Surge arrester

2-electrode arrester

Series/Type:	**EM3000XS**
Ordering code:	**B88069X4231******
Date:	2026-04-01
Version:	08

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Surge arrester — B88069X4231****

2-electrode arrester — EM3000XS

Features

- Small size
- Fast response time
- Stable performance over service life
- Low capacitance
- High insulation resistance
- RoHS-compatible

Applications

- Modem
- XDSL-splitter
- Station protection
- Consumer electronics
- Tuner

Electrical specifications

DC spark-over voltage [1) 2)]	3000	V
Tolerance	±20	%
Min.	2400	V
Max.	3600	V
Impulse spark-over voltage		
at 100 V/µs - for 99% of measured values	< 3800	V
at 100 V/µs - typical values of distribution	< 3600	V
at 1 kV/µs - for 99% of measured values	< 3900	V
at 1 kV/µs - typical values of distribution	< 3700	V
Service life		
10 operations 50 Hz; 1 s	1	A
300 operations 8/20 µs	100	A
10 operations 8/20 µs	3	kA
1 operation 8/20 µs	5	kA
Insulation resistance at 100 V_{DC}	> 1	GΩ
Capacitance at 1 MHz	< 1	pF
Arc voltage at 1 A	1500	V
Glow to arc transition current	< 0.3	A
Glow voltage at 0.1 A	~ 170	V
AC withstand voltage (1 min) [3)]	1500	V
Weight	~ 1	g
Operation and storage temperature	–40 ... +125	°C
Recommended storage		
- temperature	+5 ... +35	°C
- humidity	45 ... 80	%
- period	≤ 2	years
Climatic category (IEC 60068-1)	40/125/21	

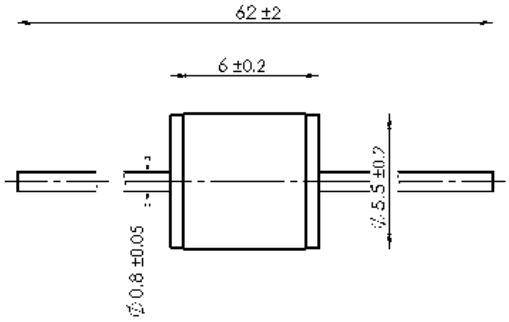
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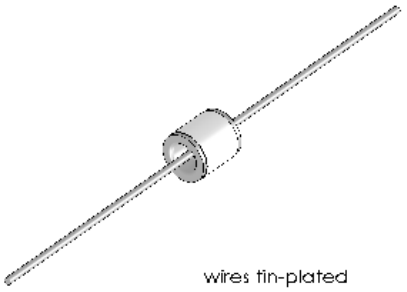
Marking, blue positive	**TDK EM 3000 YY** EM - Series 3000 - Nominal voltage YY - Year of production
Certifications	UL 1449 (E319264)

1) At delivery AQL 0.65 level II, DIN ISO 2859
2) In ionized mode
3) Test conditions in acc. with MIL-STD-202G at 25 ±5 °C, relative humidity of ≤ 55% and atmospheric pressure 860 ... 1100mbar.

Terms and current waveforms in accordance with: ITU-T Rec. K. 12; IEC 61643-21; 61643-311.

