

Preset counters, electromechanical

Standard counters	Adding, 5 digits (AC+DC)	BVa 15
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The electromechanical preset counters BVa 15 (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	BVa 15.01	
Front bezel 1, mounting holes	BVa 15.11	<i>Order information</i>
Mounting clip	BVa 15.21	- Art. no.
Front bezel 3, mounting holes	BVa 15.31	- For special voltages, please give type, voltage and series e.g.: BVa 15.31, 12 V DC ...

Further versions, fully assembled (on request)
Counter with lockable reset

BVa 15.21 vs



Counter with transparent cover

Dv BVa 15.31
lockable



Dvs BVa 15.31
key lockable



Type / Counting mechanism

Voltage	Type max.	Pulse frequency min.	Pulse on time min.	Pulse interval	Pulse ratio	On-time approx.	Power consump. ripple max.	Permi. residual (non-condensing)	Operating temp.
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]

Preset counters, electromechanical

Standard counters	Adding, 5 digits (AC+DC)	BVa 15	
Accessories			
Dimensions in mm [inch]			
Order no.			
Front bezel type F2B	for cut-out 54 x 54 [2.13 x 2.13] , with screw mounting for plug-in counters BVa 15.0x in socket box type 946.1	beige black	G007503 G007504
Socket box type 946.1	for counters BVa 15.01, can be used for plug-in connections, in front bezel F2B	black	G008439
Sealing cover type K2, IP65	for front bezel 75 x 60 [2.95 x 2.36] with screw mounting, for elektrom. counters and via adapter front bezel T008860 for counters 48 x 48 [1.89 x 1.89]	grey black	G008302 G008303
Mounting frame with cut-out 50 x 50 [2.36 x 2.36] via separate adapter also for 45 x 45 [1.77 x 1.77]	for snap-on mounting on 35 [1.38] top-hat DIN rail, for counters 48 x 48 [1.89 x 1.89], 53 x 53 [2.09 x 2.09] and 55 x 55 [2.17 x 2.17]	chromated	G300003
DIN rail mount SR 3	for snap-on mounting on 35 [1.38] top-hat DIN rail		G300002
Replacement parts			Order no.
Transparent cover, IP65	type 2 Dv, suitable for Dv BVa 15 and Dv HVa 15 type 2 Dvs, suitable for Dvs BVa 15 and Dvs HVa 15	lockable key lockable	G008141 G008151
Key for key-locking zero reset			G050265

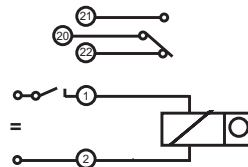
Suitable gaskets, other accessories and installation examples for optional accessories can be found in chapter Accessories or in the Accessories section under: www.kuebler.com/accessories.

Technical data			
Electrical connection	counter	tinned tabs ø 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 ±10 % 24 / 48 / 115 / 230 V AC ±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]	
EMC standards		EN 55011 class B, EN 61000-6-2, EN 61000-6-3,	
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.)	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 %			

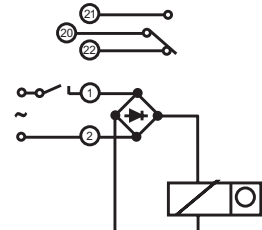
Options		
Key-locking zero reset	housing grey	Art. no.: 2.1X0.XX6.XXX
	housing black	Art. no.: 2.1X0.XX7.XXX
Lockable transparent cover (IP65)	Dv BVa counter with front bezel 3	Art. no.: 2.1X0.7XX.XXX
Key lockable transparent cover (IP65)	Dvs BVa counter with front bezel 3	Art. no.: 2.1X0.8XX.XXX
Flexible 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

