

## Product Brief 2020

# MKD AC Capacitors

## For AC Filtering in Power Electronics Applications

TDK is one of the world's leading manufacturers of electronic components. Hardly any other supplier offers one-stop shopping for all key components. The growing success of its power quality products is based on TDK's well-positioned portfolio of products and services for AC applications.







TDK is leveraging its competent team of field application engineers to offer application know-how in addition to its products. In view of the growing importance of power quality, TDK is focusing on AC filtering solutions.

In order to cover the wide range of different power applications TDK offers an equally wide range of EPCOS AC filter capacitors. They are available with different terminal configurations and electrical parameters. Thanks to their simple design (round winding in an aluminum can), these widely used components offer high reliability at the same time.

TDK's portfolio features two basic AC filter capacitor designs: single-phase and 3-phase capacitors. When AC capacitors are used as filters, they suppress harmonic distortions and reactive power problems, thus improving power quality and reliability.



# AC Filtering in Industrial Applications

Capacitors overview			
Single-phase		Three-phases	
<p><b>B33331V</b> Fast-on</p> 		<p><b>B32375 – Delta connection</b> Fast-on</p> 	
<p><b>B32370</b> Fast-on</p> 		<p><b>B32376 – Delta connection</b> Screw terminal M10</p> 	
<p><b>B32371</b> Screw terminal M6</p> 		<p><b>B32377 – Delta connection</b> Clamp terminal</p> 	
<p><b>B32373</b> Screw terminal M10</p> 		<p><b>B32378 – Star connection</b> Clamp terminal</p> 	
<p><b>B32374</b> Clamp terminal</p> 			

A typical inverter would need AC capacitors for filtering of harmonic distortions and reactive power. Depending of the power electronic topology single phase or three phase capacitors can be use in their different variant of

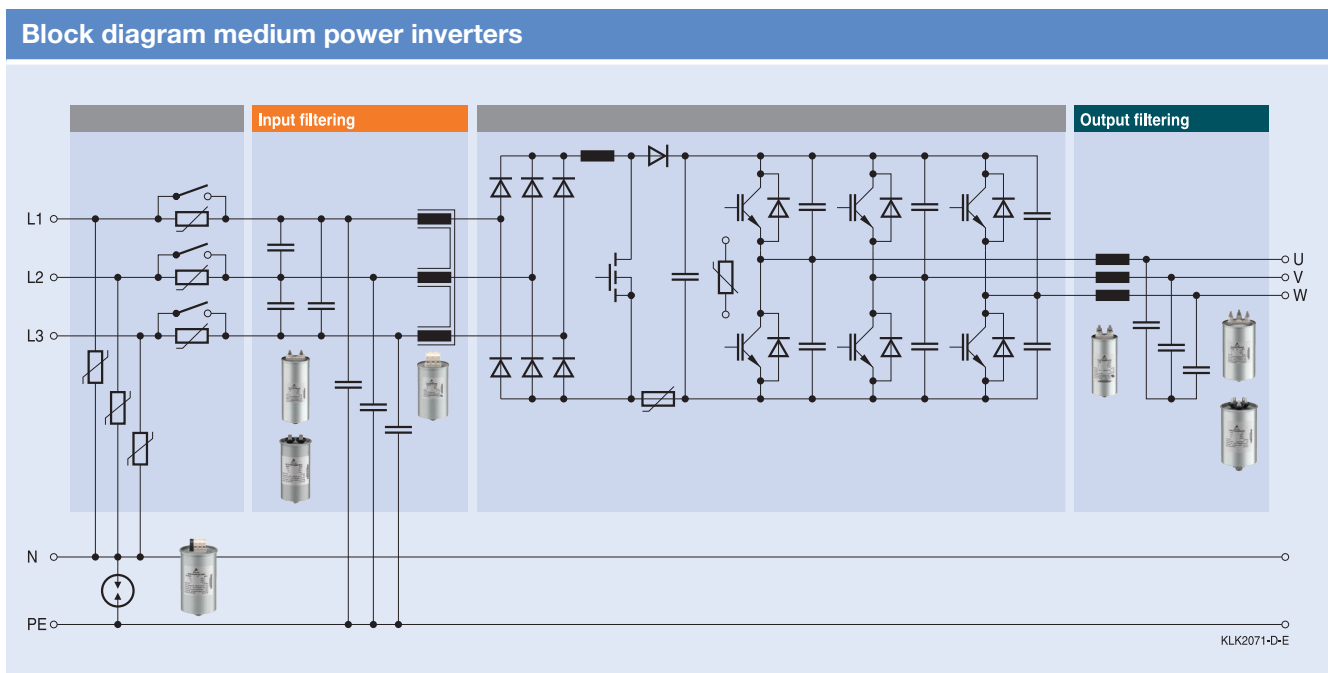
terminals (fast on, screw and clamp on) according to the electrical parameters needed. The appropriate film capacitors for input and output filters of inverter systems are AC Filter aluminum can capacitors.

