Film capacitors – AC capacitors

Motor run capacitors

400 V; class A; 85 °C / 450 V; class B; 85 °C

Series/Type: **B32356 – MotorCap™ P2 Compact**

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Version: 2.0

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Construction

- Dielectric: polypropylene film
- Electrode: segmented metallized film
- Plastic can and top material to IEC 60335-1
- Dry type



Features

- Self-healing properties
- Low dissipation factor
- P2 safety class to IEC 60252-1 2001-02
- High insulation resistance
- Case IP 53 protected
- IEC/EN 60335 compatible

Typical applications

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

Terminals

- Twin core cable type PP 2 × 0.50 mm^2, 600 V, 95 °C
- Connectors on request

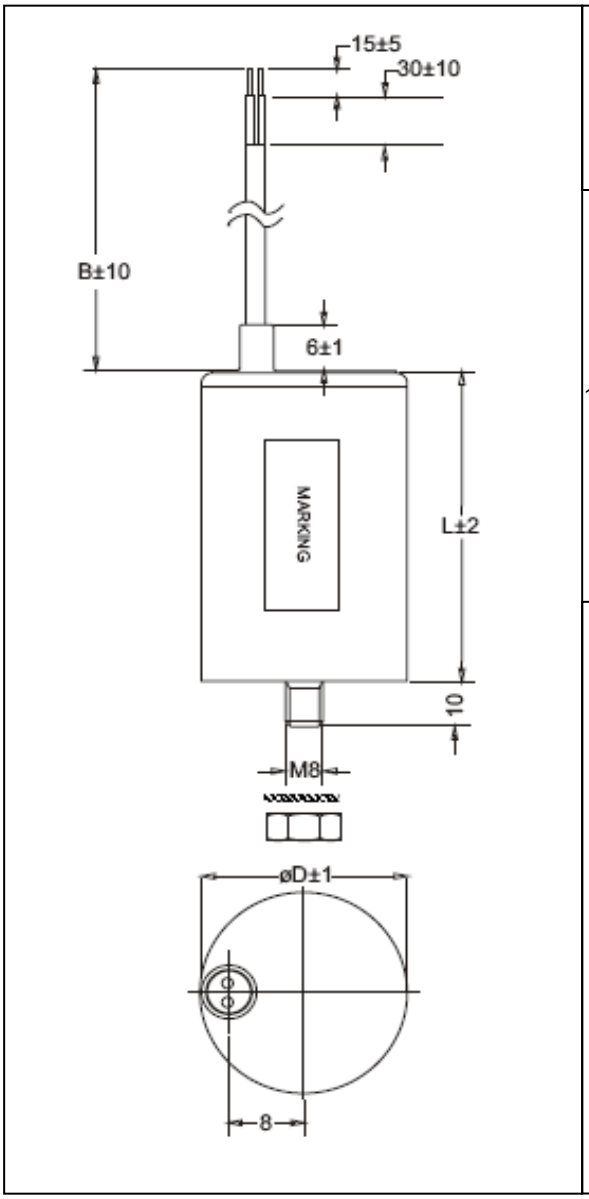
Mounting parts (optional)

- Threaded stud at bottom of can (M8, max. torque = 5 Nm)
- Locking clip for mounting into a hole of Ø 8 mm