Connection diagrams

DC



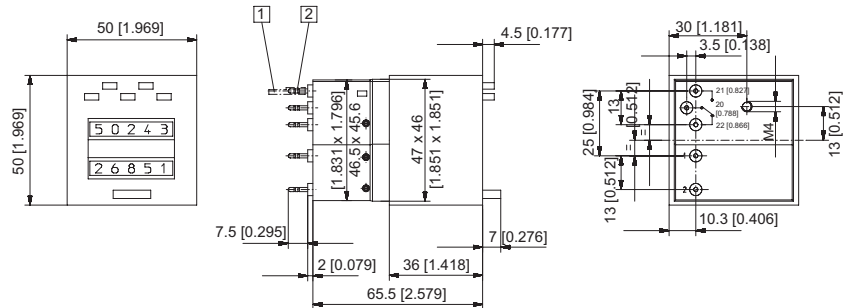
AC



Preset counters, electromechanical

Standard counters **Adding, 5 digits (AC+DC)** **BVa 15**

Without front bezel,
plugs into socket box type 946.1
Type BVa 15.01

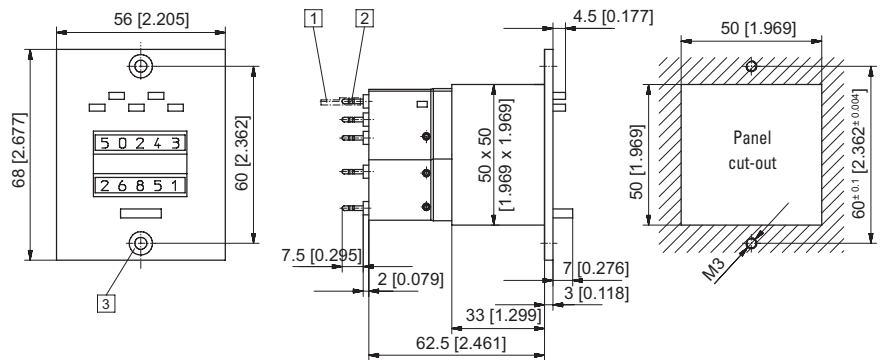


1 Push-on connector \varnothing 1.5 [0.059] tinned 2 Round pin \varnothing 1.6 [0.063] tinned
Color of housing grey (standard)

Type	Voltage	Display	Art. no.		
			24 V	115 V	230 V
BVa 15.01	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 BVa 15.11



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
BVa 15.11	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

Preset counters, electromechanical

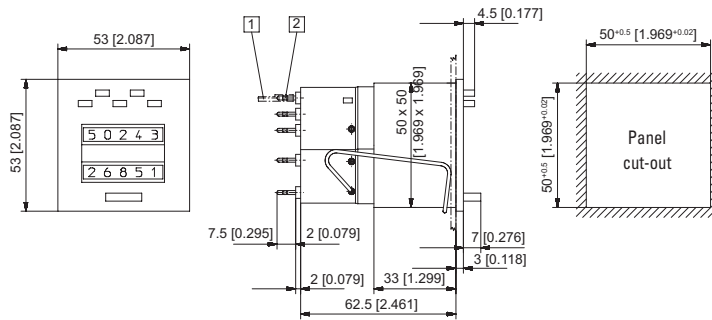
Standard counters

Adding, 5 digits (AC+DC)

BVa 15

With mounting clips

Type BVa 15.21



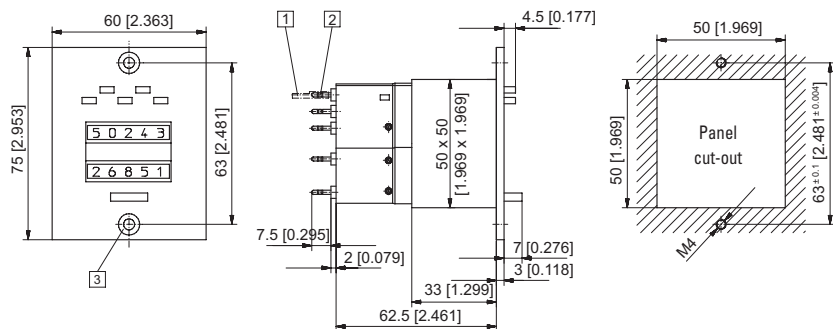
- 1 Push-on connector \varnothing 1.5 [0.059] tinned 2 Round pin \varnothing 1.6 [0.063] tinned

Color of housing grey (standard)

Type	Voltage	Display	Art. no.		
			24 V	115 V	230 V
BVa 15.21	DC (25 Hz)	5 digits	2.100.210.033 ¹⁾	–	–
	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 BVa 15.31



