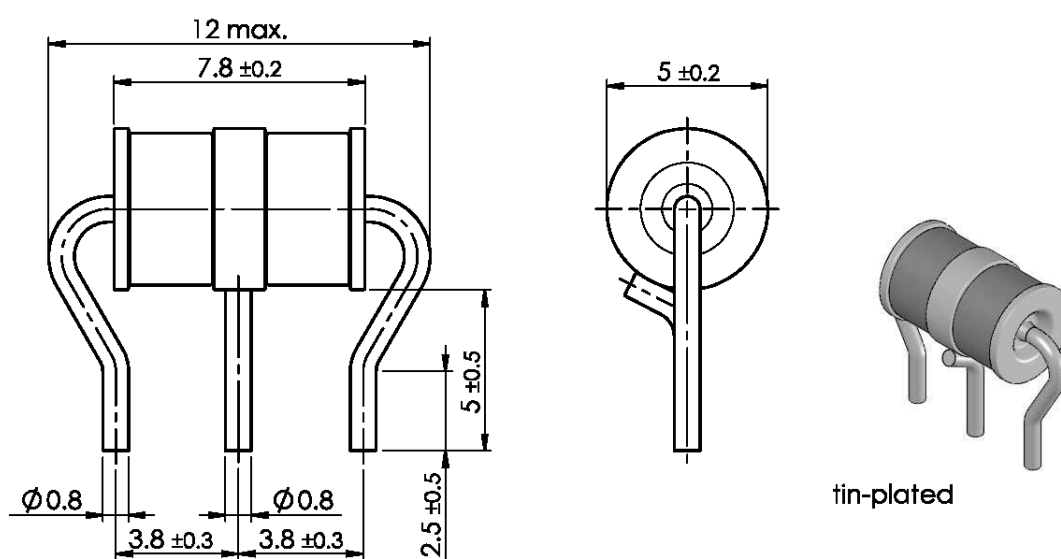
UL 497B (E163070)



- 1) At delivery AQL 0.65 level II, DIN ISO 2859
- 2) In ionized mode
- 3) Tip or ring electrode to center electrode
- 4) Total current through center electrode, half value through tip respectively ring electrode.
- 5) DC spark-over voltage values may exceed $\pm 25\%$ after discharge, but will continue to protect without venting
- 6) Test according to ITU-T Rec. K.12

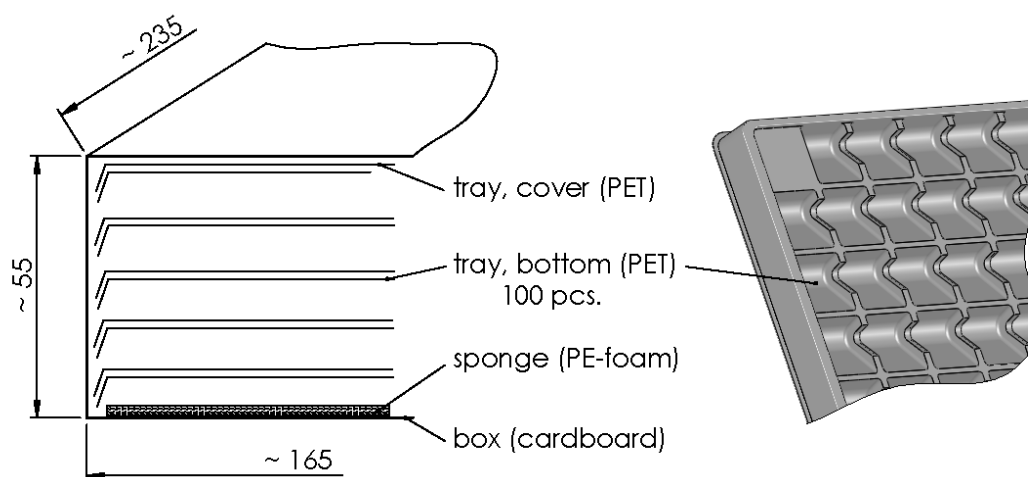
Terms in accordance with ITU-T Rec. K.12 and IEC 61643-311.

Dimensional drawing in mm



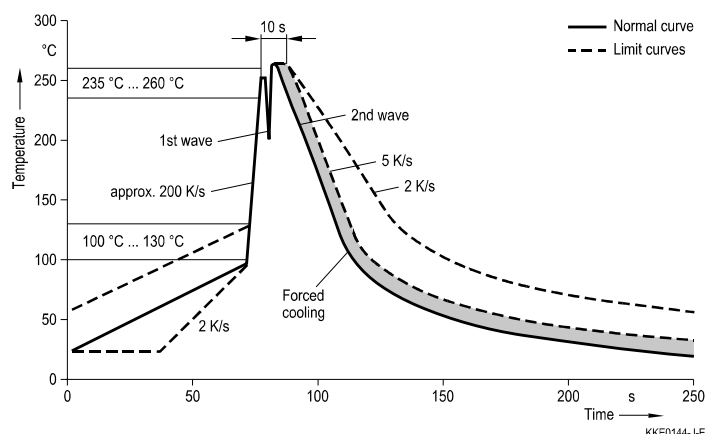
Ordering code and packing advice

B88069X3663B502 = 500 pcs. on trays



Soldering parameter

Wave soldering



Wave profile features	Pb-free assembly
Solder	Sn 95.5 / Ag 3.8 / Cu 0.7
Solder bath temperature	263 (±3) °C
Dwell time	< 3 s

Soldering profile applied to a single soldering process.

Cautions and warnings

- Do not operate surge arresters in power supply networks, whose maximum operating voltage exceeds the minimum spark-over voltage of the surge arresters.
- If the contacts of the surge arresters are defective, current load can cause sparks and loud noises.
- Surge arresters may become hot in the event of longer periods of current stress (burn risk). In the event of overload the connectors may fail or the component may be destroyed.
- Surge arresters must be handled with care and must not be dropped.
- Do not continue to use damaged surge arresters.

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