

# Preset counters, electromechanical

<b>Standard counters</b>	<b>Subtracting, 2 or 3 digits (AC+DC)</b>	<b>MVs 13</b>
--------------------------	---	---------------




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.

<h3>Characteristics</h3> <ul style="list-style-type: none"> <li>• 2- or 3-digit subtracting preset counter.</li> <li>• Manual or manual and electrical reset.</li> <li>• Potential free changeover contact (microswitch) on reaching zero.</li> <li>• Contact switches for "0" count position and remains unswitched until reset to zero.</li> </ul>	<h3>Benefits</h3> <ul style="list-style-type: none"> <li>• Delivery complete with push-on connectors.</li> <li>• Very small dimensions.</li> <li>• Versions with sealing cover on request.</li> </ul> <h3>Applications</h3> <p>Piece counting, batch quantities and automation.</p>
--	---

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	<b>MVs 13.11</b>	<b>MVs 13.13</b>	<b>MVs 13.11/2</b>	<b>MVs 13.13/2</b>
Front bezel with mounting clip	<b>MVs 13.21</b>	<b>MVs 13.23</b>	<b>MVs 13.21/2</b>	<b>MVs 13.23/2</b>

Accessories					
		Type / size	Description		Order no.
<b>Dichtungskappe IP65</b>		<b>KV3</b>	Screw mounting	transp. /grey	<b>G008310</b>
				transp. /black	<b>G008311</b>

# Preset counters, electromechanical

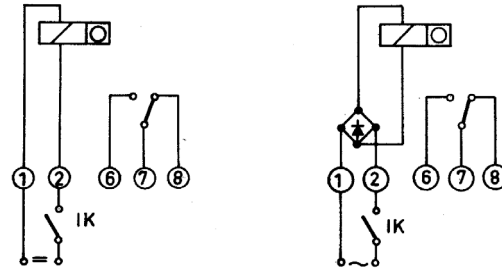
<b>Standard counters</b>	<b>Subtracting, 2 or 3 digits (AC+DC)</b>	<b>MVs 13</b>
--------------------------	---	---------------

Technical data																
<b>Electrical connection</b>	tinned flat pins 0.8 x 2.8 mm [0.032 x 0.11"] (with push on connectors)															
<b>Rated voltages</b>	<table border="0"> <tr> <td style="padding-right: 10px;">count mechanism</td> <td>12 / 24 / 48 / 115 / 230 V DC ±10 %</td> </tr> <tr> <td></td> <td>24 / 48 / 115 / 230 V AC ±10 %</td> </tr> <tr> <td style="padding-right: 10px;">reset magnet</td> <td>24 / 48 / 115 / 230 V DC ±10 %</td> </tr> <tr> <td></td> <td>24 / 48 / 115 / 230 V AC ±10 %</td> </tr> </table>	count mechanism	12 / 24 / 48 / 115 / 230 V DC ±10 %		24 / 48 / 115 / 230 V AC ±10 %	reset magnet	24 / 48 / 115 / 230 V DC ±10 %		24 / 48 / 115 / 230 V AC ±10 %							
count mechanism	12 / 24 / 48 / 115 / 230 V DC ±10 %															
	24 / 48 / 115 / 230 V AC ±10 %															
reset magnet	24 / 48 / 115 / 230 V DC ±10 %															
	24 / 48 / 115 / 230 V AC ±10 %															
<b>Height of figures</b>	4 mm [0.16"]															
<b>Color of housing</b>	similar to RAL 7001															
<b>Color of figures</b>	white 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>	<table border="0"> <tr> <td style="padding-right: 10px;">with electrical reset</td> <td>approx. 150 g [5.29 oz],</td> </tr> <tr> <td></td> <td>approx. 190 g [6.70 oz]</td> </tr> </table>	with electrical reset	approx. 150 g [5.29 oz],		approx. 190 g [6.70 oz]											
with electrical reset	approx. 150 g [5.29 oz],															
	approx. 190 g [6.70 oz]															
<b>EMC standards</b>	EN 55011 class B, EN 61000-6-2, EN 61000-6-3															
<b>Device safety</b>	<table border="0"> <tr> <td style="padding-right: 10px;">designed to</td> <td>EN 61010 part 1</td> </tr> <tr> <td style="padding-right: 10px;">protection class</td> <td>2</td> </tr> <tr> <td style="padding-right: 10px;">application area</td> <td>pollution level 2</td> </tr> </table>	designed to	EN 61010 part 1	protection class	2	application area	pollution level 2									
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 exactly at zero															
<b>Load (max.)</b>	<table border="0"> <tr> <td style="padding-right: 10px;">AC</td> <td>250 V AC</td> <td>2.0 A</td> </tr> <tr> <td style="padding-right: 10px;">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														
With inductive: suitable spark quenching is required on inductive load, reducing the max. current to approx. 60 %																
<b>Electrical reset</b>	<table border="0"> <tr> <td style="padding-right: 10px;">on time</td> <td>10 % max. 40 seconds</td> </tr> <tr> <td style="padding-right: 10px;">minimum pulse time</td> <td>0.25 sec.</td> </tr> <tr> <td style="padding-right: 10px;">power consumption</td> <td>12 W at DC, 14 VA at AC</td> </tr> </table>	on time	10 % max. 40 seconds	minimum pulse time	0.25 sec.	power consumption	12 W at DC, 14 VA at AC									
on time	10 % max. 40 seconds															
minimum pulse time	0.25 sec.															
power consumption	12 W at DC, 14 VA at AC															