- 1 Push-on connector \varnothing 1.5 [0.059] tinned 2 Round pin \varnothing 1.6 [0.063] tinned 3 Countersinking Af3 DIN 74

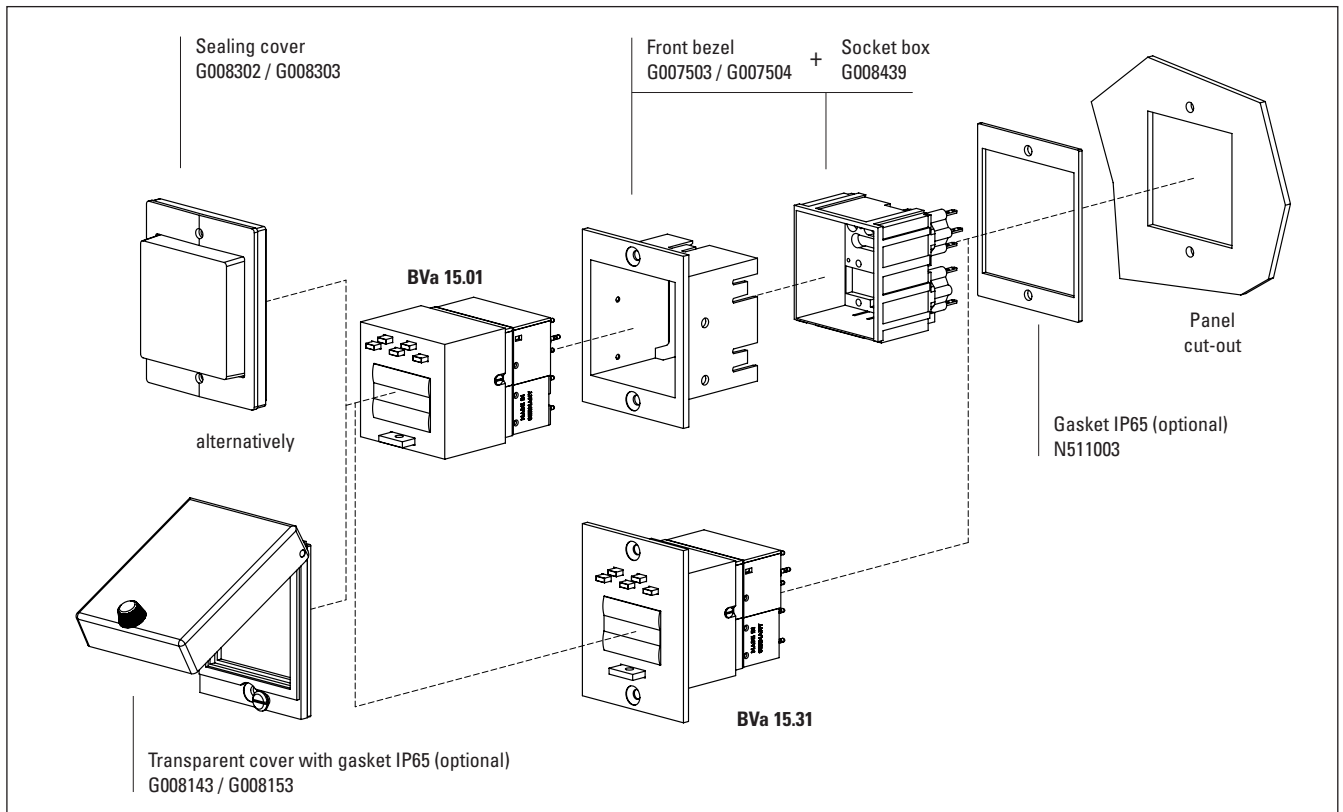
Color of housing grey (standard)

Type	Voltage	Display	Art. no.		
			24 V	115 V	230 V
BVa 15.31	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: BVa 15.31.4sw 24 V DC / Art. no. 2.107.311.013		

Preset counters, electromechanical

Standard counters **Adding, 5 digits (AC+DC)** **BVa 15**

Mounting examples for optional accessories



Preset counters, electromechanical

Standard counters

Subtracting, 2 or 3 digits (AC+DC)

MVs 13



The electromechanical preset counters MVs 13 (with manual and manual/electrical reset) boast a robust construction with very small dimensions.