# AC Filtering in Industrial Applications

Overview										
Applications										
	UPS			Wind energy	Photo voltaic		Inverters		Type of load	
	< 10 kW	10 ... 50 kW	> 50 kW		String	Central	Low voltage	Medium voltage	Single-phase	Three-phase
B33331V	■	■			■		■		■	
B32370, B32371 B32373, B32374		■	■	■	■	■	■	■	■	
B32375, B32376 B32377, B32378	■	■	■	■		■	■	■		■

Technical data										
	Voltage $V_{RMS}$			Mounting			Certifications			
	< 460	460 ... 690	> 690	Cable or flexible bus bar			IEC 61071 / UL 810			
				Fast-on	Screw	Clamp	Fast-on	Screw	Clamp	
B33331V	■			■			■			
B32370, B32371 B32373, B32374	■	■	■	■	■	■	■	■	■	■
B32375, B32376 B32377, B32378	■	■	■	■	■	■	■	■	■	■



# AC Filtering in Industrial Applications

Power Electronic Capacitors B3331V Series



## General

### Construction

- Dielectric: polypropylene (PP)
- Aluminum can
- Soft polyurethane resin

### Features

- Self-healing properties
- Low dissipation factor
- Overpressure disconnecter for all terminals

- Low ESR value
- +85 °C, 85% RH, 460 V AC, 1000 h
- UL 810 approval file E238746
- RoHs and CE compatible
- Reference standard IEC 61071

### Typical applications

- UPS
- General sine-wave filters
- Output AC filter for power converters
- Motor drives

### Terminals

- 2+2 fast-on terminals  
6.3 × 0.8 mm

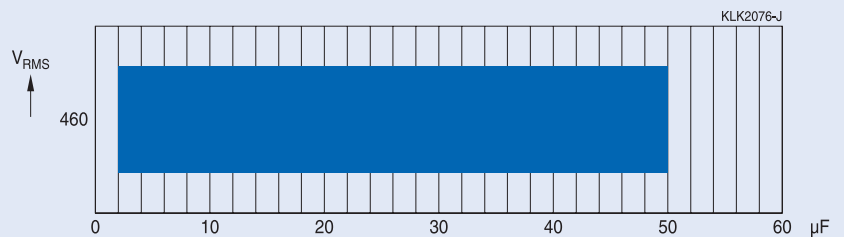
## Technical data

### Type/series

B33331V

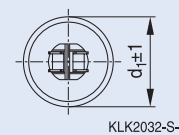
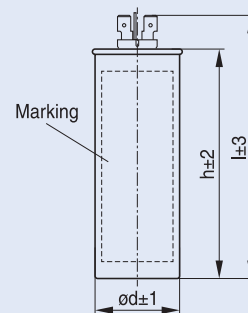
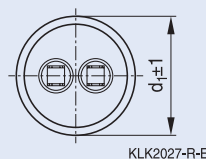
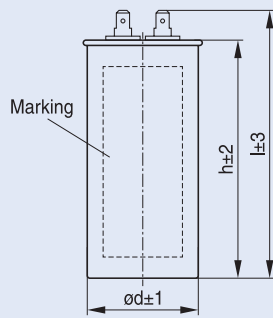


### Voltage vs capacitance



## Dimensional drawings

B33331V



# AC Filtering in Industrial Applications

Power Electronic Capacitors B3237\* Series – Single-phase



## General

### Construction

- Dielectric: polypropylene (PP)
- Aluminum can
- Soft polyurethane resin

### Features

- Very high reliability
- High peak-current capability
- Voltage series up to 1000 V RMS
- Five different terminal styles
- Customized configurations
- Resin filling, non-PCB

- Safety device: over pressure disconnecter, self-healing technology
- Mounting and grounding by stud on bottom of aluminum can
- Reference standard IEC 61071
- RoHS and CE compatible
- UL 810 approval file E487229

