



## Film Capacitors – AC Capacitors

### Motor run capacitors


<b>Series/Type:</b>	<b>MotorCap S3 Compact</b>
<b>Ordering code:</b>	<b>B32350/B32352</b>
Date:	November 2023
Version:	10

**Rated capacitance: 2  $\mu$ F...20  $\mu$ F**  
**Rated AC Voltage: 400/450 V AC**

### Construction

- Metallized polypropylene film
- Plastic can with plastic top
- Dry type resin

### Features

- Self-healing properties
- Low dissipation factor
- Highest safety level S3 to IEC 60252-1+A1:2013
- High insulation resistance
-  file E 106388, component approval mark, on request
- EN 60335-1 compatible

### Applications

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

### Terminals

- B32350 – Single Fast-on: 6.3 x 0.8 mm
- B32352 – Double Fast-on: 6.3 x 0.8 mm

### Mounting parts (optional)

- Threaded stud at bottom of can (M8, max. torque = 5 Nm)
- Fast fixation for mounting into a hole of  $\varnothing$  8 mm
- Mounting in any position possible

### Delivery mode and packing unit

- Cardboard tape on pallet
- Packing unit, see dimension table
- EU pallet as standard



<b>Technical data and specifications</b>	
Reference standards	IEC 60252-1+A1 :2013 EN60252-1 : 2014-07
Life expectancy to IEC 60252-1+A1 :2013	400 V AC: 30000 h (class A) 450 V AC: 10000 h (class B)
Safety class according to IEC 60252-1+A1 :2013	S3
UL 810 file E 106388	Approved component, 10000 AFC protected up to 450 V AC (Approval mark upon request)
Rated capacitance $C_R$	See table ordering codes, page 5, 6
Tolerance	$\pm 5\%$
Permitted capacitance $\Delta C/C$	$\leq 3\%$
Rated voltage $V_R$	450 V AC
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 $V_R$ , 2 s (routine test) 2 $V_R$ , 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 $\tau$ 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/ $\mu$ 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 at +40°C and 93% RH



**Mechanical and thermal properties**

Ball pressure test to IEC 60309-1 sec. 27.3	20 N at +125 °C
Tracking test to IEC 60112 solution A	>250 V
Plastic can and top disk material	UL 94 V2 min / Compliant to EN60252-1/ EN60335-1
Glow wire test to IEC 60695 – 2 – 1 / 1 Test temp 550 °C for $I_R \leq 0.5$ A Test temp 750 °C for $I_R \geq 0.5$ A	Self-extinguish within 2 s of withdrawing glow wire without igniting wrapping tissue to GWIT
Part compliant to EN 60335-1 Glow wire test acc. to EN60335-1:2002 +A11+A1 +A12+Corr.+A2:2006, IEC60335-1 ed 4+A1+A2	Self extinguish within 2 s with GWT 750 °C and within 60 s with GWFI 850 °C of withdrawing the glow wire and without igniting the wrapping tissue

**Compatibility to RoHS**

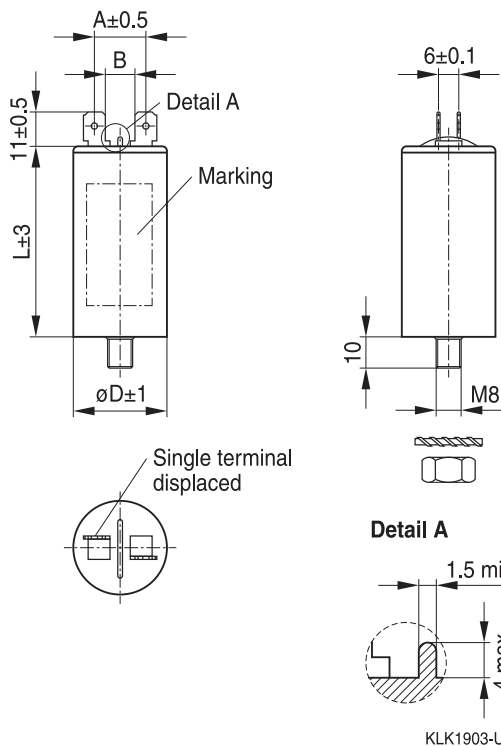
Compliance to directive 2011/65/EU, Annex II, amended by Directive (EU) 2015/863


