Film capacitors – AC capacitors

Motor run capacitors

450 V; class B; 85 °C

Series/Type: **B32330/B32332 – Super MotorCap**

Date: September 2009
Version: 3.0

Construction

- Dielectric: polypropylene film
- Aluminum can
- Soft polyurethane resin

Features

- Self-healing properties
- Low dissipation factor
- Overpressure disconnection device
- Highest safety level P2 to IEC 60252-1 2001-02
- High insulation resistance
- UL approval **cULus,** VDE, TÜV, CQC

Typical applications

- For general sine wave applications, mainly as motor run capacitor

Terminals

- B32330 – single fast-on: 6.3 × 0.8 mm
- B32332 – double fast-on: 6.3 × 0.8 mm

Mounting parts

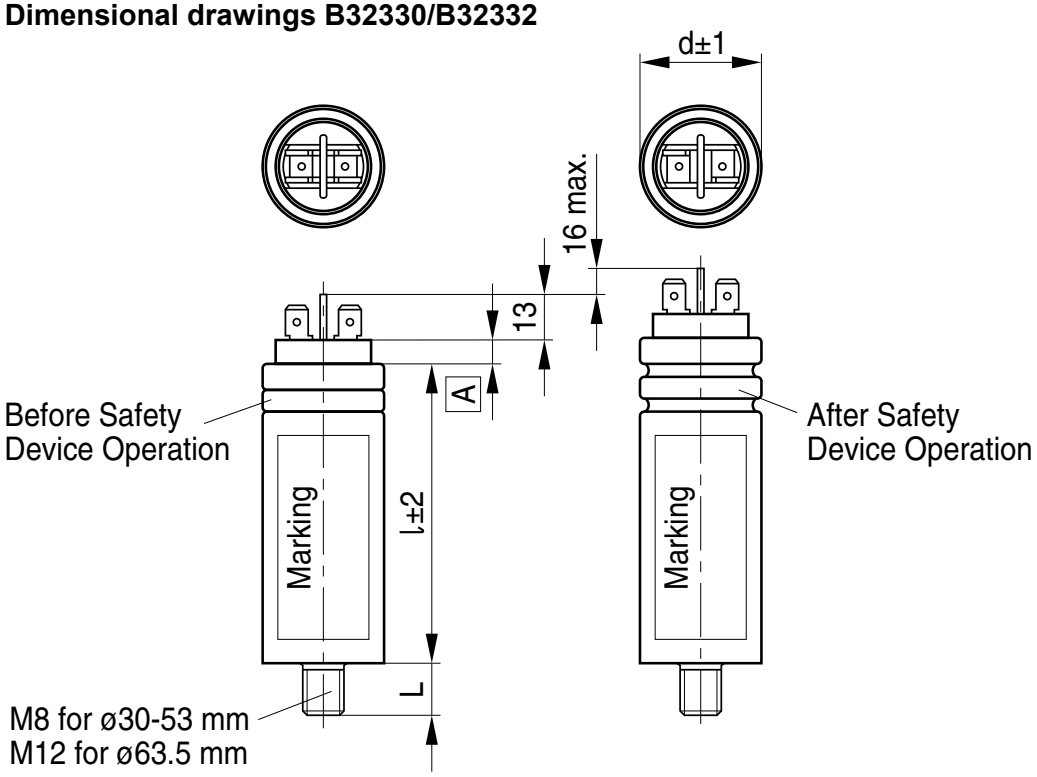
- Threaded stud at bottom of can (M8, max. torque = 5 Nm) as option

Technical data and specifications		
Reference standards	IEC 60252-1 2001-02 / EN 60252 2001 / UL 810	
Safety class to IEC 60252-1 2001-02	P2	
Life expectancy to IEC 60252 2001	400 V: 10000 h (class B) 450 V: 10000 h (class B)	
Rated capacitance C_R	See dimensions table	
Tolerance	±5%	
Rated voltage V_R	420 V, 450 V	
Rated frequency f_R	50/60 Hz	
Maximum ratings		
Maximum permissible voltage V_{max}	$1.1 \cdot V_R$	(V_R = Rated voltage)
Maximum permissible current I_{max}	$1.3 \cdot I_R$	(I_R = Rated current)

Test data	
AC test voltage terminal to terminal V_{TT}	2 · V_R, 2 s (routine test) 2 · V_R, 60 s (type test)
Insulation voltage terminals to case	2000 V AC, 60 s (type test) 2000 V AC, 2 s (routine test)
Insulation resistance R_{ins} or time constant τ at 20 °C, rel. Humidity ≤ 65% (minimum as-delivered values)	3000 s
Dissipation factor tan δ at 20 °C	≤ 1.0 · 10^{-3} (120 Hz)
Maximum rate of voltage rise dV/dt_{max}	10 V/µs
Climatic data	
Climatic category	25/085/21 to IEC 60068-1
Lower category T_{min}	–25 °C
Upper category T_{max}	+85 °C
Damp heat test t_{test}	21 days
Mechanical and thermal properties of terminal top disk material	
Ball pressure test to IEC 60309-1 sec. 27.3	20 N at 125°C
Top disk material	
Option A: ■ UL 94 V2 compatible ■ Glow wire test to IEC 60695-2-1/1 Test temperature 550 °C for I_R ≤ 0.5 A Test temperature 850 °C for I_R > 0.5 A	Self-extinguish within 30 seconds of withdrawing glow wire
Option B: ■ UL 94 V2/V0 compatible ■ Glow wire test to IEC60335-1 / IEC 60695-2-1/1 Test temperature 550 °C / 750 °C ■ Part is compatible to EN 60335-1	Self-extinguish within 2 seconds of withdrawing glow wire
Tracking test to IEC 60112 solution A	> 250 V
Compatibility to RoHS	
Compliance to directive 2002/95/EC	RoHS compatible

