



Film Capacitors – AC Capacitors

Motor run capacitors

Series/Type: B32333 – Super MotorCap™, 450 V
Ordering code: B32333
Date: Nov 2013
Version: 8

Construction

- Metallized polypropylene film
- Aluminum can with protective aluminum cover
- Soft polyurethane resin

Applications

- For general sine wave applications, mainly as motor run capacitor, e.g. compressor motor application

Features

- Self-healing properties
- Low dissipation factor
- Highest safety level P2 to IEC 60252-1 2001-02
- Overpressure disconnection device
- High insulation resistance
- EN 60335-1 compliance on request



Terminals

- Twin core cable, double insulated, (H05V2V2F)
- Twin core cable UL style on request
- Receptacles on request
- Compliance to IEC60112

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 |
| Life expectancy to IEC 60252 2001 | 450 V: 30000 h (class A) |
| Safety class according to IEC 60252-1 2001-02 | P2 |
| UL 810 file E 106388 | Approved Component 10000 AFC protected up to 450 V |
| Rated capacitance C_R | See table ordering codes, page 6 |
| Tolerance | ±5% |
| Permitted capacitance $\Delta C/C$ | ≤3% |
| Rated voltage V_R | 450 V AC |
| 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) |
| AC test voltage terminals to can V_{TC} | 2 kV AC, 2 s (routine test) 2 kV AC, 60 s (type test) |
| Insulation resistance R_{ins} or time constant τ at 20 °C, Rel. humidity max. value 85%, annual means $\leq 65\%$ | 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/ μ s |
| 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 | At 125 °C |
| Plastic can and top disk material | See option A or option B |
| Option A: <ul style="list-style-type: none"> ■ 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 the glow |
| Option B: <ul style="list-style-type: none"> ■ UL 94 V2/V0 compatible ■ Glow wire test to IEC 60335-1 / 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 |
| Protection class acc. IEC 60529 2001 | IP 55 |

| Compatibility to RoHS | |
|---|---|
| Compliance to directive 2002/95/EC | |
| Approvals | |
| VDE EN 60252-1 450 V / 85 °C: 30000 h (class A) | Approved up to 20 µF |
| TÜV 450 V / 85 °C: 30000 h (class A) | Approved up to 50 µF |
| UL 810 E106388 | Approved component 10000 AFC, protected up to 450 V |
| | Approved on request |
| Logistics | |
| Delivery mode | <ul style="list-style-type: none"> ■ EU palette as standard ■ Cardboard tape on palette ■ Pack unit, see dimension table |

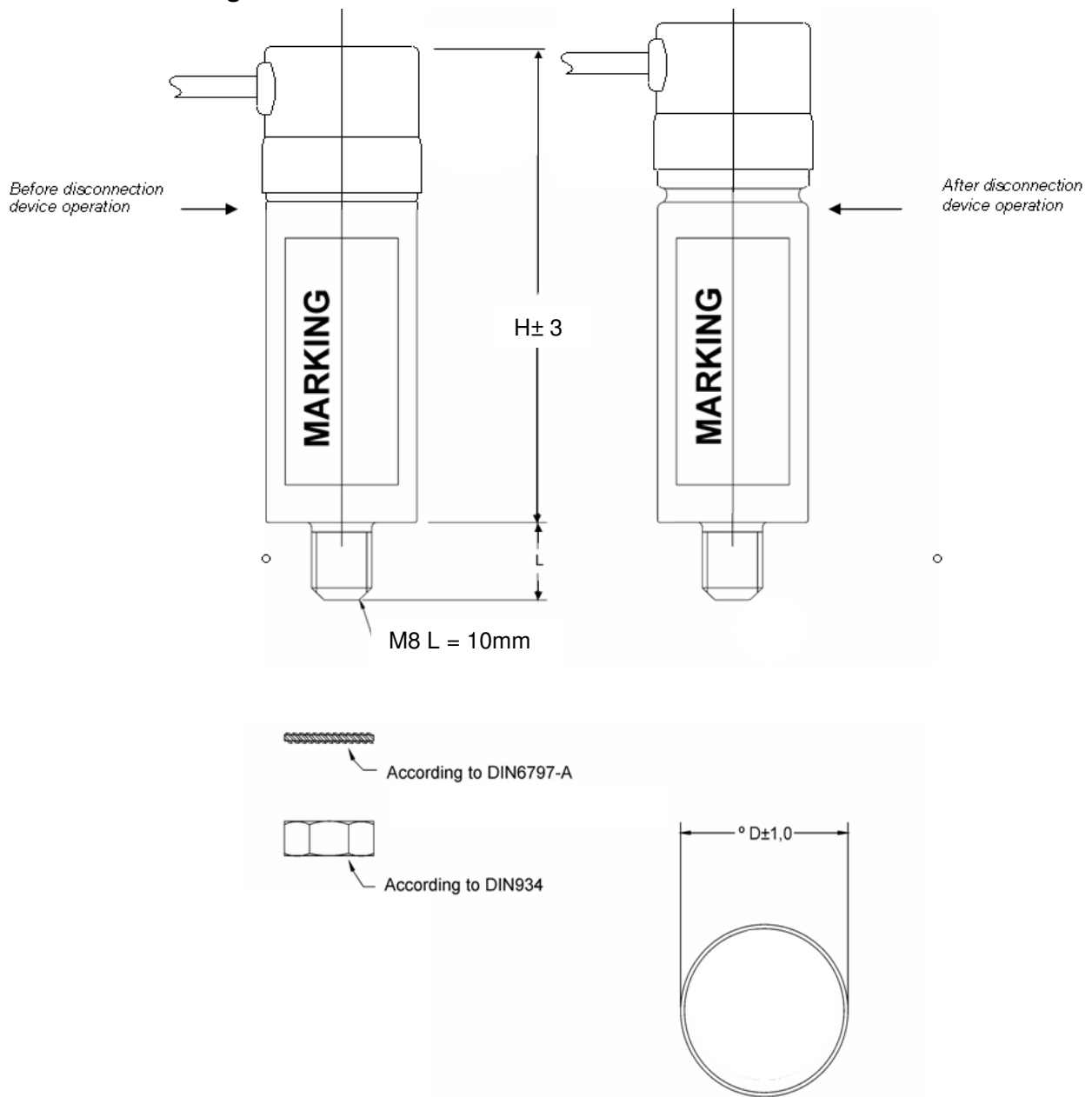
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Cautions and warnings