They are ideal for use in harsh industrial environments. The subtracting counters are set to a value via the front keys, the signal occurs when the count value reaches 0.

Characteristics

- 2- or 3-digit subtracting preset counter.
- Manual or manual and electrical reset.
- Potential free changeover contact (microswitch) on reaching zero.
- Contact switches for "0" count position and remains unswitched until reset to zero.

Benefits

- Delivery complete with push-on connectors.
- Very small dimensions.
- Versions with sealing cover on request.

Applications

Piece counting, batch quantities and automation.

Type series

	3 digits manual reset	3 digits manual and electr. reset	2 digits manual reset	2 digits manual and electr. reset
Front bezel with mounting holes	MVs 13.11	MVs 13.13	MVs 13.11/2	MVs 13.13/2
Front bezel with mounting clip	MVs 13.21	MVs 13.23	MVs 13.21/2	MVs 13.23/2

Accessories

	Dimensions in mm [inch]	Order no.
Sealing cover type KV3, IP65	for front bezel 39 x 68 [1.54 x 2.68] , with screw mounting	transparent, grey transparent, black
		G008310 G008311

Suitable gaskets as well as further accessories can be found in the accessories section or in the accessories area of our website at: www.kuebler.com/accessories.

Preset counters, electromechanical

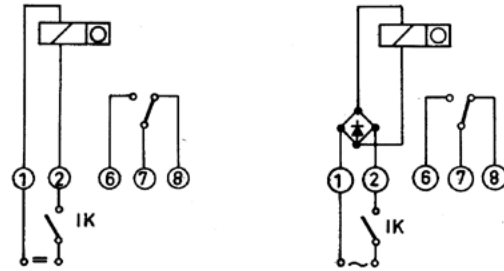
Standard counters	Subtracting, 2 or 3 digits (AC+DC)	MVs 13
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Technical data	
Electrical connection	tinned flat pins 0.8 x 2.8 mm [0.032 x 0.11"] (with push on connectors)
Rated voltages	count mechanism 12 / 24 / 48 / 115 / 230 V DC $\pm 10\%$ 24 / 48 / 115 / 230 V AC $\pm 10\%$ reset magnet 24 / 48 / 115 / 230 V DC $\pm 10\%$ 24 / 48 / 115 / 230 V AC $\pm 10\%$
Height of figures	4 mm [0.16"]
Color of housing	similar to RAL 7001
Color of figures	white on black
Counting mechanism shaft	stainless steel
Mounting position	any
Service life	approx. 100 x 10 ⁶ pulses
Protection	IP40 (front side)
Weight	approx. 150 g [5.29 oz], with electrical reset approx. 190 g [6.70 oz]
EMC standards	EN 55011 class B, EN 61000-6-2, EN 61000-6-3
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 exactly at zero
Load (max.) (with resistive load)	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
With inductive: suitable spark quenching is required on inductive load, reducing the max. current to approx. 60%	
Electrical reset	on time 10 % max. 40 seconds minimum pulse time 0.25 sec. power consumption 12 W at DC, 14 VA at AC

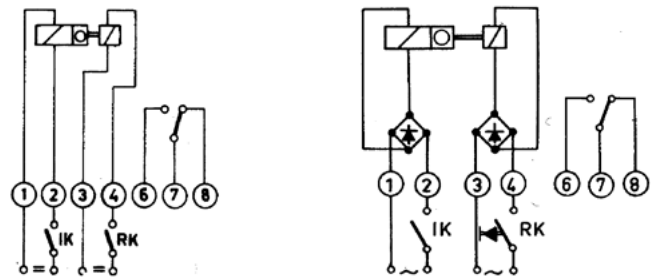
Options
Electrical reset only

Connection diagrams

Manual reset



Manual and electrical reset



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 %	4 W	48 %	-10°C ... +45°C [+14°F ... +113°F]
V AC	a	18 Hz	22.2 ms	33.3 ms	2 : 3	100 %	4.5 VA	—	-10°C ... +45°C [+14°F ... +113°F]