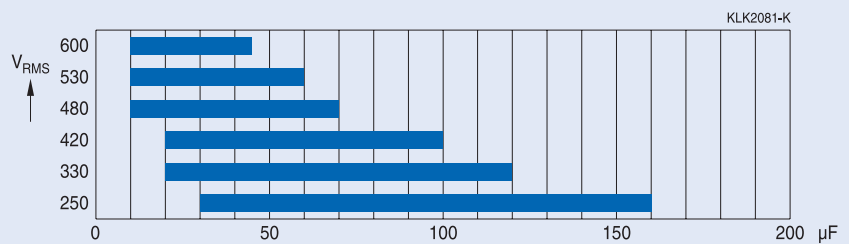
## Technical data

### Type/series

### Voltage vs capacitance

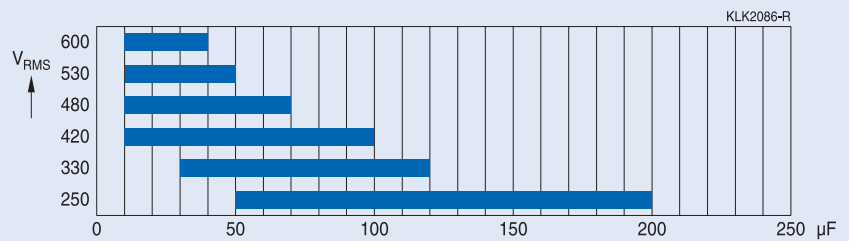
#### B32370

Fast-on



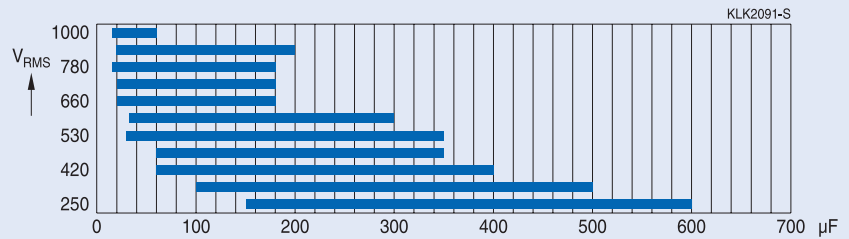
#### B32371

Screw terminal M6



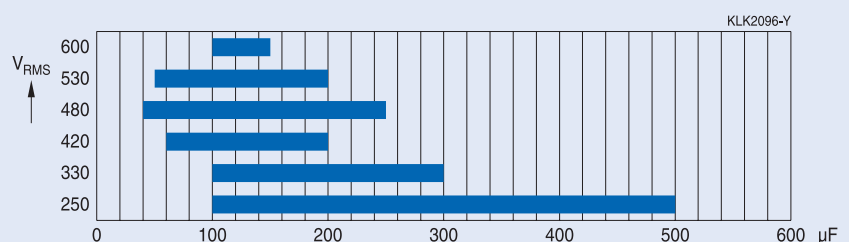
#### B32373

Screw terminal M10



#### B32374

Clamp terminals

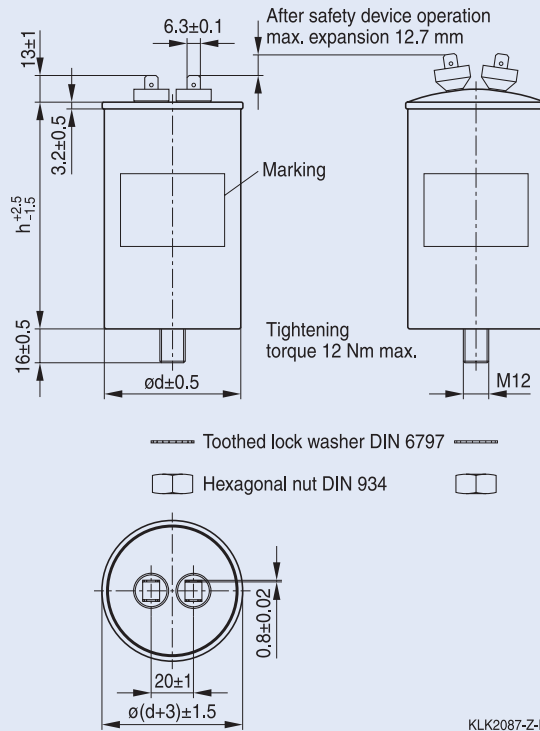


