

# Preset counters, electromechanical

**Standard counters**      **Adding, 5 digits (AC+DC)**      **BVa15**



The electromechanical preset counters BVa15 (with manual reset) boast a robust construction. They are ideal for use in harsh industrial environments as stand-alone counters or as plug-in variants in combination with additional B, BVa, HB or HVA counters.

Display shows actual count and preset value.

### Characteristics

- 5-digit adding preset counter with stationary preset value.
- Manual reset to zero.
- Potential free changeover contact (microswitch) on reaching the preset.
- Contact switches when preset value is reached and remains switched until reset to zero.
- Counters without front bezel fit into bezel F2B and can be combined in RM 50 x 50 mm.

### Benefits

- Can be combined with counters of the B, BVa, HB and HVA series using the socket boxes of the pluggable versions.
- Count value and preset constantly visible.
- Versions with transparent cover, sealing cover, zero reset key-lock.

### Applications

Piece counting, automation.

## Type series

#### Description

(Reset manual)

Without front bezel, plugs into socket box

Front bezel 1, mounting holes

Mounting clip

Front bezel 3, mounting holes

#### Type

**BVa15.01**

**BVa15.11**

**BVa15.21**

**BVa15.31**

#### Delivery specification

Counter complete with socket box

#### Order information

- Art. no.

- For special voltages, please give type, voltage and series e.g.: BVa15.31, 12 V DC ...

#### Further versions, fully assembled (on request)

Counter with lockable reset

**BVa15.21 vs**



Counter with transparent cover

**Dv BVa15.31**  
lockable



**Dvs BVa15.31**  
key lockable



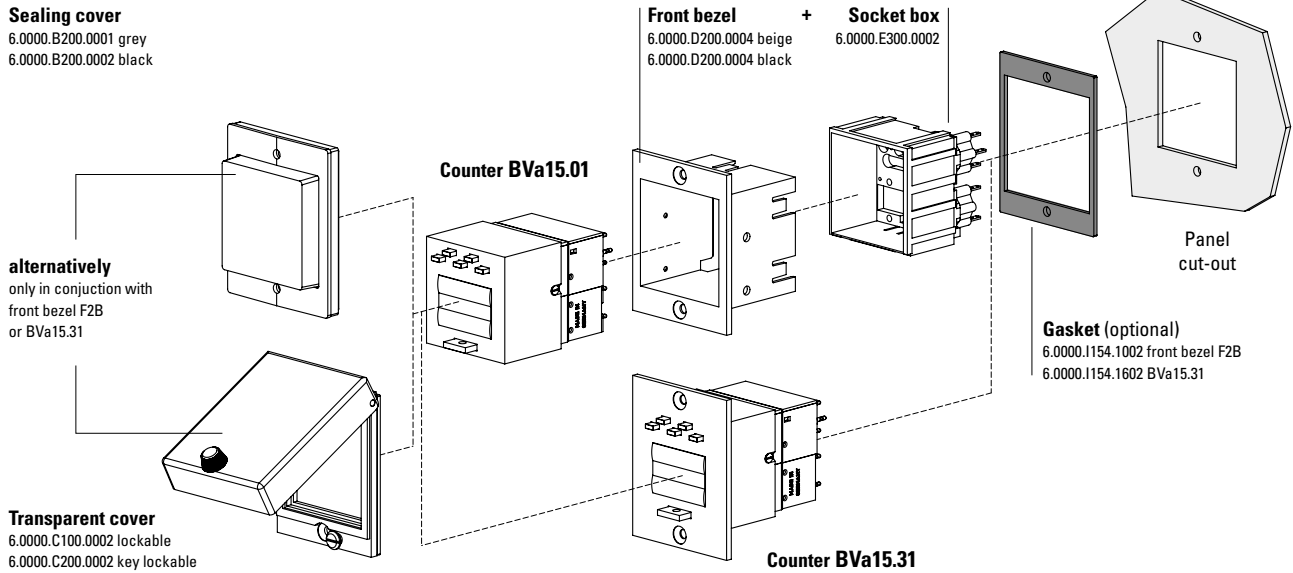
## Type / Counting mechanism

Voltage	Type	Pulse frequency max.	Pulse on time min.	Pulse interval min.	Pulse ratio	On-time	Power consump. approx.	Permi. residual ripple max.	Operating temp. (non-condensing)
<b>V DC</b>	1	25 Hz	24 ms	16 ms	3 : 2	100 %	3 W	48 %	-10°C ... +60°C [+14°F ... +140°F]
<b>V AC</b>	a	18 Hz	27.7 ms	27.7 ms	1 : 1	100 %	3 VA	-	-10°C ... +55°C [+14°F ... +131°F]