**Approvals**

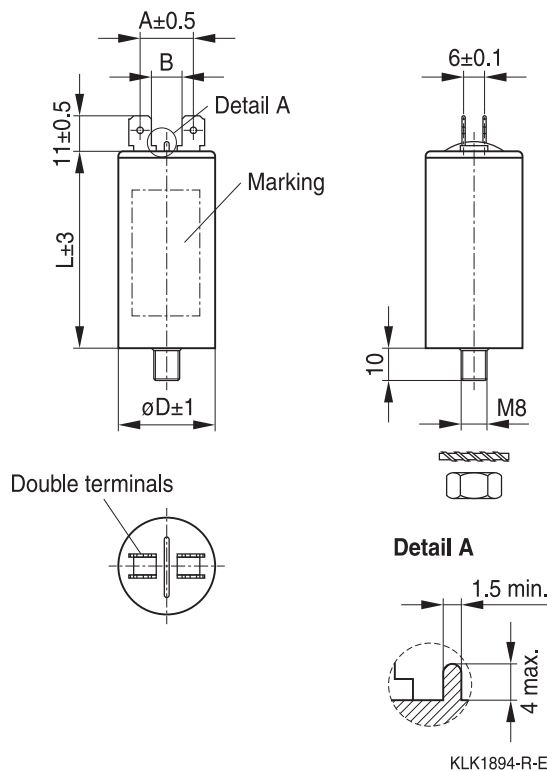
<b>VDE</b> – 400 V AC / 85 °C: 30000 h (class A)	Approved
<b>VDE</b> – 450 V AC / 85 °C: 10000 h (class B)	Approved
 <b>UL 810 E106388</b>	Approved component 10000 AFC, protected up to 450 V AC
	Compliance to LV directive 2014/35/EU