Approvals	
cULus UL 810 files E106388 See table for approved ratings	Approved Component 10000 AFC protected
VDE 400 V/85 °C: 10000 h (class B) 450 V/85 °C: 10000 h (class B) See table for approved ratings	 Approved Approved
CQC	Approved

Dimensional drawings B32330/B32332



According to DIN 6797-A

According to DIN 934

KMK1156-A-E

M8 bolt: **L** = 12 mm
M12 bolt: **L** = 16 mm

A = 5 mm for diameters d = 30, 35, 40, 45 mm
A = 0 mm for diameters d = 50, 53, 63.5 mm

Ordering codes and packing units

V_R V AC	C_R µF	Max. dimensions d × l mm	Ordering code (composition see below)	Packing units pcs.	VDE approval	UL approval cULus
400 / 450	1.0	30 × 52	B3233*I5105J0#2	49	Yes	–
	2.0	30 × 52	B3233*I5205J0#2	49	Yes	–
	2.5	30 × 52	B3233*I5255J0#2	49	Yes	–
	3.0	30 × 52	B3233*I5305J0#2	49	Yes	–
	3.5	30 × 52	B3233*I5355J0#2	49	Yes	–
	4.0	30 × 52	B3233*I5405J0#2	49	Yes	–
	5.0	30 × 52	B3233*I5505J0#2	49	Yes	–
	6.0	30 × 52	B3233*I5605J0#2	49	Yes	–
	7.0	30 × 52	B3233*I5705J0#2	49	Yes	–
	3.0	30 × 68	B3233*I5305J0#1	49	Yes	Yes
	3.5	30 × 68	B3233*I5355J0#1	49	Yes	Yes
	4.0	30 × 68	B3233*I5405J0#1	49	Yes	Yes
	5.0	30 × 68	B3233*I5505J0#1	49	Yes	Yes
	6.0	30 × 68	B3233*I5605J0#1	49	Yes	Yes
	7.0	30 × 68	B3233*I5705J0#1	49	Yes	Yes
	8.0	30 × 68	B3233*I5805J0#1	49	Yes	Yes
	10.0	30 × 68	B3233*I5106J0#1	49	Yes	Yes
	12.0	30 × 78	B3233*I5126J0#1	49	Yes	Yes
	15.0	30 × 78	B3233*I5156J0#1	49	Yes	Yes
	16.0	30 × 78	B3233*I5166J0#1	49	Yes	Yes
	18.0	30 × 93	B3233*I5186J0#2	49	Yes	Yes
	18.0	35 × 78	B3233*I5186J0#1	36	Yes	Yes
	20.0	35 × 78	B3233*I5206J0#1	36	Yes	Yes
	20.0	30 × 93	B3233*I5206J0#2	49	Yes	Yes
	22.0	30 × 93	B3233*I5226J0#2	49	Yes	Yes
	22.0	35 × 78	B3233*I5226J0#1	36	Yes	Yes
	25.0	40 × 78	B3233*I5256J0#1	36	Yes	Yes
	25.0	35 × 93	B3233*I5256J0#0	36	Yes	Yes
	30.0	35 × 93	B3233*I5306J0#0	36	Yes	Yes
	30.0	40 × 78	B3233*I5306J0#1	36	Yes	Yes
	35.0	35 × 103	B3233*I5356J0#0	36	Yes	Yes
	36.0	40 × 103	B3233*I5366J0#1	36	Yes	Yes
	40.0	40 × 103	B3233*I5406J0#1	36	Yes	Yes
	45.0	40 × 103	B3233*I5456J0#1	36	Yes	Yes
	50.0	45 × 103	B3233*I5506J0#1	36	Yes	Yes
	55.0	45 × 103	B3233*I5556J0#1	36	Yes	Yes
	55.0	53 × 78	B3233*I5556J0#2	36	Yes	Yes
	60.0	45 × 103	B3233*I5606J0#1	36	Yes	Yes
	60.0	53 × 78	B3233*I5606J0#2	36	Yes	Yes

Composition of ordering code:

*: terminals
- 0 single fast-on terminals
- 2 double fast-on terminals

#: construction of can and plastic top
- 5 aluminum can, Option A: UL 94 V2 top
- 6 aluminum can, Option B: UL 94 V2/V0 top/IEC 60335-1
- 7 aluminum can with M 8 bolt, Option A: UL 94 V2 top
- 8 aluminum can with M 8 bolt, Option B: UL 94 V2/V0 top/IEC 60335-1

⚠ Please read “Applications warning, installation and maintenance instructions” and the “General Safety Data Sheet for Power Capacitors” issued by ZVEI, which are available on the Internet at **www.epcos.com/ac_capacitors**, to ensure optimum performance and to prevent products from failing, and in worst case, bursting and fire. Information given in the data sheet reflects typical specifications. You are kindly requested to approve our product specifications or request our approval for your specification before ordering.

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