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**Accessories / Mounting examples**



		Type / size	Description		Order no.	suitable gasket
<b>Front bezel</b>		<b>F2B</b>	for counter BVa15.01 for cut-out 54 x 49 mm (only with socket box 6.0000.E300.0002)	beige black	<b>6.0000.D200.0004</b> <b>6.0000.D200.0002</b>	<b>6.0000.E300.0002</b>
<b>Socket box</b>		<b>946.1</b>	for plug-in connection in front bezel F2B	black	<b>6.0000.E300.0002</b>	
<b>Sealing cover IP65</b>		<b>K2</b>	for counter BVa15.31 or for counter BVa15.01 in conjunction with front bezel F2B	transp. /grau transp. /black	<b>6.0000.B200.0001</b> <b>6.0000.B200.0002</b>	
<b>Transparent cover IP65 with gasket</b>		<b>2 Dv</b>	cover lockable for counter BVa15.31 or for counter BVa15.01 in conjunction with front bezel F2B	transp. /black	<b>6.0000.C100.0002</b>	
		<b>2 Dvs</b>	cover key lockable for counter BVa15.31 or for counter BVa15.01 in conjunction with front bezel F2B	transp. /black	<b>G008153</b>	
<b>Gasket counter</b>			58 x 58 mm [2.28 x 2.28"] 60 x 75 mm [2.36 x 2.95"]	BVa15.21 BVa15.31	<b>6.0000.I133.0802</b> <b>6.0000.I154.1602</b>	
<b>Mounting frame</b>		<b>cut-out 50 x 25 mm [1.97 x 0.98"]</b>	for snap-on mounting on 35 mm [1.38"] top-hat DIN rail, for BVa15.21	chromated	<b>6.0000.F200.0006</b>	
<b>DIN rail mount</b>		<b>SR 3</b>	for snap-on mounting on 35 mm [1.38"] top-hat DIN rail		<b>6.0000.G300.0000</b>	
<b>Key for key-locking zero reset</b>					<b>6.0000.S110.0001</b>	

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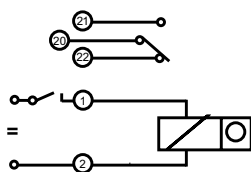
Technical data																
<b>Electrical connection</b>	counter: tinned tabs $\varnothing$ 1.6 mm [0.063"] with push-on connectors socket box: tinned plated tabs 0.8 x 2.8 mm [0.032 x 0.11"]															
<b>Rated voltages</b>	counting mechanism: 12 / 24 / 48 / 115 V DC $\pm 10\%$ 24 / 48 / 115 / 230 V AC $\pm 10\%$															
<b>Height of figures</b>	counter: 4.5 mm [0.18"] preset: 4 mm [0.16"]															
<b>Color of housing</b>	grey: Art. no. x.xxx.xx0.xxx black: Art. no. x.xxx.xx1.xxx															
<b>Color of figures</b>	counter: white on black preset: yellow on black															
<b>Counting mechanism shaft</b>	stainless steel															
<b>Mounting position</b>	any															
<b>Service life</b>	approx. 100 x 10 <sup>6</sup> pulses															
<b>Protection</b>	IP40 (front side)															
<b>Weight</b>	approx. 130 g [4.59 oz]															
<b>Device safety</b>	designed to EN 61010 part 1 protection class 2 application area: pollution level 2															
<b>Test voltage</b>	2000 V, effective															
<b>Switching contact</b>	1 change over contact (micro switch), release in 2nd half-step on the preset number															
<b>Loading (max) (with resistive Load.)</b>	<table style="border: none;"> <tr> <td style="padding-right: 10px;"><b>AC</b></td> <td>250 V AC</td> <td>2.0 A</td> </tr> <tr> <td><b>DC</b></td> <td>24 V DC</td> <td>2.0 A</td> </tr> <tr> <td></td> <td>60 V DC</td> <td>0.7 A</td> </tr> <tr> <td></td> <td>115 V DC</td> <td>0.4 A</td> </tr> <tr> <td></td> <td>230 V DC</td> <td>0.2 A</td> </tr> </table>	<b>AC</b>	250 V AC	2.0 A	<b>DC</b>	24 V DC	2.0 A		60 V DC	0.7 A		115 V DC	0.4 A		230 V DC	0.2 A
<b>AC</b>	250 V AC	2.0 A														
<b>DC</b>	24 V DC	2.0 A														
	60 V DC	0.7 A														
	115 V DC	0.4 A														
	230 V DC	0.2 A														
Suitable spark quenching is required with inductive load, reducing the max. current to 60 %																

