

Preset counters, electromechanical

Standard counters	Adding, 5 digits (AC+DC)	BVa15
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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	Type	Delivery specification
(Reset manual)		Counter complete with socket box
Without front bezel, plugs into socket box	BVa15.01	
Front bezel 1, mounting holes	BVa15.11	<i>Order information</i>
Mounting clip	BVa15.21	- Art. no.
Front bezel 3, mounting holes	BVa15.31	- 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



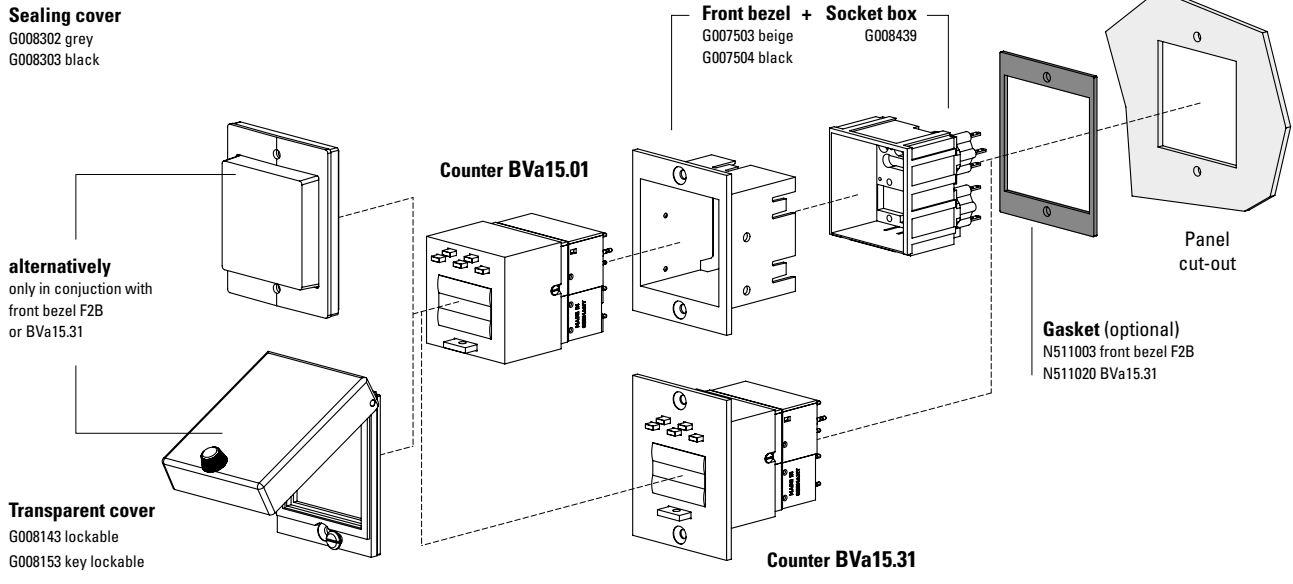
Type / Counting mechanism

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)
V DC	1	25 Hz	24 ms	16 ms	3 : 2	100 %	3 W	48 %	-10°C ... +60°C [+14°F ... +140°F]
V AC	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
Front bezel		F2B	for counter BVa15.01 for cut-out 54 x 49 mm (only in conjunction with socket box G008439)	beige black	G007503 G007504	N511003
Socket box		946.1	for plug-in connection in front bezel F2B	black	G008439	–
Sealing cover IP65		K2	for counter BVa15.31 or for counter BVa15.01 in conjunction with front bezel F2B	transp. /grau transp. /black	G008302 G008303	–
Transparent cover IP65 with gasket		2 Dv	cover lockable for counter BVa15.31 or for counter BVa15.01 in conjunction with front bezel F2B	transp. /black	G008143	–
		2 Dvs	cover key lockable for counter BVa15.31 or for counter BVa15.01 in conjunction with front bezel F2B	transp. /black	G008153	–
Gasket counter			58 x 58 mm [2.28 x 2.28"] 60 x 75 mm [2.36 x 2.95"]	BVa15.21 BVa15.31	N511004 N511020	
Mounting frame		cut-out 50 x 25 mm [1.97 x 0.98"]	for snap-on mounting on 35 mm [1.38"] top-hat DIN rail, for BVa15.21	chromated	G300003	
DIN rail mount		SR 3	for snap-on mounting on 35 mm [1.38"] top-hat DIN rail		G300002	
Key for key-locking zero reset					G050265	

