



## Film Capacitors – AC Capacitors

Motor run capacitors

**Series/Type:** B32330/B32332 – Super Motor Cap™, 420 V, 450 V  
**Ordering code:** B32330/B32332  
**Date:** January 2010  
**Version:** 4

**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 **CSA US**, 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

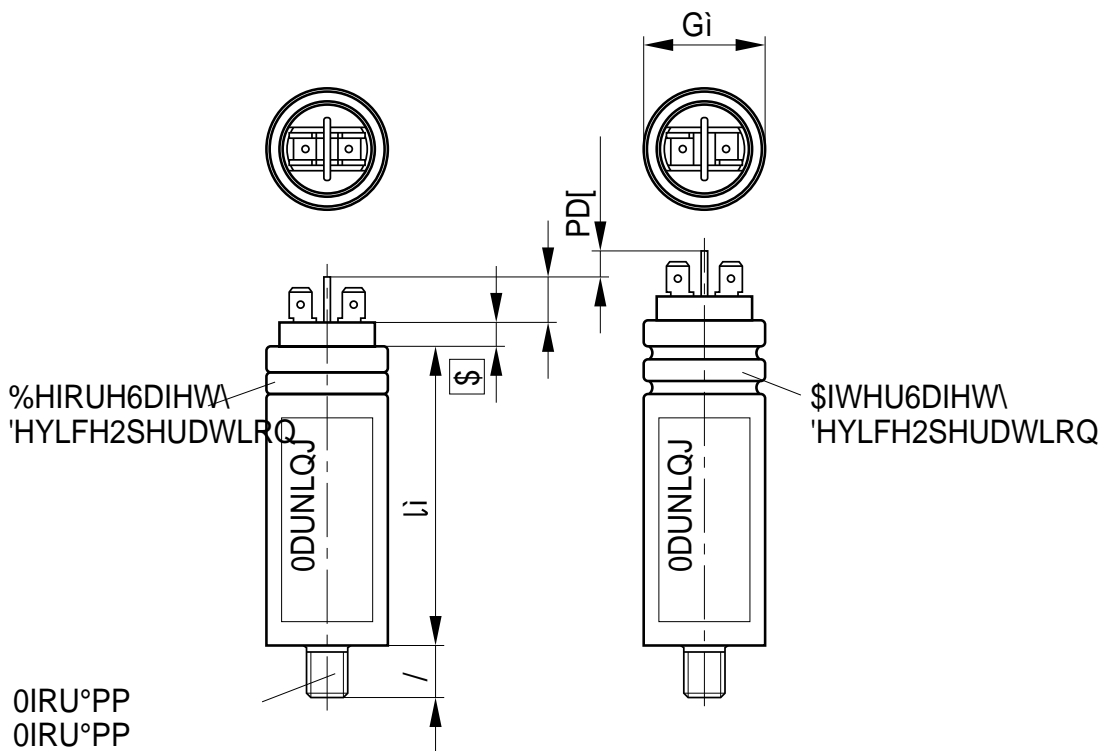

**Technical data and specifications**

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	420 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	
<b>Maximum ratings</b>		
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)

<b>Test data</b>	
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	2000 V AC, 60 s (type test) 2000 V AC, 2 s (routine test)
Insulation resistance $R_{ins}$ or time constant $\tau$ at 20 °C, rel. Humidity $\leq 65\%$ (minimum as-delivered values)	3000 s
Dissipation factor $\tan \delta$ at 20 °C	$\leq 1.0 \cdot 10^{-3}$ (120 Hz)
Maximum rate of voltage rise $dV/dt_{max}$	10 V/ $\mu$ s
<b>Climatic data</b>	
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
<b>Mechanical and thermal properties of terminal top disk material</b>	
Ball pressure test to IEC 60309-1 sec. 27.3	20 N at 125°C
Top disk material	
Option A:	
<ul style="list-style-type: none"> <li>■ UL 94 V2 compatible</li> <li>■ Glow wire test to IEC 60695-2-1/1 Test temperature 550 °C for <math>I_R \leq 0.5</math> A Test temperature 850 °C for <math>I_R &gt; 0.5</math> A</li> </ul>	Self-extinguish within 30 seconds of withdrawing glow wire
Option B:	
<ul style="list-style-type: none"> <li>■ UL 94 V2/V0 compatible</li> <li>■ Glow wire test to IEC60335-1 / IEC 60695-2-1/1 Test temperature 550 °C / 750 °C</li> <li>■ Part is compatible to EN 60335-1</li> </ul>	Self-extinguish within 2 seconds of withdrawing glow wire
Tracking test to IEC 60112 solution A	> 250 V
<b>Compatibility to RoHS</b>	
Compliance to directive 2002/95/EC	