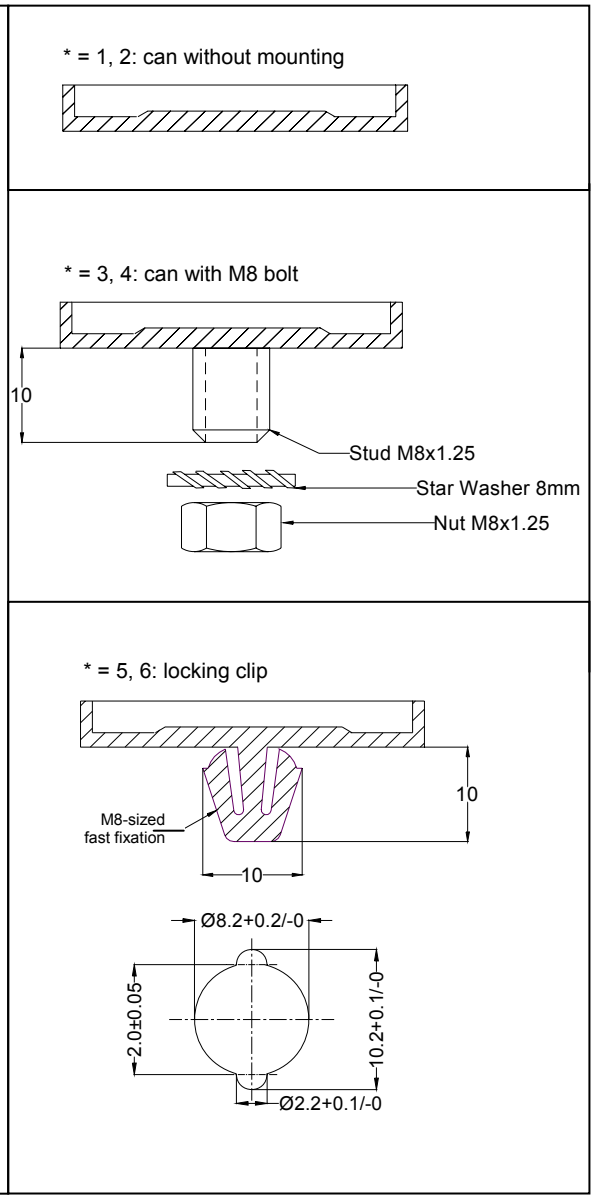
Technical data and specifications	
Reference standards	IEC 60252-1 2001-02 / EN 60252 2001
Safety class to IEC 60252-1 2001-02	P2
Life expectancy to IEC 60252 2001	400 V/85 °C: 30000 h (class A) 450 V/85 °C: 10000 h (class B)
Rated capacitance C_R	2.0 ... 20 µF
Tolerance	±5%, other tolerances upon request
Rated voltage V_R	400 V AC, 450 V AC
Rated frequency f_R	50/60 Hz
Maximum ratings	
Maximum permissible voltage V_{max}	1.1 · V_R (V_R= rated voltage)
Maximum permissible current I_{max}	1.3 · I_R (I_R= rated current)

Test data	
AC test voltage terminal to terminal V_{TT}	$2 \cdot V_R$, 2 s
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	$\leq 1.0 \cdot 10^{-3}$ (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
Plastic can and top disk material	Compliant to EN 60252
■ UL 94 V2 compatible ■ Glow wire test to IEC 60695-2-1/0 and -2-1/1 Test temperature 550 °C for $I_R \leq 0.5$ A Test temperature 750 °C for $I_R > 0.5$ A ■ Part is compatible to EN 60335-1	Self-extinguishing within 2 seconds of withdrawing glow wire without igniting wrapping tissue to GWIT
Tracking Test to IEC 60112 solution A	> 250 V
Protection class to IEC 60529 2001	IP 53
Compatibility to RoHS	
Compliance to directive 2002/95/EC	RoHS compatible
Approvals	
VDE – 400 V/85 °C: 30000 h (class A)	Approved
VDE – 450 V/85 °C: 10000 h (class B)	Approved
C UL US UL 810 files E106388	See table for approved ratings
Approved Component 10000 AFC up to 450 V	Protected

Dimensional drawing



Mounting options



Ordering codes and packing units

V_R	C_R	Max. dimensions d × l	Ordering code	Packing units
V AC	µF	mm		pcs.
400/450	2.0	30 × 62	B32356B4205J0*#	150
	2.5	30 × 62	B32356B4255J0*#	150
	3.0	30 × 62	B32356B4305J0*#	150
	4.0	30 × 62	B32356B4405J0*#	150
	5.0	30 × 62	B32356B4505J0*#	150
	5.0	32 × 62	B32356B4505J1*#	150
	6.0	35 × 62	B32356B4605J0*#	150
	7.0	35 × 62	B32356B4705J0*#	150
	7.5	35 × 62	B32356B4755J0*#	150
	8.0	35 × 71	B32356B4805J0*#	50
	9.0	35 × 71	B32356B4905J0*#	50
	10.0	35 × 71	B32356B4106J0*#	50
	11.0	40 × 72	B32356B4116J0*#	50
	12.0	40 × 72	B32356B4126J0*#	50
	13.0	40 × 72	B32356B4136J0*#	50
	15.0	45 × 72	B32356B4136J0*#	50
	17.5	50 × 96	B32356B4176J5*#	50
	20.0	50 × 96	B32356B4206J0*#	50

Composition of ordering code:

*: construction

1 plastic can
2 plastic can with UL approval
3 plastic can with M8 bolt
4 plastic can with M8 bolt, with UL approval
5 plastic can with locking clip available for diameters 30 mm, 32 mm and 35 mm, others on request
6 plastic can with locking clip, with UL approval, available for diameters 30 mm, 32 mm and 35 mm, others on request

#: cable length (dimension ‘b’ in drawing)

2 200 mm
3 300 mm
other lengths on request

⚠ 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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