Preset counters, electromechanical

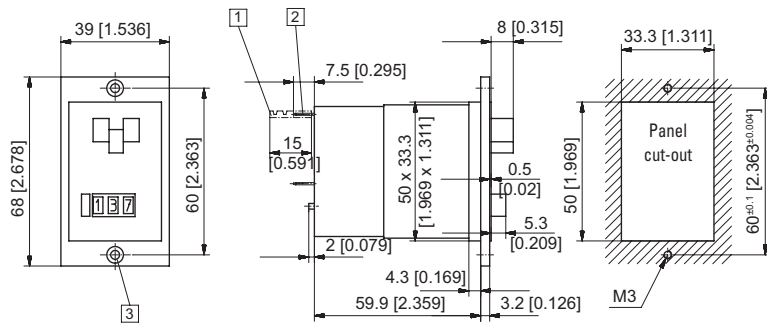
Standard counters

Subtracting, 2 or 3 digits (AC+DC)

MVs 13

Front bezel with mounting holes,
manual reset

Type MVs 13.11, MVs 13.11/2

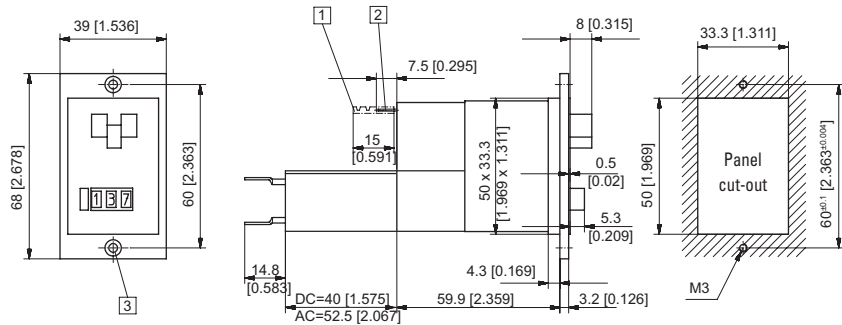


- 1 Push-on connector 0.8 x 2.8 [0.032 x 0.11] tinned
 - 2 Flat pin 0.8 x 2.8 [0.032 x 0.11] tinned
 - 3 Countersinking Af3 DIN 74
- Color of housing grey (standard)

Voltage	Type / Art. no.	MVs 13.11 (display 3 digits)			MVs 13.11/2 (display 2 digits)		
		24 V	115 V	230 V	24 V	115 V	230 V
DC (25 Hz)		2.300.110.033	–	–	2.310.110.033	–	–
AC (18 Hz)		2.300.110.061	2.300.110.064	2.300.110.066	2.310.110.061	2.310.110.064	2.310.110.066

Front bezel with mounting holes,
manual and electrical reset

Type MVs 13.13, MVs 13.13/2



- 1 Push-on connector 0.8 x 2.8 [0.032 x 0.11] tinned
 - 2 Flat pin 0.8 x 2.8 [0.032 x 0.11] tinned
 - 3 Countersinking Af3 DIN 74
- Color of housing grey (standard)

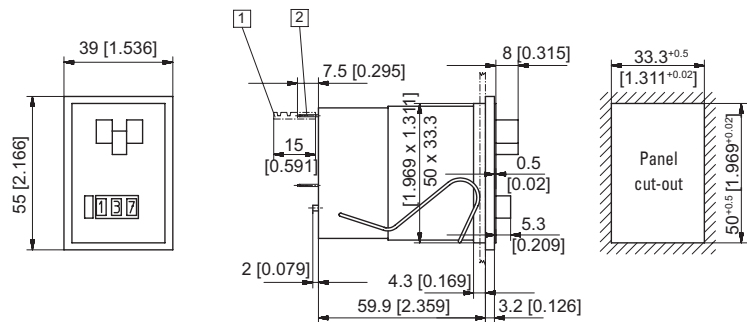
Voltage	Type / Art. no.	MVs 13.13 (display 3 digits)			MVs 13.13/2 (display 2 digits)		
		24 V	115 V	230 V	24 V	115 V	230 V
DC (25 Hz)		2.300.130.033	–	–	2.310.130.033	–	–
AC (18 Hz)		2.300.130.061	2.300.130.064	2.300.130.066	2.310.130.061	2.310.130.064	2.310.130.066