# AC Filtering in Industrial Applications

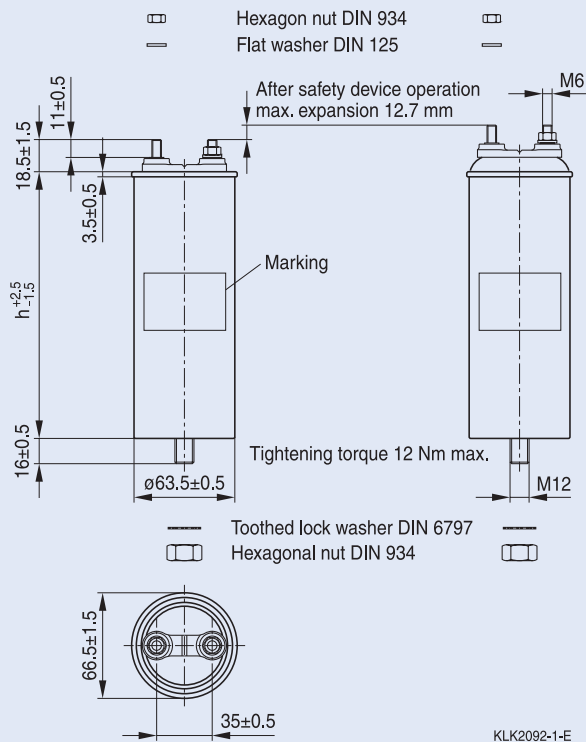
Power Electronic Capacitors B3237\* Series – Single-phase

## Dimensional drawings

### B32370 (Fast-on terminal)



### B32371 (M6 screw terminal)

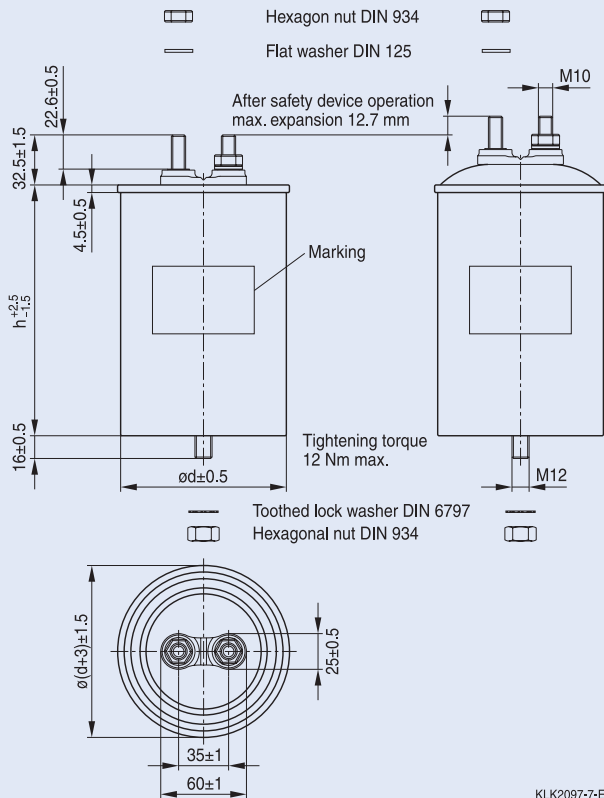


# AC Filtering in Industrial Applications

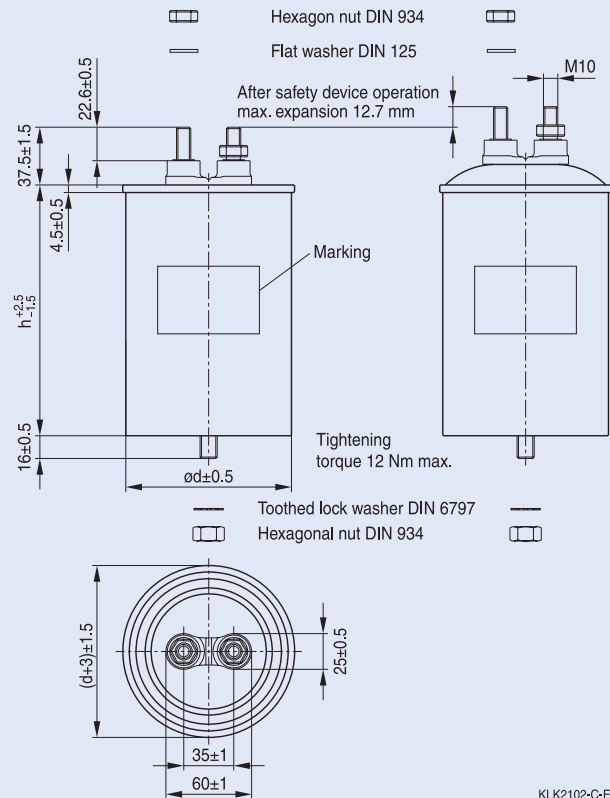
Power Electronic Capacitors B3237\* Series – Single-phase

