

Surge arrester

2-electrode arrester

 Series/Type:
 EC145X

 Ordering code:
 B88069X5970****

 Version/Date:
 Issue 02 / 2015-01-13

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Surge arrester

2-electrode arrester

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EC145X

Features

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

Applications

- Branch exchange
- Line protection
- Subscriber protection
- Alarm system
- Tuner
- Antenna protection

DC spark-over voltage 112 145 V Tolerance ±20 % Min. 116 V Impulse spark-over voltage 174 V at 100 V/µs - for 99% of measured values < 500 V - typical values of distribution < 450 V at 1 kV/µs - for 99% of measured values < 600 V - typical values of distribution < 600 V - typical values of distribution < 570 V Service life 5 A 10 operations 50 Hz, 1 s 5 A 1 operation 50 Hz, 0.18 s (9 cycles) 20 A 10 operations 8/20 µs 5 KA Insulation resistance at 50 V _{DC} > 10 GΩ Capacitance at 1 MHz < 1.5 pF Arc voltage at 1 A < 12 V Glow to arc transition current < 60 V Operation and storage temperature -40 +90 °C Climatic category (IEC 60068-1) <td< th=""><th>Electrical specifications</th><th></th><th></th></td<>	Electrical specifications		
Min. Max.116VImpulse spark-over voltage at 100 V/µs- for 99% of measured values - typical values of distribution - typical values of distribution< 500	DC spark-over voltage ^{1) 2)}	145	V
Max. 174 V Impulse spark-over voltage 174 V at 100 V/μs - for 99% of measured values < 500			
Impulse spark-over voltage < 500		_	
at 100 V/μs - for 99% of measured values < 500	Max.	174	V
- typical values of distribution < 450			
at 1 kV/μs - for 99% of measured values - typical values of distribution < 600 < 570			-
- typical values of distribution< 570VService life10 operations50 Hz, 1 s5A1 operation50 Hz, 0.18 s (9 cycles)20A10 operations $8/20 \ \mu s$ 5kA1 operation $8/20 \ \mu s$ 10kAInsulation resistance at 50 V _{DC} > 10G Ω Capacitance at 1 MHz< 1.5	••		
Service life5A10 operations50 Hz, 0.18 s (9 cycles)20A1 operation50 Hz, 0.18 s (9 cycles)20A10 operations $8/20 \ \mu s$ 5KA1 operation $8/20 \ \mu s$ 10KAInsulation resistance at 50 V _{DC} > 10G Ω Capacitance at 1 MHz< 1.5			
10 operations50 Hz, 1 s5A1 operation50 Hz, 0.18 s (9 cycles)20A10 operations $8/20 \ \mu s$ 5kA1 operation $8/20 \ \mu s$ 10kAInsulation resistance at 50 V _{DC} > 10G Ω Capacitance at 1 MHz< 1.5	- typical values of distribution	< 570	V
$\begin{array}{c cccc} 1 & \text{operation} & 50 \text{ Hz}, 0.18 \text{ s} (9 \text{ cycles}) & 20 & A \\ 10 & \text{operations} & 8/20 \ \mu\text{s} & 5 & kA \\ \hline 1 & \text{operation} & 8/20 \ \mu\text{s} & 10 & KA \\ \hline \text{Insulation resistance at 50 V}_{DC} & > 10 & G\Omega \\ \hline \text{Capacitance at 1 MHz} & < 1.5 & pF \\ \hline \text{Arc voltage at 1 A} & ~12 & V \\ \text{Glow to arc transition current} & < 0.5 & A \\ \hline \text{Glow voltage} & ~60 & V \\ \hline \text{Weight} & & ~1.5 & g \\ \hline \text{Operation and storage temperature}} & -40 \dots +90 & ^{\circ}\text{C} \\ \hline \text{Climatic category (IEC 60068-1)} & 40/ 90/ 21 \\ \hline \text{Marking, red positive} & & \\ \hline \text{EPCOS EC 145 YY O} \\ \hline \text{EC} & - \text{Series} \\ 145 & - \text{Nominal voltage} \\ \hline \text{YY} & - \text{Year of production} \\ \hline \text{O} & - \text{Non radioactive} \\ \hline \end{array}$	Service life		
10 operations $8/20 \ \mu s$ 5kA1 operation $8/20 \ \mu s$ 10kAInsulation resistance at 50 V _{DC} > 10G Ω Capacitance at 1 MHz< 1.5	10 operations 50 Hz, 1 s	5	А
1 operation $8/20 \ \mu s$ 10kAInsulation resistance at 50 V _{DC} > 10 $G\Omega$ Capacitance at 1 MHz< 1.5	1 operation 50 Hz, 0.18 s (9 cycles)	20	A
Insulation resistance at 50 V_{DC} > 10 $G\Omega$ Capacitance at 1 MHz< 1.5	10 operations 8/20 µs	5	kA
Capacitance at 1 MHz < 1.5	1 operation 8/20 µs	10	kA
Arc voltage at 1 A Glow to arc transition current Glow voltage~ 12 < 0.5 ~ 60VWeight~ 1.5gOperation and storage temperature-40 +90°CClimatic category (IEC 60068-1)40/ 90/ 21Marking, red positive EPCOS EC 145 YY O EC YY Y - Year of production O YY - Year of production O YY	Insulation resistance at 50 V_{DC}	> 10	GΩ
Glow to arc transition current < 0.5	Capacitance at 1 MHz	< 1.5	pF
Glow to arc transition current Glow voltage< 0.5 ~ 60A VWeight~ 1.5gOperation and storage temperature-40 +90°CClimatic category (IEC 60068-1)40/ 90/ 21Marking, red positiveEPCOS EC 145 YY O EC 145 YY - Year of production O O O - Non radioactive	Arc voltage at 1 A	~ 12	V
Weight ~ 1.5 g Operation and storage temperature -40 +90 °C Climatic category (IEC 60068-1) 40/ 90/ 21 Marking, red positive EPCOS EC 145 YY O EC - Series 145 - Nominal voltage YY - Year of production O - Non radioactive	0	< 0.5	А
Operation and storage temperature -40 +90 °C Climatic category (IEC 60068-1) 40/ 90/ 21 Marking, red positive EPCOS EC 145 YY O EC - Series 145 - Nominal voltage YY - Year of production O - Non radioactive	Glow voltage	~ 60	V
Climatic category (IEC 60068-1) 40/ 90/ 21 Marking, red positive EPCOS EC 145 YY O EC - Series 145 - Nominal voltage YY - Year of production O - Non radioactive	Weight	~ 1.5	g
Marking, red positive EPCOS EC 145 YY O EC - Series 145 - Nominal voltage YY - Year of production O - Non radioactive	Operation and storage temperature	-40 +90	°C
EC - Series 145 - Nominal voltage YY - Year of production O - Non radioactive	Climatic category (IEC 60068-1)	40/ 90/ 21	÷
Certification UL 497B (E163070)	Marking, red positive	EC- Series145- Nominal voltageYY- Year of production	
	Certification	UL 497B (E163070)	9 1