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.

Dimensional drawing



Ordering codes:

| Rated voltage (V _R) VAC | C _R [μF] | Max. dimensions D x H mm | Ordering code B3233316 | VDE | TUV | UL | CQC | Packing units |
|--|------------------------|--------------------------------|---------------------------|-----|-----|----|-----|---------------|
| 450 | 1 | 30 x 74 | B3233316105J0#X | A | A | ● | ● | 80 |
| | 1.5 | 30 x 74 | B3233316155J0#X | A | A | ● | ● | 80 |
| | 2 | 30 x 74 | B3233316205J0#X | A | A | ● | ● | 80 |
| | 2.5 | 30 x 74 | B3233316255J0#X | A | A | ● | ● | 80 |
| | 3 | 30 x 74 | B3233316305J0#X | A | A | ● | ● | 80 |
| | 3.5 | 30 x 74 | B3233316355J0#X | A | A | ● | ● | 80 |
| | 4 | 30 x 74 | B3233316405J0#X | A | A | ● | ● | 80 |
| | 5 | 30 x 74 | B3233316505J0#X | A | A | ● | ● | 80 |
| | 6 | 30 x 74 | B3233316605J0#X | A | A | ● | ● | 80 |
| | 7 | 30 x 74 | B3233316705J0#X | A | A | ● | ● | 80 |
| | 7.5 | 30 x 90 | B3233316755J0#X | A | A | ● | ● | 80 |
| | 8 | 30 x 90 | B3233316805J0#X | A | A | ● | ● | 80 |
| | 9 | 30 x 90 | B3233316905J0#X | A | A | ● | ● | 80 |
| | 10 | 30 x 90 | B3233316106J0#X | A | A | ● | ● | 80 |
| | 12 | 30 x 100 | B3233316126J0#X | A | A | ● | ● | 80 |
| | 15 | 30 x 100 | B3233316156J0#X | A | A | ● | ● | 80 |
| | 17 | 30 x 115 | B3233316176J0#X | A | A | ● | ● | 80 |
| | 20 | 30 x 115 | B3233316206J0#X | A | A | ● | ● | 80 |
| | 25 | 35 x 115 | B3233316256J0#X | -- | A | ● | ● | 63 |
| | 30 | 35 x 115 | B3233316306J0#X | -- | A | ● | ● | 63 |
| 35 | 35 x 125 | B3233316356J0#X | -- | A | ● | ● | 63 | |
| 36 | 40 x 125 | B3233316366J0#X | -- | A | ● | ● | 48 | |
| 40 | 40 x 125 | B3233316406J0#X | -- | A | ● | ● | 48 | |
| 45 | 40 x 125 | B3233316456J0#X | -- | A | ● | ● | 48 | |
| 50 | 45 x 125 | B3233316506J0#X | -- | A | ● | ● | 36 | |
| 55 | 45 x 125 | B3233316556J0#X | -- | -- | ● | ● | 36 | |
| 60 | 45 x 125 | B3233316606J0#X | -- | -- | ● | ● | 36 | |

Composition of ordering code:

#: construction

- 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

X: Ordering codes will be created based on cable length and receptacles on request

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