Dimensional drawings

B32350-series

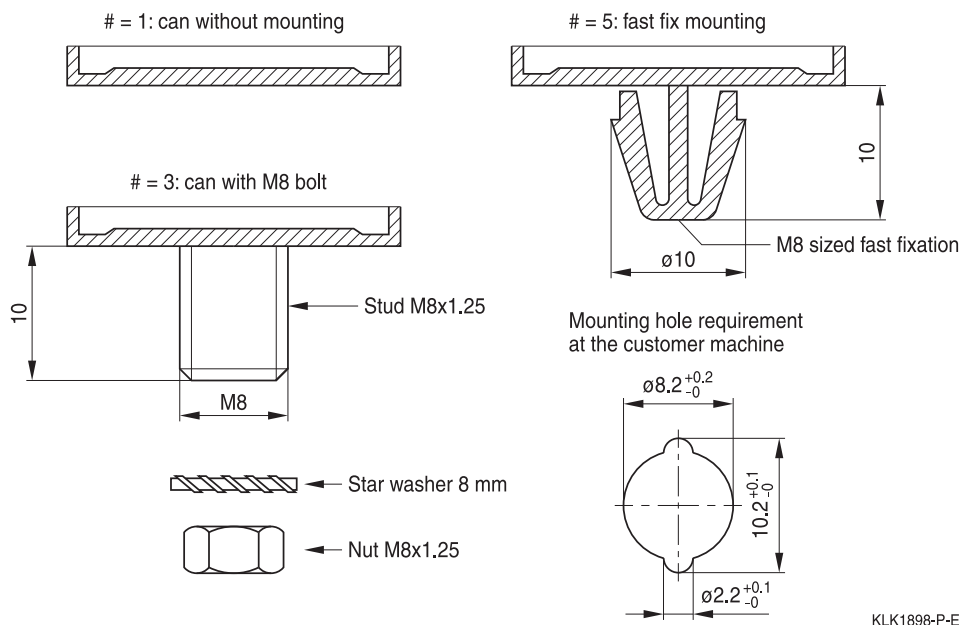


B32352-series



Dimension table

Dia. ØD (mm)	A (mm)	Mln. B (mm)
25	12.65	6
30	16.5	9,5
35-54	16,5	9,5



**Ordering codes and packing units**
**B32350-series (Single Fast-on connector)**

V <sub>R</sub> V AC	C <sub>R</sub> μF	Dimensions D × L mm	Ordering code	Packing units pcs
400/450	2	25 × 58	B32350A4205J0#0	112
	2.5	25 × 58	B32350A4255J0#0	112
	3	30 × 62	B32350A4305J0#0	112
	3.15	30 × 62	B32350A4315J5#0	112
	4	30 × 62	B32350A4405J0#0	112
	5	35 × 62	B32350A4505J0#0	84
	6	35 × 62	B32350A4605J0#0	84
	6.3	35 × 62	B32350A4635J0#0	84
	7	35 × 62	B32350A4705J0#0	84
	7.5	35 × 71	B32350A4755J0#0	84
	8	35 × 71	B32350A4805J0#0	84
	9	35 × 71	B32350A4905J0#0	84
	10	35 × 71	B32350A4106J0#0	84
	11	40 × 71	B32350A4116J0#0	60
	12	40 × 71	B32350A4126J0#0	60
	12.5	40 × 71	B32350A4126J5#0	60
	14	45 × 71	B32350A4146J0#0	45
	15	45 × 71	B32350A4156J0#0	45
	16	45 × 96	B32350A4166J0#0	45
	17.5	45 × 96	B32350A4176J5#0	45
18	50 × 100	B32350A4186J0#0	32	
20	50 × 100	B32350A4206J0#0	32	

**Composition of ordering code**

#: construction

- 1 plastic can
- 3 plastic can with M8 bolt
- 5 plastic can with fast fixation device, available for diameter 30 mm and 35 mm, others on request

Last digit in Ordering code: 0 for standard parts as per datasheet, can be revised from (1-9) on deviating dimensions or marking specifications on customer request.

**Ordering codes and packing units**
**B32352-series (Double Fast-on connector)**

V <sub>R</sub> V AC	C <sub>R</sub> μF	Dimensions D × L mm	Ordering code	Packing units pcs
400/450	2	30 × 62	B32352A4205J0#0	112
	2.5	30 × 62	B32352A4255J0#0	112
	3	30 × 62	B32352A4305J0#0	112
	3.15	30 × 62	B32352A4315J5#0	112
	4	30 × 62	B32352A4405J0#0	112
	5	35 × 62	B32352A4505J0#0	112
	6	35 × 62	B32352A4605J0#0	84
	6.3	35 × 62	B32352A4635J0#0	84
	7	35 × 62	B32352A4705J0#0	84
	7.5	35 × 71	B32352A4755J0#0	84
	8	35 × 71	B32352A4805J0#0	84
	9	35 × 71	B32352A4905J0#0	84
	10	35 × 71	B32352A4106J0#0	84
	11	40 × 71	B32352A4116J0#0	60
	12	40 × 71	B32352A4126J0#0	60
	12.5	40 × 71	B32352A4126J5#0	60
	14	45 × 71	B32352A4146J0#0	45
	15	45 × 71	B32352A4156J0#0	45
	16	45 × 96	B32352A4166J0#0	45
	17.5	45 × 96	B32352A4176J5#0	45
18	50 × 100	B32352A4186J0#0	32	
20	50 × 100	B32352A4206J0#0	32	

**Composition of ordering code**

#: construction

- 1 plastic can
- 3 plastic can with M8 bolt
- 5 plastic can with fast fixation device, available for diameter 30 mm and 35 mm, others on request

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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.tdk-electronics.tdk.com/ac\\_capacitors](http://www.tdk-electronics.tdk.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 our specification before ordering.

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