Preset counters, electromechanical

Standard counters **Subtracting, 2 or 3 digits (AC+DC)** **MVs 13**

Front bezel with clip mounting, manual reset

Type MVs 13.21, MVs 13.21/2



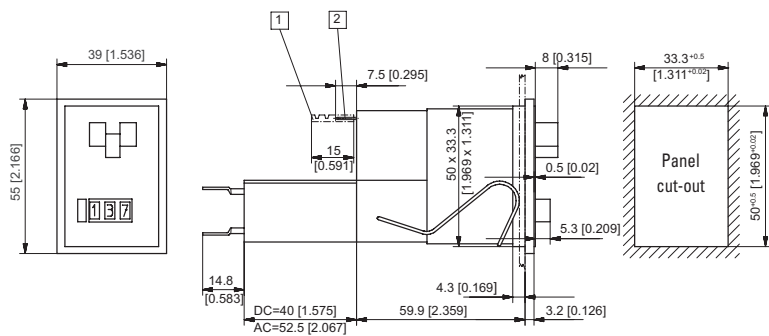
1 Push-on connector 0.8 x 2.8 [0.032 x 0.11] tinned 2 Flat pin 0.8 x 2.8 [0.032 x 0.11] tinned
Color of housing grey (standard)

Voltage	Type / Art. no.	MVs 13.21 (display 3 digits)			MVs 13.21/2 (display 2 digits)		
		24 V	115 V	230 V	24 V	115 V	230 V
DC (25 Hz)		2.300.210.033	—	—	2.310.210.033	—	—
AC (18 Hz)		2.300.210.061	2.300.210.064	2.300.210.066	2.310.210.061	2.310.210.064	2.310.210.066

Color of housing black: Art. no. 2.3X0.211.XXX

Front bezel with clip mounting, manual and electrical reset

Type MVs 13.23, MVs 13.23/2



1 Push-on connector 0.8 x 2.8 [0.032 x 0.11] tinned 2 Flat pin 0.8 x 2.8 [0.032 x 0.11] tinned
Color of housing grey (standard)

Voltage	Type / Art. no.	MVs 13.23 (display 3 digits)			MVs 13.23/2 (display 2 digits)		
		24 V	115 V	230 V	24 V	115 V	230 V
DC (25 Hz)		2.300.230.033	—	—	2.310.230.033	—	—
AC (18 Hz)		2.300.230.061	2.300.230.064	2.300.230.066	2.310.230.061	2.310.230.064	2.310.230.066

Color of housing black: Art. no. 2.3X0.231.XXX

Preset counters, electromechanical

Standard counters

Subtracting, 6 digits (AC+DC)

MVs 16



The electromechanical preset counters MVs 16 (with manual and electrical reset) boast a robust construction. They are ideal for use in harsh industrial environments. The subtracting counters are set to a value via the keys on the front, the signal occurs when the count value reaches 0.



Characteristics

- 6-digit subtracting preset counter.
- Manual and electrical reset.
- Potential free changeover (microswitch) on reaching zero.
- Contact switches for "0" count position and remains unswitched until reset to zero.

Benefits

- Delivery complete with push-on connectors.
- Versions with transparent cover or sealing cover on request.

Applications

Piece counting, batch quantities and automation.

Type series

Description

Type

Front bezel 2 with mounting clip

MVs 16.23

Accessories

Dimensions in mm [inch]

Order no.