## Dimensional drawings

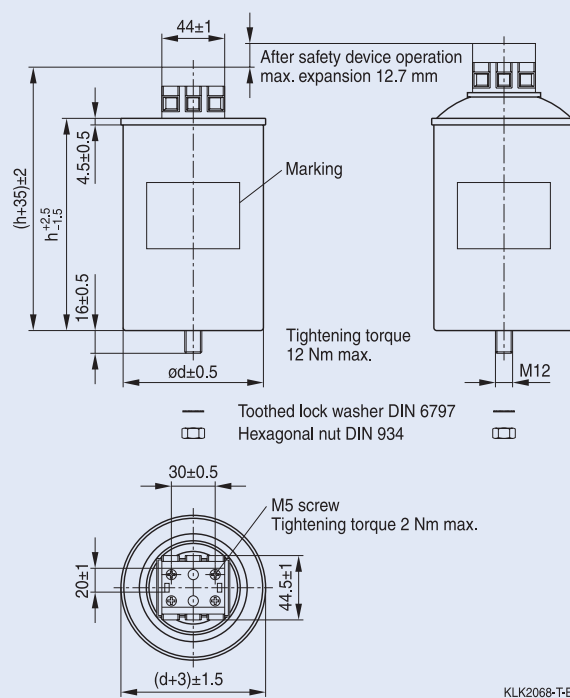
### B32373 (M10 screw terminal type A)



### B32373 (M10 screw terminal type B)



### B32374 (M5 screw clamp terminal)



# AC Filtering in Industrial Applications

Power Electronic Capacitors B3237\* Series – Three-phase



## General

### Construction

- Dielectric: polypropylene (PP)
- Aluminum can
- Soft polyurethane resin

### Features

- Very high reliability
- High peak-current capability
- Voltage series up to 1000 V RMS
- Customized configurations
- Resin filling, non-PCB

- Safety device: over pressure disconnecter, self-healing technology
- Mounting and grounding by stud on bottom of aluminum can
- Reference standard IEC 61071
- RoHS and CE compatible
- UL 810 approval file E487229