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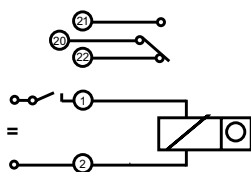
Technical data																
Electrical connection	counter: tinned tabs \varnothing 1.6 mm [0.063"] with push-on connectors socket box: tinned plated tabs 0.8 x 2.8 mm [0.032 x 0.11"]															
Rated voltages	counting mechanism: 12 / 24 / 48 / 115 V DC $\pm 10\%$ 24 / 48 / 115 / 230 V AC $\pm 10\%$															
Height of figures	counter: 4.5 mm [0.18"] preset: 4 mm [0.16"]															
Color of housing	grey: Art. no. x.xxx.xx0.xxx black: Art. no. x.xxx.xx1.xxx															
Color of figures	counter: white on black preset: yellow on black															
Counting mechanism shaft	stainless steel															
Mounting position	any															
Service life	approx. 100 x 10 ⁶ pulses															
Protection	IP40 (front side)															
Weight	approx. 130 g [4.59 oz]															
Device safety	designed to EN 61010 part 1 protection class 2 application area: pollution level 2															
Test voltage	2000 V, effective															
Switching contact	1 change over contact (micro switch), release in 2nd half-step on the preset number															
Loading (max) (with resistive Load.)	<table style="border: none;"> <tr> <td style="padding-right: 10px;">AC</td> <td>250 V AC</td> <td>2.0 A</td> </tr> <tr> <td>DC</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>	AC	250 V AC	2.0 A	DC	24 V DC	2.0 A		60 V DC	0.7 A		115 V DC	0.4 A		230 V DC	0.2 A
AC	250 V AC	2.0 A														
DC	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	
Key-locking zero reset	housing grey: Art. no.: 2.1X0.XX6.XXX housing black: Art. no.: 2.1X0.XX7.XXX
Lockable transparent cover (IP65)	Dv BVa counter with front bezel 3 Art. no.: 2.1X0.7XX.XXX
Key lockable transparent cover (IP65)	Dvs BVa counter with front bezel 3 Art. no.: 2.1X0.8XX.XXX
Flexible sealing cover K2 (IP54)	K2 BVa counter with front bezel 3 Art. no.: 2.1X0.6XX.XXX
Screw terminal connection	Art. no.: 2.XXX.XXX.XXX.023
Flat pin connection 2.8 x 0.8 mm (on request)	Art. no.: 2.XX7.XXX.XXX

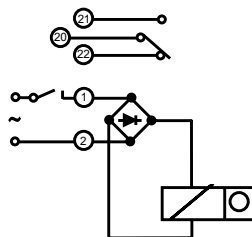
Approvals	
CE compliant in accordance with	
EMC Directive	2014/30/EU
RoHS Directive	2011/65/EU
Low Voltage Directive	2014/35/EU

Connection diagrams

DC



AC



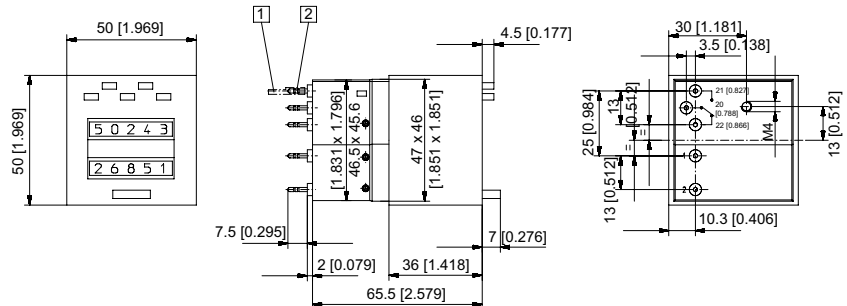
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Without front bezel,
plugs into socket box type 946.1
Type BVa15.01