Options	
<b>Key-locking zero reset</b>	housing grey: Art. no.: 2.1X0.XX6.XXX housing black: Art. no.: 2.1X0.XX7.XXX
<b>Lockable transparent cover (IP65)</b>	Dv BVa counter with front bezel 3 Art. no.: 2.1X0.7XX.XXX
<b>Key lockable transparent cover (IP65)</b>	Dvs BVa counter with front bezel 3 Art. no.: 2.1X0.8XX.XXX
<b>Flexible sealing cover K2 (IP54)</b>	K2 BVa counter with front bezel 3 Art. no.: 2.1X0.6XX.XXX
<b>Screw terminal connection</b>	Art. no.: 2.XXX.XXX.XXX.023
<b>Flat pin connection 2.8 x 0.8 mm (on request)</b>	Art. no.: 2.XX7.XXX.XXX

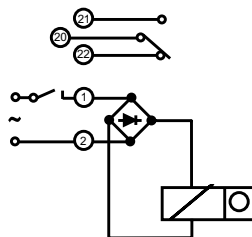
Approvals	
<b>CE compliant</b> in accordance with	
EMC Directive	2014/30/EU
RoHS Directive	2011/65/EU
Low Voltage Directive	2014/35/EU

## Connection diagrams

DC



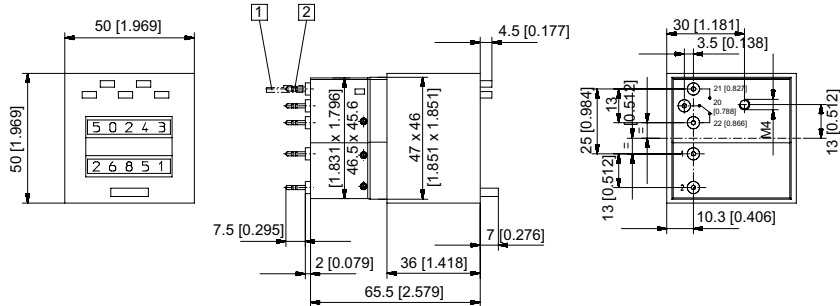
AC



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Without front bezel,  
plugs into socket box type 946.1  
Type BVa15.01

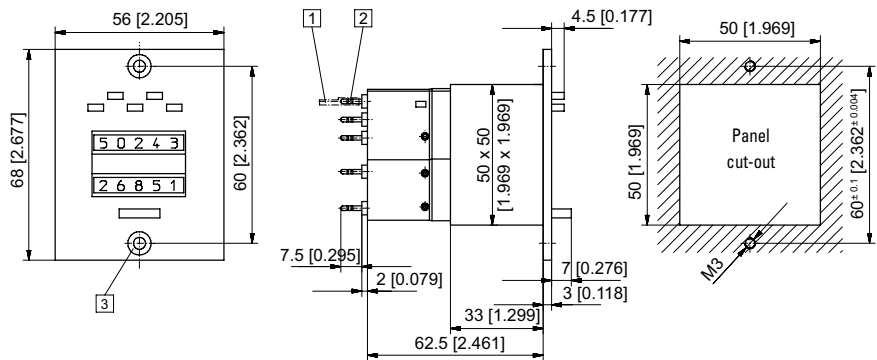


1 Push-on connector  $\varnothing$  1.5 [0.059] tinned    2 Round pin  $\varnothing$  1.6 [0.063] tinned  
Color of housing grey (standard)