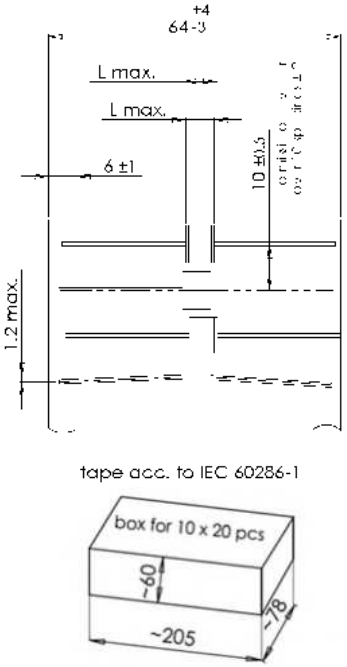
Dimensional drawing in mm



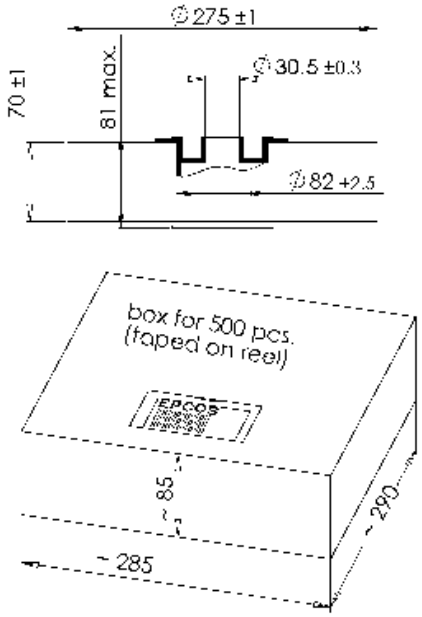


Ordering codes and packing advices

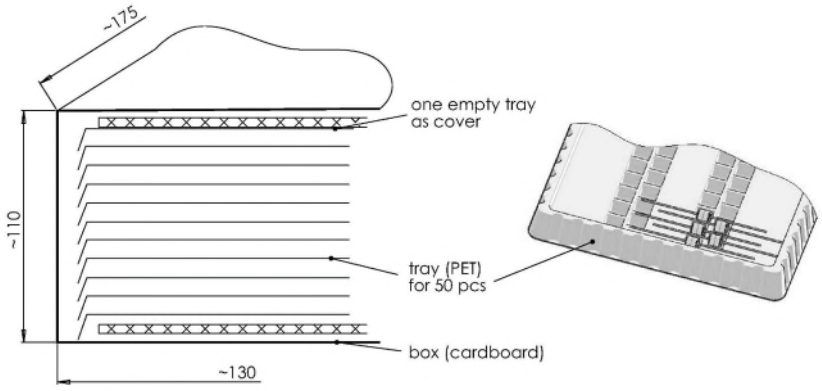
*B88069X4231**S202** = 200 pcs. on 10 taped stripes*



*B88069X4231**T502** = 500 pcs. on tape & reel*

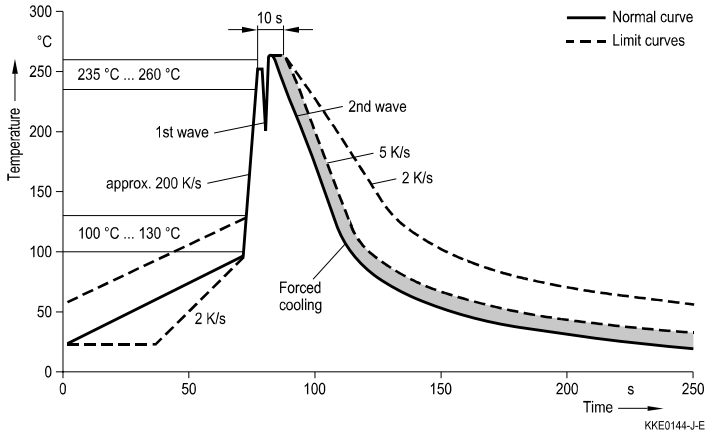


*B88069X4231**B502** = 500 pcs. on trays*



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.
- Electromagnetic fields and ionizing radiation may affect the electrical characteristics of the arrester. The impact of such effects (inductive and capacitive field distortion from adjacent components) must be avoided by appropriate circuit design measures.
- 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.
- If the contacts of the surge arresters are defective, current load can cause sparks and loud noises.
- Surge arresters must be handled with care and must not be dropped.
- Do not continue to use damaged surge arresters.

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Release 2024-02