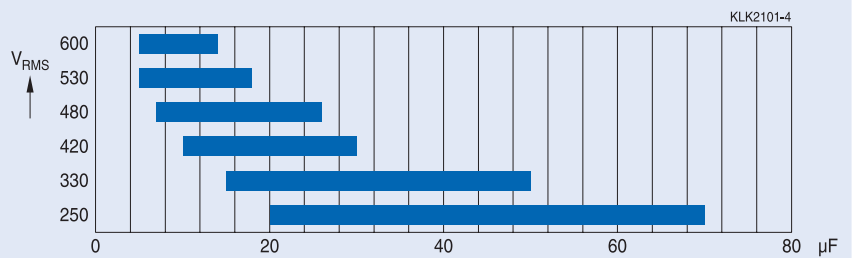
## Technical data

### Type/series

### Voltage vs capacitance

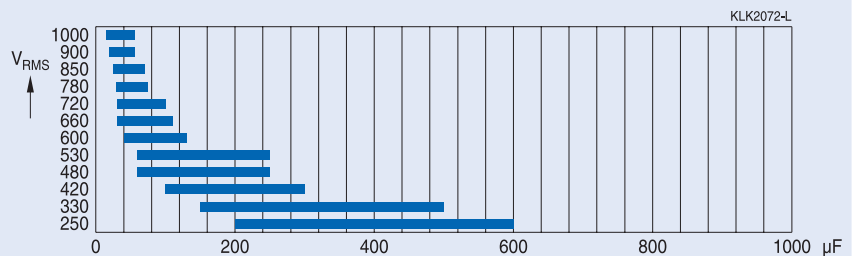
#### B32375

Delta connection



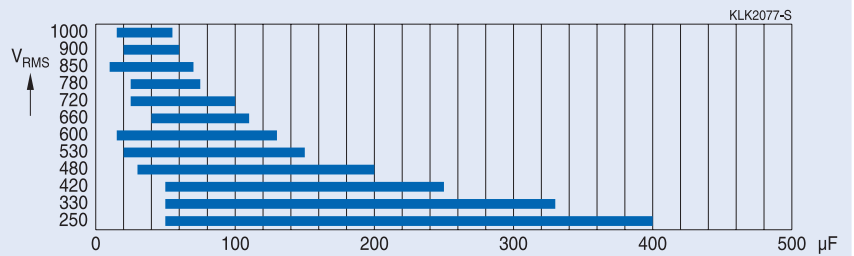
#### B32376

Delta connection



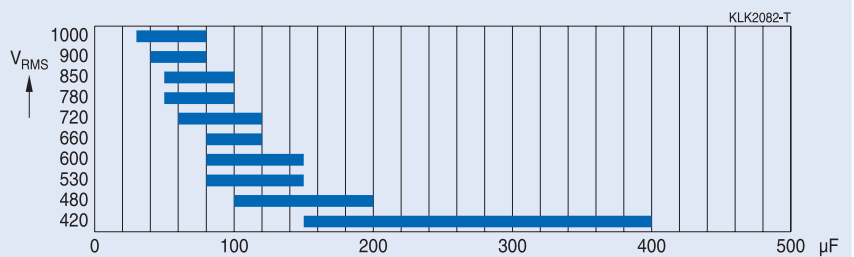
#### B32377

Delta connection



#### B32378

Star connection

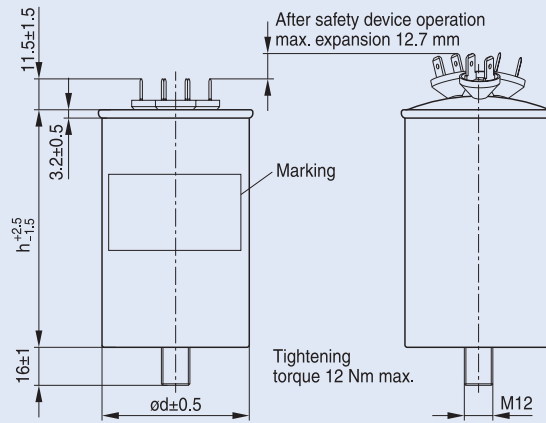


# AC Filtering in Industrial Applications

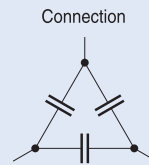
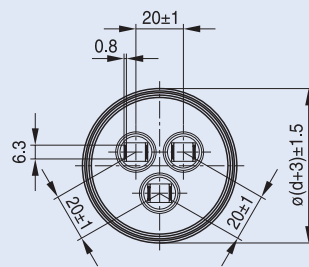
Power Electronic Capacitors B3237\* Series – Three-phase

## Dimensional drawings

### Series B32375

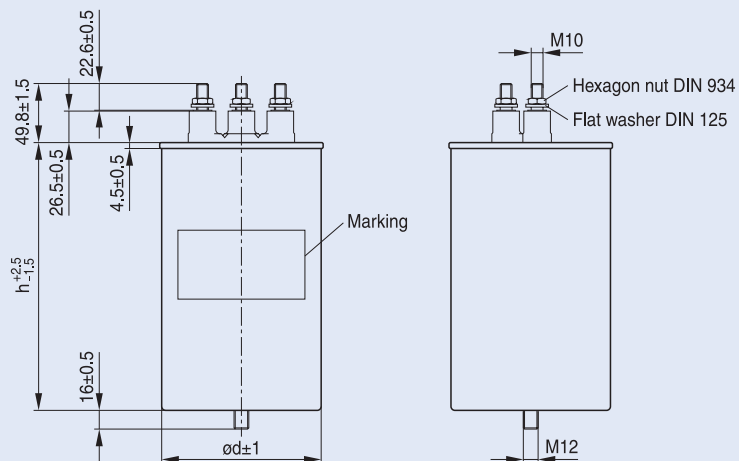


----- Toothed lock washer DIN 6797 -----  
 □ Hexagonal nut DIN 934 □

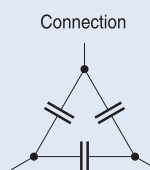
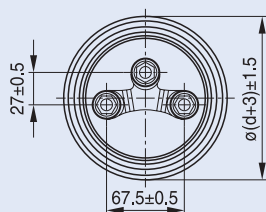