Socket box, type 926.1

for counters MVs 16 for plug-in connections

transparent

G008433

Mounting frame

with cut-out 50 x 50 [2.36 x 2.36]

via separate adapter also for 45 x 45 [1.77 x 1.77]

for snap-on mounting on 35 [1.38] top-hat DIN rail,
for counters 48 x 48 [1.89 x 1.89], 53 x 53 [2.09 x 2.09]
and 55 x 55 [2.17 x 2.17]

chromated

G300003

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Type / Counting mechanism

Voltage	Type max.	Pulse frequency min.	Pulse on time min.	Pulse interval	Pulse ratio	On-time approx.	Power consump. ripple max.	Permi. residual (non-condensing)	Operating temp.
V DC	1	25 Hz	24 ms	16 ms	3 : 2	100 %	4 W	48 %	-10°C ... +45°C [+14°F ... +113°F]
V AC	a	18 Hz	22.2 ms	33.3 ms	2 : 3	100 %	4.5 VA	—	-10°C ... +45°C [+14°F ... +113°F]

Preset counters, electromechanical

Standard counters **Subtracting, 6 digits (AC+DC)** **MVs 16**

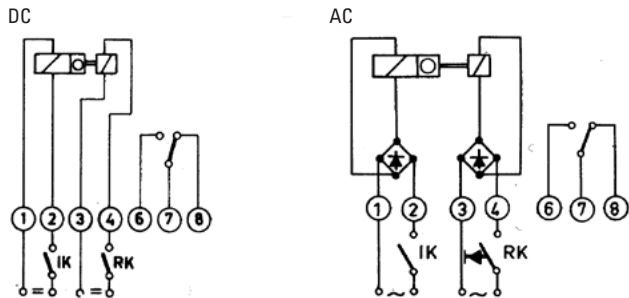
Technical data	
Electrical connection	tinned flat pins 0.8 x 2.8 mm [0.032 x 0.11"] (with push-on connectors) socket box 0.3 x 2.8 mm [0.012 x 0.11"]
Rated voltages	counting mechanism 12 / 24 / 48 / 115 V DC ±10 % 24 / 48 / 115 / 230 V AC ±10 % reset magnet 24 / 48 / 115 V DC ±10 % 24 / 48 / 115 / 230 V AC ±10 %
High of figures	4 mm
Color of housing	similar to RAL 7001
Color of figures	white on black
Counting mechanism shaft	stainless steel
Mounting position	any
Service life	approx. 100 x 10 ⁶ pulses
Protection	IP40 (front side)
Weight	approx. 170 g [6.00 oz], with electrical reset approx. 210 g [7.41 oz]
EMC standards	EN 55011 class B, EN 61000-6-2, EN 61000-6-3
Device safety	designed to EN 61010 part 1 protection class 2 application area pollution level 2
Test voltage	2000 V AC, effective
Switching contact	1 change over contact (micro switch), contact making in 2nd half step at zero
Load (max.) (at resistive load)	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

At inductive load: suitable spark quenching is required on inductive load, reducing the max. current to approx. 60%

Options	
Electrical reset	on time 20 % max. 1 minute minimum pulse time 0.25 sec. power consumption 10 W at DC, 14 VA at AC

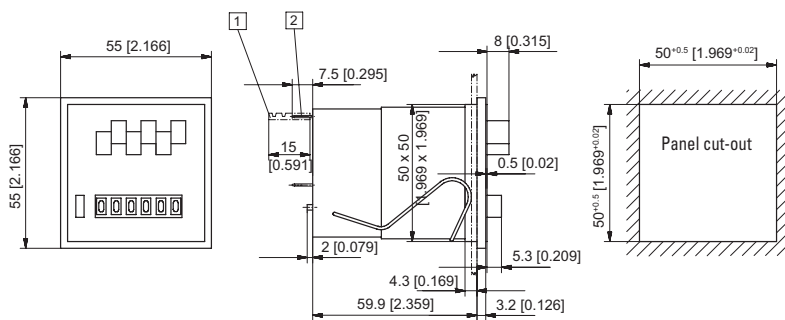
Connection diagrams

Manual and electrical reset



Front bezel 2 with mounting clips, manual and electrical reset

Type MVs 16.23



1 Push-on connector 0.8 x 2.8 tinned [0.032 x 0.11] 2 Flat pin 0.8 x 2.8 [0.032 x 0.11] tinned
Color of housing grey (standard)

Type	Voltage	Display	Art. no.		
			24 V	115 V	230 V
MVs 16.23	DC (25 Hz)	6-digits	2.320.230.033	—	—
	AC (18 Hz)		2.320.230.061	2.320.230.064	2.320.230.066