Film capacitors – AC capacitors

Motor run capacitors

420 V; class B; 70 °C / 450 V; class C; 70 °C

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

Date: July 2007
Version: 2.0

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
- TÜV approval

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

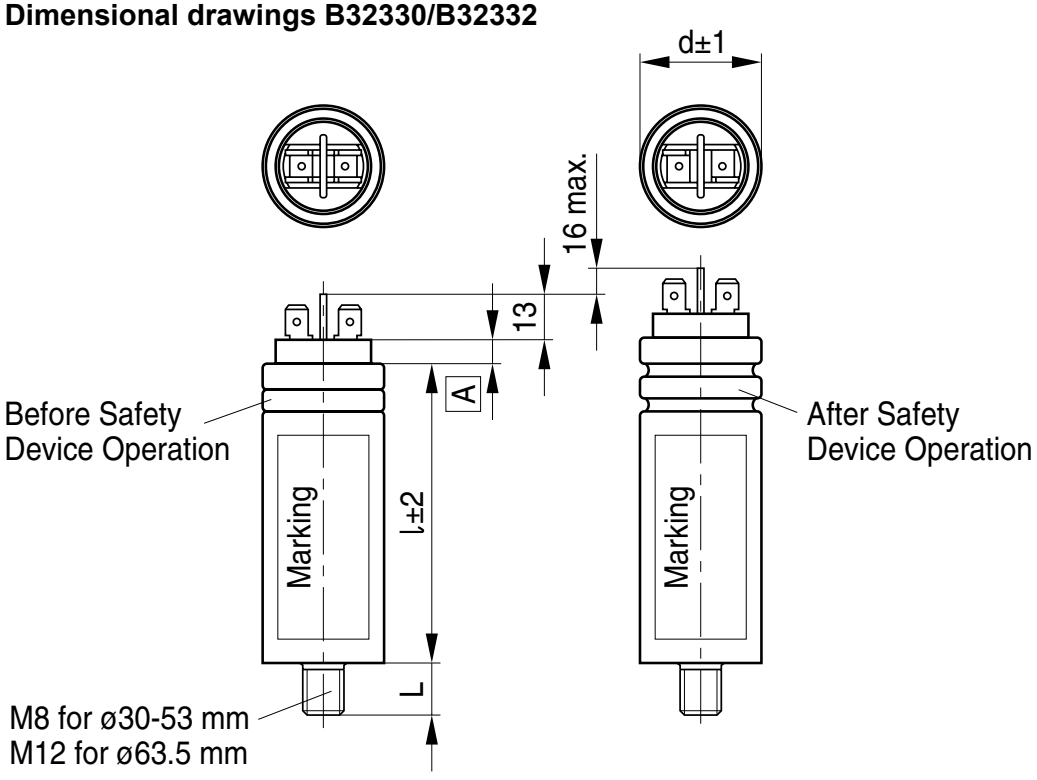
- Threaded stud at bottom of can (M8, max. torque = 5 Nm) as option

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	420 V: 10,000 h (class B) 450 V: 3,000 h (class C)
TÜV approval	420 V: 10,000 h (class B) 450 V: 3,000 h (class C)
UL 810 file E106388	Approved component 10000 AFC protected
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}	$2 \cdot V_R$, 2 s (routine test) $2 \cdot V_R$, 60 s (type test)
Insulation voltage terminals to case	2,000 V AC, 60 s (type test) 2,000 V AC, 2 s (routine test)
Insulation resistance R_{ins} or time constant τ at 20 °C, rel. Humidity ≤ 65% (minimum as-delivered values)	3,000 s
Dissipation factor tan δ at 20 °C	$\leq 1.0 \cdot 10^{-3}$ (120 Hz)
Maximum rate of voltage rise dV/dt_{max}	10 V/µs
Climatic data	
Climatic category	25/070/21 to IEC 60068-1
Lower category T_{min}	–25 °C
Upper category T_{max}	+70 °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 $I_R \leq 0.5$ 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
TÜV 420 V/70 °C: 10,000 h (class B) 450 V/70 °C: 3,000 h (class C) See table for approved ratings	Approved Approved

Dimensional drawings B32330/B32332



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	Packing units pcs.	TÜV approval	UL approval cULus
420 / 450	1.0	30 × 52	B3233*I5105J0#2	150	Yes	
	2.0	30 × 52	B3233*I5205J0#2	150	Yes	
	2.5	30 × 52	B3233*I5255J0#2	150	Yes	
	3.0	30 × 52	B3233*I5305J0#2	150	Yes	
	3.5	30 × 52	B3233*I5355J0#2	150	Yes	
	4.0	30 × 52	B3233*I5405J0#2	150	Yes	
	5.0	30 × 52	B3233*I5505J0#2	150	Yes	
	6.0	30 × 52	B3233*I5605J0#2	150	Yes	
	7.0	30 × 52	B3233*I5705J0#2	150	Yes	
	3.0	30 × 68	B3233*I5305J0#1	150	Yes	Yes
	3.5	30 × 68	B3233*I5355J0#1	150	Yes	Yes
	4.0	30 × 68	B3233*I5405J0#1	150	Yes	Yes
	5.0	30 × 68	B3233*I5505J0#1	150	Yes	Yes
	6.0	30 × 68	B3233*I5605J0#1	150	Yes	Yes
	7.0	30 × 68	B3233*I5705J0#1	150	Yes	Yes
	8.0	30 × 68	B3233*I5805J0#1	150	Yes	Yes
	10.0	30 × 68	B3233*I5106J0#1	150	Yes	Yes
	12.0	30 × 78	B3233*I5126J0#1	150	Yes	Yes
	15.0	30 × 78	B3233*I5156J0#1	150	Yes	Yes
	16.0	30 × 78	B3233*I5166J0#1	150	Yes	Yes
	18.0	35 × 78	B3233*I5186J0#1	50	Yes	Yes
	20.0	35 × 78	B3233*I5206J0#1	50	Yes	Yes
	22.0	35 × 78	B3233*I5226J0#1	50	Yes	Yes
	25.0	40 × 78	B3233*I5256J0#1	50	Yes	Yes
	30.0	40 × 78	B3233*I5306J0#1	50	Yes	Yes
	35.0	40 × 103	B3233*I5356J0#1	50	Yes	Yes
	35.0	45 × 103	B3233*I5356J0#3	50	Yes	Yes
	36.0	40 × 103	B3233*I5366J0#1	50	Yes	Yes
	40.0	40 × 103	B3233*I5406J0#1	50	Yes	Yes
	45.0	40 × 103	B3233*I5456J0#1	50	Yes	Yes
	50.0	45 × 103	B3233*I5506J0#1	50	Yes	Yes
	55.0	45 × 103	B3233*I5556J0#1	50		Yes
	55.0	53 × 78	B3233*I5556J0#2	50		Yes
	60.0	45 × 103	B3233*I5606J0#1	50		Yes
	60.0	53 × 78	B3233*I5606J0#2	50		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

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