KLK2073-U-E

### Series B32376



----- Toothed lock washer DIN 6797 -----  
 □ Hexagonal nut DIN 934 □



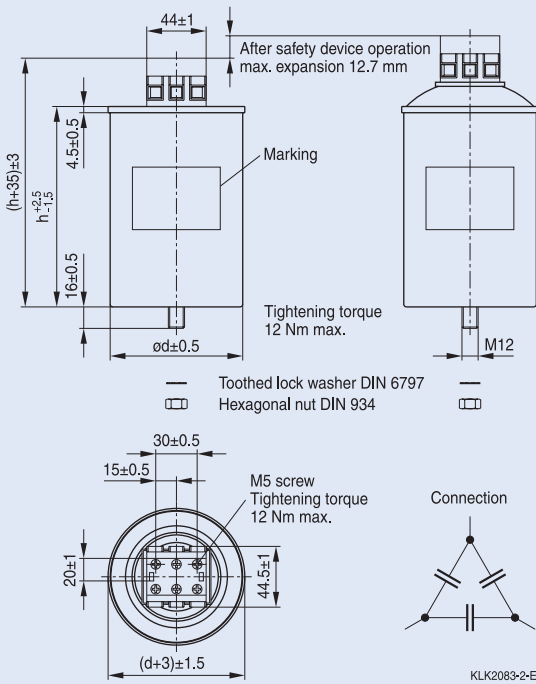
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# AC Filtering in Industrial Applications

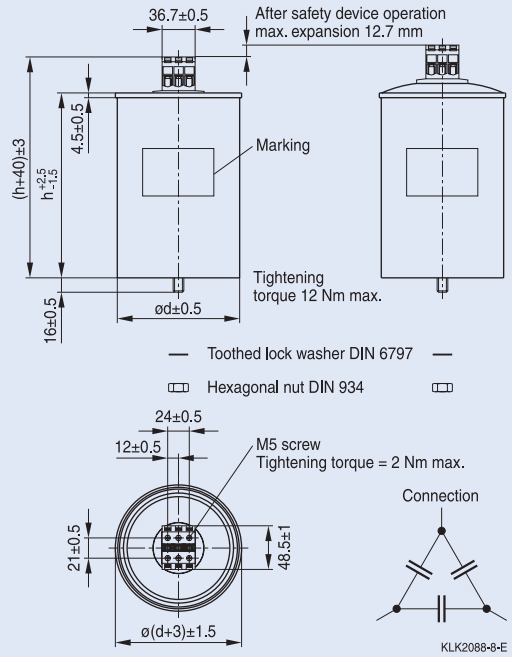
Power Electronic Capacitors B3237\* Series – Three-phase

## Dimensional drawings

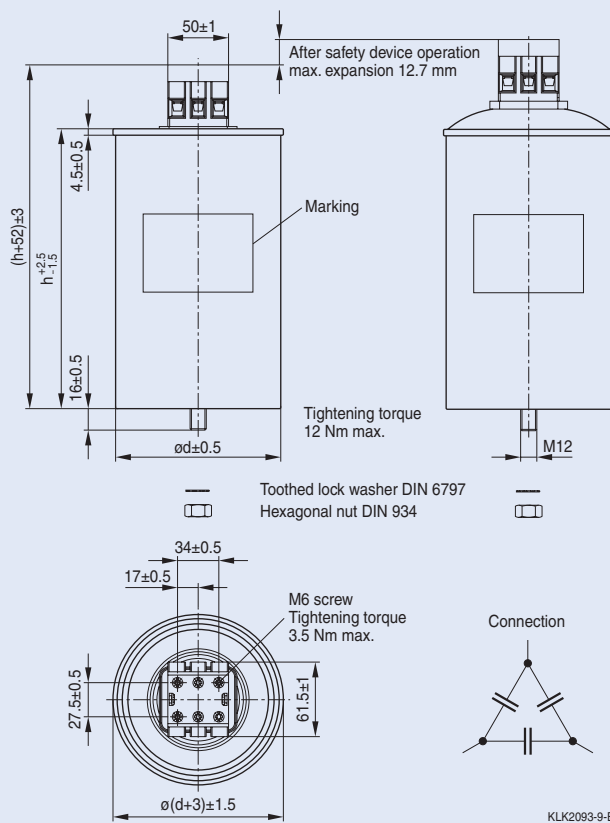
### Series B32377 (Delta connection type A)