Approvals	
<b>CRA US</b> UL 810 files E106388 See table for approved ratings	Approved Component 10000 AFC protected
<b>VDE</b> 420 V/85 °C: 10000 h (class B) See table for approved ratings	Approved
<b>TÜV</b> 450 V/70 °C: 10000 h (class B) See table for approved ratings	Approved
<b>CQC</b> 420 V/85 °C: 10000 h (class B)	Approval on request

Dimensional drawings B32330/B32332



0IRU°PP  
0IRU°PP

→→→→ \$FFRUGLQJWR',1\$

→→→→ \$FFRUGLQJWR',1 .0.\$(

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 <sub>R</sub> V AC	C <sub>R</sub> μF	Dimensions d × l mm	Ordering code (composition see below)	Packing units	VDE/TÜV	Approvals	
						UL	CQC
420 / 450	1.0	25 × 52	B3233+I5105J0*2	49	X		X
	1.5	25 × 52	B3233+I5105J5*2	49	X		X
	2.0	30 × 52	B3233+I5205J0*2	49	X		X
	2.5	30 × 52	B3233+I5255J0*2	49	X		X
	3.0	30 × 52	B3233+I5305J0*2	49	X		X
	3.0	30 × 68	B3233+I5305J0*1	49	X	X	X
	3.5	30 × 52	B3233+I5355J0*2	49	X		X
	3.5	30 × 68	B3233+I5355J0*1	49	X	X	X
	4.0	30 × 52	B3233+I5405J0*2	49	X		X
	4.0	30 × 68	B3233+I5405J0*1	49	X	X	X
	5.0	30 × 52	B3233+I5505J0*2	49	X		X
	5.0	30 × 68	B3233+I5505J0*1	49	X	X	X
	6.0	30 × 52	B3233+I5605J0*2	49	X		X
	6.0	30 × 68	B3233+I5605J0*1	49	X	X	X
	7.0	30 × 52	B3233+I5705J0*2	49	X		X
	7.0	30 × 68	B3233+I5705J0*1	49	X	X	X
	8.0	30 × 68	B3233+I5805J0*1	49	X	X	X
	10.0	30 × 68	B3233+I5106J0*1	49	X	X	X
	12.0	30 × 78	B3233+I5126J0*1	49	X	X	X
	15.0	30 × 78	B3233+I5156J0*1	49	X	X	X
	16.0	30 × 78	B3233+I5166J0*1	49	X	X	X
	18.0	35 × 78	B3233+I5186J0*1	36	X	X	X
	18.0	30 × 93	B3233+I5186J0*2	49	X	X	X
	20.0	35 × 78	B3233+I5206J0*1	36	X	X	X
	20.0	30 × 93	B3233+I5206J0*2	49	X	X	X
	22.0	35 × 78	B3233+I5226J0*1	36	X	X	X
	22.0	30 × 93	B3233+I5226J0*2	49	X	X	X
	25.0	40 × 78	B3233+I5256J0*1	36	X	X	X
	25.0	35 × 93	B3233+I5256J0*0	36	X	X	X
	30.0	40 × 78	B3233+I5306J0*1	36	X	X	X
	30.0	35 × 93	B3233+I5306J0*0	36	X	X	X
	35.0	40 × 103	B3233+I5356J0*0	36	X	X	X
	36.0	40 × 103	B3233+I5366J0*1	36	X	X	X
	40.0	40 × 103	B3233+I5406J0*1	36	X	X	X
	45.0	40 × 103	B3233+I5456J0*1	36	X	X	X
	50.0	45 × 103	B3233+I5506J0*1	36	X	X	X
	55.0	45 × 103	B3233+I5556J0*1	36	X	X	X
	55.0	53 × 78	B3233+I5556J0*2	36	X	X	X
	60.0	45 × 103	B3233+I5606J0*1	36	X	X	X
	60.0	53 × 78	B3233+I5606J0*2	36	X	X	X

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](http://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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