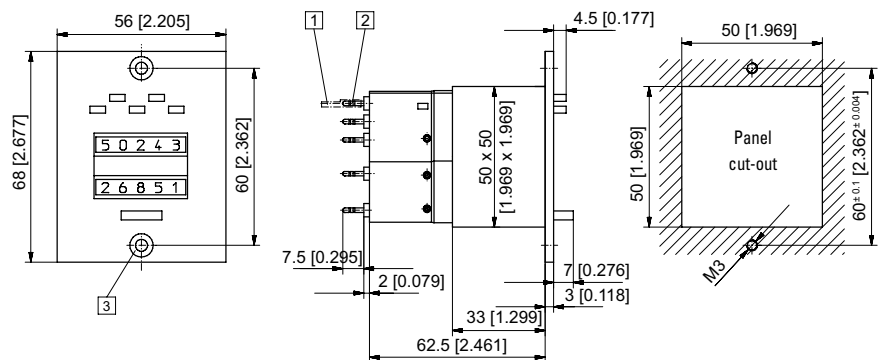
Panel cut-out 50 x 50 mm
[1.97 x 1.97]

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)

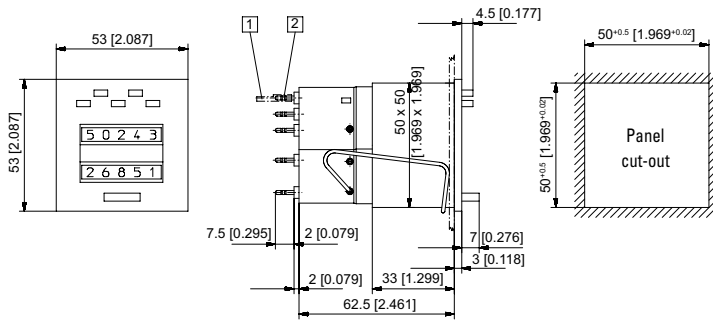
Type	Voltage	Display	Art. no.		
			24 V	115 V	230 V
BVa15.11	DC (25 Hz)	5 digits	2.100.110.033	-	-
	AC (18 Hz)		2.100.110.061	2.100.110.064	2.100.110.066

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

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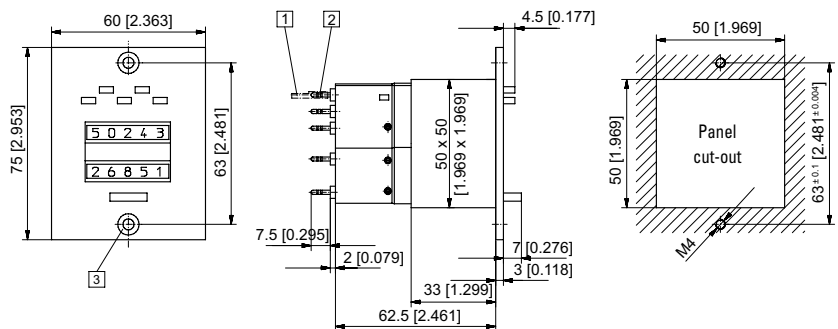
With mounting clips
Type BVa15.21



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
BVa15.21	DC (25 Hz)	5 digits	2.100.210.033	—	—
	AC (18 Hz)		2.100.210.061	2.100.210.064	2.100.210.066 ¹⁾
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
BVa15.31	DC (25 Hz)	5 digits	2.100.310.033	—	—
	AC (18 Hz)		2.100.310.061	2.100.310.064	2.100.310.066
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		