Film capacitors – AC capacitors

Motor run capacitors

400 V; class B; 85 °C / 420 V; class C; 85 °C

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

Date: October 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 **c UL us**

Typical applications

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

Terminals

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

Mounting parts (optional)

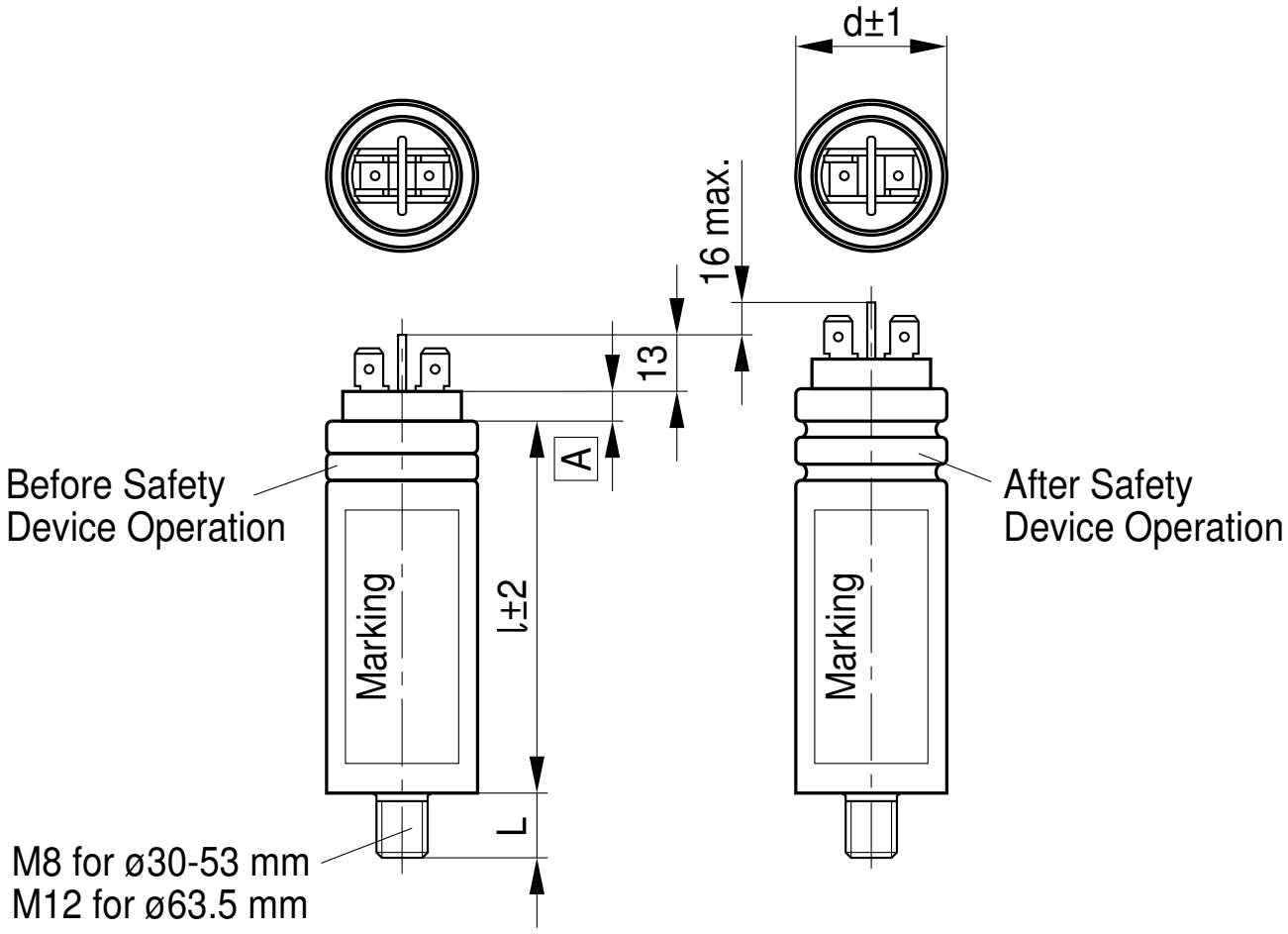
- Threaded stud at bottom of can (M8, max. torque = 5 Nm)

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: 10,000 h (class B) 420 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	400 V, 420 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}	$2 \cdot V_R$, 60 s (type test) $2 \cdot V_R$, 2 s (routine 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	25/085/21 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	
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 60695-2-11 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 60695-2-11 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	
VDE 400 V / 85 °C: 10,000 h (class B) 420 V / 85 °C: 3,000 h (class C) See table for approved ratings	 Approved Approved
c UL us UL 810 files E106388 See table for approved ratings	Approved Component 10000 AFC protected

Dimensional drawings B32330/B32332



KMK1156-A-E

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

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

Ordering codes and packing units

V_R	C_R	Max. dimensions	Ordering code	Packing units	Approvals	
		d × l			VDE	UL
V AC	µF	mm		pcs.		
400 / 420	1.0	30 × 52	B3233*B4105J0#1	on request	Yes	-
	1.5	30 × 52	B3233*B4155J0#1	on request	Yes	-
	2.0	30 × 52	B3233*B4205J0#1	on request	Yes	-
	2.5	30 × 52	B3233*B4255J0#1	on request	Yes	-
	3.0	30 × 68	B3233*B4305J0#0	on request	Yes	Yes
	3.0	30 × 52	B3233*B4305J0#1	on request	Yes	-
	3.5	30 × 68	B3233*B4355J0#0	on request	Yes	Yes
	3.5	30 × 52	B3233*B4355J0#1	on request	Yes	-
	4.0	30 × 68	B3233*B4405J0#0	on request	Yes	Yes
	4.0	30 × 52	B3233*B4405J0#1	on request	Yes	-
	5.0	30 × 68	B3233*B4505J0#0	on request	Yes	Yes
	5.0	30 × 52	B3233*B4505J0#1	on request	Yes	-
	6.0	30 × 68	B3233*B4605J0#0	on request	Yes	Yes
	7.0	30 × 78	B3233*B4705J0#0	on request	Yes	Yes
	7.5	30 × 78	B3233*B4755J0#0	on request	Yes	Yes
	8.0	30 × 78	B3233*B4805J0#0	on request	Yes	Yes
	10.0	30 × 78	B3233*B4106J0#0	on request	Yes	Yes
	12.0	40 × 78	B3233*B4126J0#0	on request	Yes	Yes
	15.0	40 × 78	B3233*B4156J0#0	on request	Yes	Yes
	20.0	40 × 78	B3233*B4206J0#0	on request	Yes	Yes
	25.0	40 × 103	B3233*B4256J0#0	on request	Yes	Yes
	30.0	40 × 103	B3233*B4306J0#0	on request	Yes	Yes
	35.0	45 × 103	B3233*B4356J0#0	on request	Yes	Yes
	40.0	45 × 103	B3233*B4406J0#1	on request	Yes	Yes
	45.0	50 × 105	B3233*B4456J0#1	on request	Yes	Yes
	50.0	50 × 107	B3233*B4506J0#2	on request	Yes	Yes
	60.0	53 × 105	B3233*B4606J0#2	on request	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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