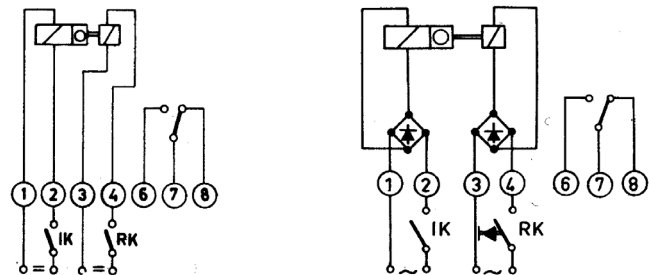
Options
<b>Electrical reset only</b>

## Connection diagrams

### Manual reset



### Manual and electrical reset



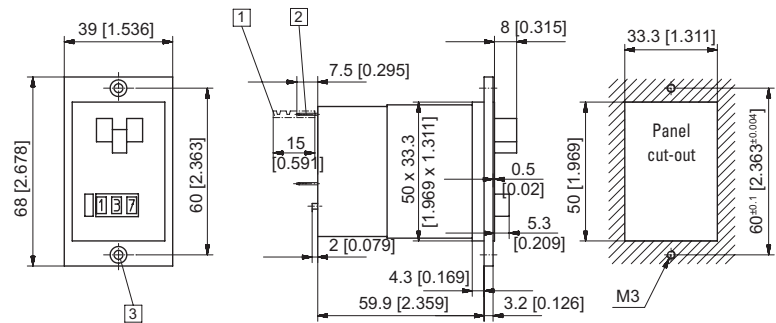
Type / Counting mechanism									
Voltage	Type	Pulse frequency max.	Pulse on time min.	Pulse interval min.	Pulse ratio	On-time	Power consump. approx.	Permi. residual ripple max.	Operating temp. (non-condensing)
<b>V DC</b>	1	25 Hz	24 ms	16 ms	3 : 2	100 %	4 W	48 %	-10°C ... +45°C [+14°F ... +113°F]
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

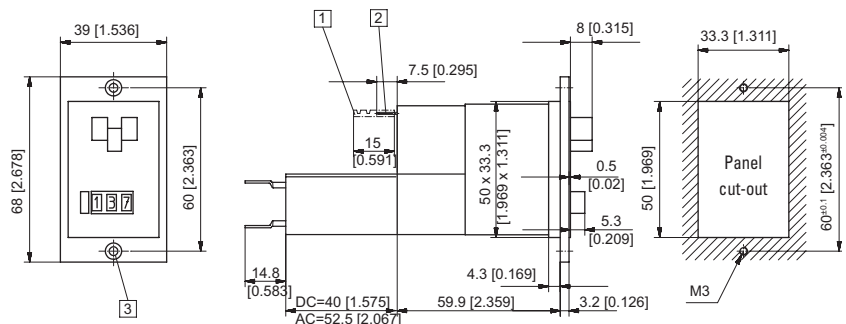


- 1 Push-on connector 0.8 x 2.8 [0.032 x 0.11] tinned
  - 2 Flat pin 0.8 x 2.8 [0.032 x 0.11] tinned
  - 3 Countersinking Af3 DIN 74
- Color of housing grey (standard)

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)

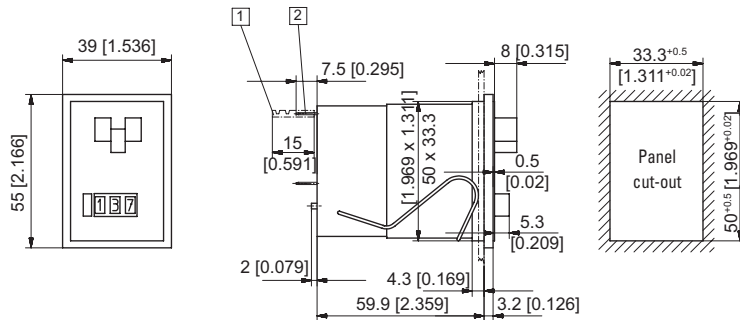
Voltage	Type / Art. no.	MVs 13.13 (display 3 digits)			MVs 13.13/2 (display 2 digits)		
		24 V	115 V	230 V	24 V	115 V	230 V
DC (25 Hz)		2.300.130.033	–	–	2.310.130.033	–	–
AC (18 Hz)		2.300.130.061	2.300.130.064	2.300.130.066	2.310.130.061	2.310.130.064	2.310.130.066

# Preset counters, electromechanical

<b>Standard counters</b>	<b>Subtracting, 2 or 3 digits (AC+DC)</b>	<b>MVs 13</b>
--------------------------	---	---------------

**Front bezel with clip mounting, manual reset**

**Type MVs 13.21, MVs 13.21/2**

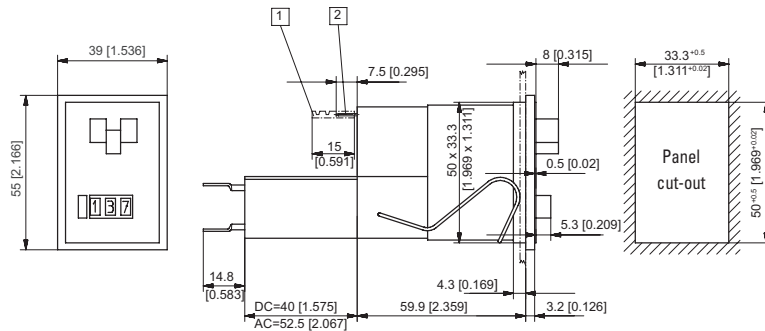


1 Push-on connector 0.8 x 2.8 [0.032 x 0.11] tinned    2 Flat pin 0.8 x 2.8 [0.032 x 0.11] tinned  
Color of housing grey (standard)

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							