### Series B32377 (Delta connection type B)



### Series B32377 (Delta connection type C)

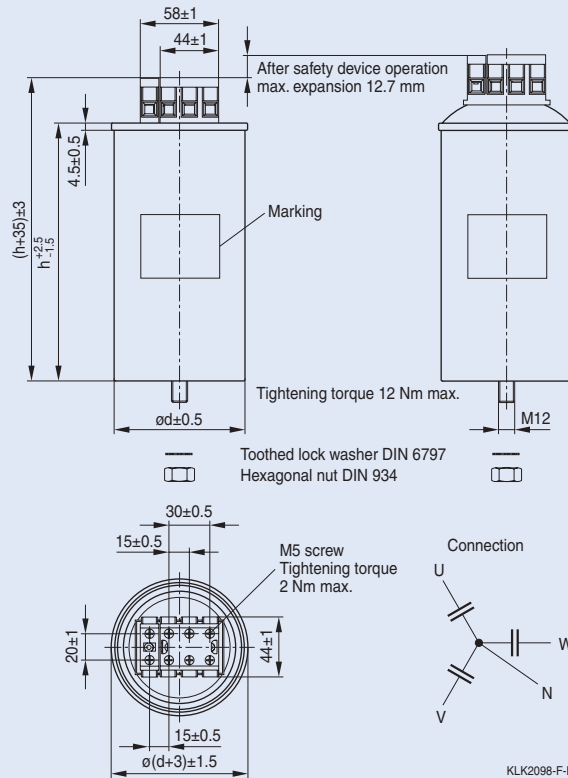


# AC Filtering in Industrial Applications

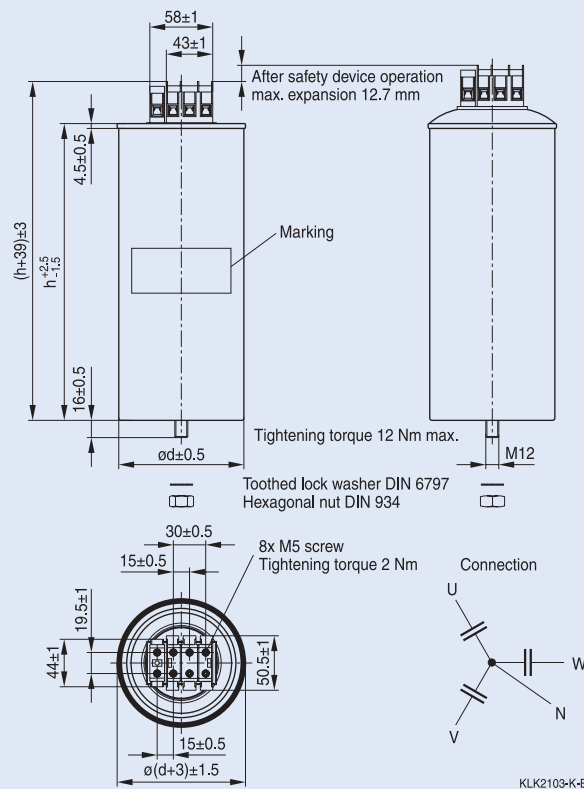
Power Electronic Capacitors B3237\* Series – Three-phase

## Dimensional drawings

### Series B32378 (Star connection with neutral type D)



### Series B32378 (Star connection with neutral type E)



**Important information:** Some parts of this publication contain statements about the suitability of our products for certain areas of application. These statements are based on our knowledge of typical requirements that are often placed on our products. We expressly point out that these statements cannot be regarded as binding statements about the suitability of our products for a particular customer application. It is incumbent on the customer to check and decide whether a product is suitable for use in a particular application. This publication is only a brief product survey which may be changed from time to time. Our products are described in detail in our data sheets. The *Important notes* ([www.tdk-electronics.tdk.com/ImportantNotes](http://www.tdk-electronics.tdk.com/ImportantNotes)) and the product-specific *Cautions and warnings* must be observed. All relevant information is available through our sales offices.

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Edition 10/2019 · Ordering No. EPC:26078-7600 · Printed in Germany · PB 10191.