¹⁾ At delivery AQL 0.65 level II, DIN ISO 2859

²⁾ In ionized mode

Terms in accordance with ITU-T Rec. K.12; IEC 61663-2 and IEC 61643-311.

PPD AB PD / PPD AB PM

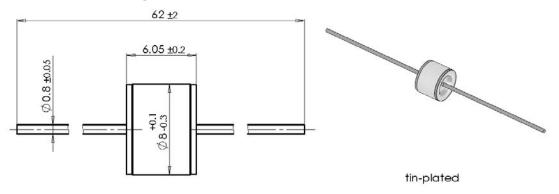


Surge arrester

2-electrode arrester

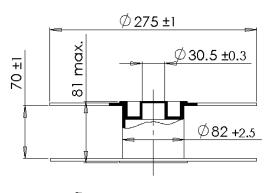
EC145X

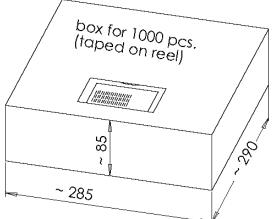
Dimensional drawing in mm

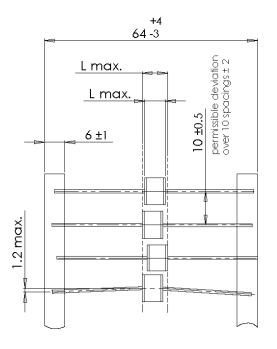


Ordering codes and packing advices

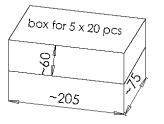
B88069X5970**S102** = 100 pcs. on 5 taped stripes B88069X5970**T502** = 500 pcs. on tape and reel







tape acc. to IEC 60286-1



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②TDK

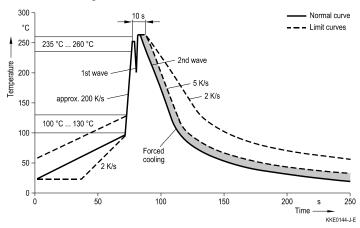
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Soldering parameter

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.
- 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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