Type	Voltage	Display	Art. no.		
			24 V	115 V	230 V
BVa15.01	DC (25 Hz)	5 digits	2.100.010.033	-	-
	AC (18 Hz)		2.100.010.061	2.100.010.064	2.100.010.066

Color of housing black: Art. no. 2.1X0.011.XXX

Front bezel 1,  
with mounting holes  
Type BVa15.11



1 Push-on connector  $\varnothing$  1.5 [0.059] tinned    2 Round pin  $\varnothing$  1.6 [0.063] tinned    3 Countersinking Af3 DIN 74  
Color of housing grey (standard)

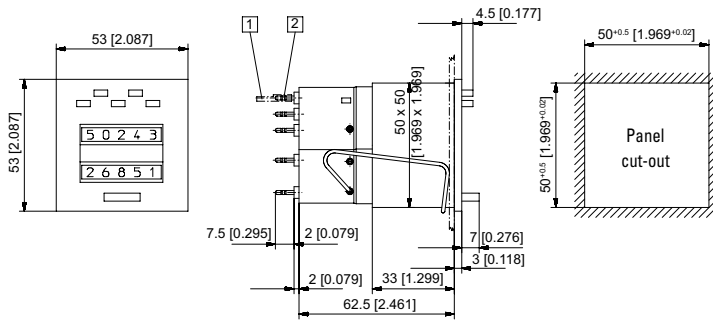
Type	Voltage	Display	Art. no.		
			24 V	115 V	230 V
BVa15.11	DC (25 Hz)	5 digits	2.100.110.033	-	-
	AC (18 Hz)		2.100.110.061	2.100.110.064	2.100.110.066

Color of housing black: Art. no. 2.1X0.111.XXX

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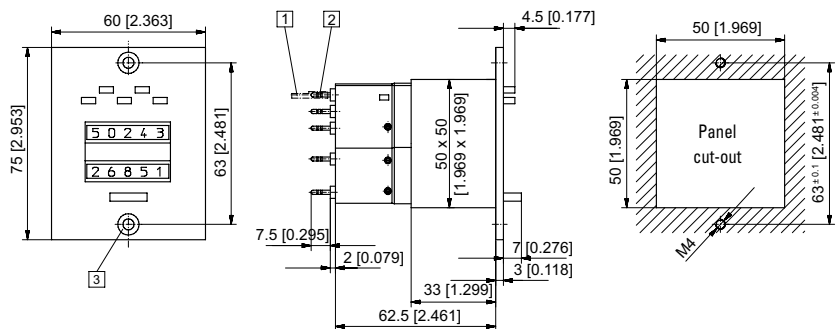
**With mounting clips**  
**Type BVa15.21**



1 Push-on connector  $\varnothing$  1.5 [0.059] tinned    2 Round pin  $\varnothing$  1.6 [0.063] tinned  
 Color of housing grey (standard)

Type	Voltage	Display	Art. no.		
			24 V	115 V	230 V
<b>BVa15.21</b>	DC (25 Hz)	5 digits	<b>2.100.210.033</b>	–	–
	AC (18 Hz)		<b>2.100.210.061</b>	<b>2.100.210.064</b>	<b>2.100.210.066</b> <sup>1)</sup>
Color of housing black: Art. no. 2.1X0.211.XXX			Further stock types: Art. no. 2.100.211.033		

**Front bezel 3, with mounting holes**  
**Type BVa15.31**



1 Push-on connector  $\varnothing$  1.5 [0.059] tinned    2 Round pin  $\varnothing$  1.6 [0.063] tinned    3 Countersinking Af3 DIN 74  
 Color of housing grey (standard)

Type	Voltage	Display	Art. no.		
			24 V	115 V	230 V
<b>BVa15.31</b>	DC (25 Hz)	5 digits	<b>2.100.310.033</b>	–	–
	AC (18 Hz)		<b>2.100.310.061</b>	<b>2.100.310.064</b>	<b>2.100.310.066</b>
Color of housing black: Art. no. 2.1X0.311.XXX			Further stock types: BVa15.31.4sw 24 V DC / Art. no. 2.107.311.013		