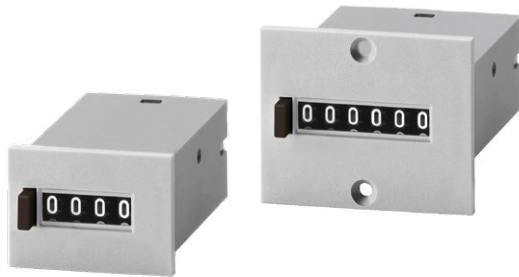


# Pulse counters, electromechanical

<b>Standard counters</b>	<b>4 or 6 digits with/without reset, electrical reset (AC+DC)</b>	<b>Mk14 / Mk16</b>
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The standard totalizers **Mk14** (with manual reset) and **Mk16** (with manual or manual and electrical reset) boast a robust construction.

They are ideal for use in harsh industrial environments.



### Characteristics

- 6-digit totalizer without reset.
- 4- or 6-digit totalizer with manual, manual and electrical reset.
- Mk16 has integrated electrical reset.

### Benefits

- Very long service life (200 million pulses).

### Applications

Piece counting, event counting, time and charge metering.

## Type series

Description	reset	4 digits	6 digits	Order information
Panel mount with front bezel and 2 mounting holes	manual	<b>Mk14.11</b>	<b>Mk16.11</b>	· Art. no. · For special voltages, please give type, voltage and series e.g.: Mk16.21, 48 V AC, type a
Panel mount for clip mounting	without	–	<b>Mk16.20</b>	
	manual	<b>Mk14.21</b>	<b>Mk16.21</b>	
	manual and electrical	–	<b>Mk16.23</b>	

## Accessories

	Type / size	Description	Order no.
<b>Gasket counter</b>	<b>39 x 40 mm</b> <b>[1.54 x 1.58]</b>	suitable for Mk14.11	<b>6.0000.1033.0202</b>

# Pulse counters, electromechanical

## Standard counters      4 or 6 digits with/without reset, electrical reset (AC+DC)      Mk14 / Mk16

Technical data	
<b>Electrical connection</b>	flat pin 0.8 x 2.8 mm [0.032 x 0.11"] with flat push on connector
<b>Rated voltage</b>	type 0 / 1 / a    12 / 24 / 48 / 60 / 115 / 230 V DC ±10 % 24 / 48 / 60 / 115 / 230 V AC ±10 %
<b>Housing</b>	Makrolon, similar to RAL 7001
<b>Height of figures</b>	4 mm [0.16"]
<b>Color of figures</b>	white on black
<b>Counting mechanism shaft</b>	stainless steel
<b>Relative humidity at +30 °C [+86 °F]</b>	≤ 80 % (non-condensing)
<b>Altitude</b>	up to 2000 m [6562']
<b>Mounting position</b>	any
<b>Operating life</b>	approx. 200 x 10 <sup>6</sup> pulses
<b>Protection</b>	with reset IP40 (front side) without reset IP41 (front side)
<b>Weight</b>	reset manual Mk14 – 85 g [3.00 oz] Mk16 – 100 g [3.53 oz] reset electrical Mk14 – 145 g [5.12 oz] Mk16 – 140 g [4.94 oz]
<b>Test voltage</b>	2000 V ~ effective
<b>Vibration resistance</b>	3 g up to 10 Hz 6 g up to 15 Hz independent of position 10 g 20 - 300 Hz
<b>Device safety</b>	designed to EN 61010 part 1 protection class 2 application area pollution level 2

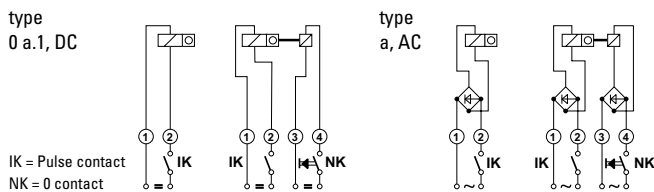
Options	
Extended temperature range	

Reset magnet	
<b>Power consumption</b>	DC approx. 9 W AC approx. 12 VA
<b>Rated voltage</b>	12 / 24 / 48 / 60 / 115 / 230 V DC ±10 % 24 / 48 / 60 / 115 / 230 V AC ±10 %
<b>Permissible residual ripple</b>	max. 48 %
<b>Minimum pulse time</b>	0.25 sec, during 0.3 sec no count pulse is allowed
<b>Cycle duration factor</b>	Mk16 15 %, max. 1.0 min Mk14 10 %, max. 40 sec

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

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	0	10 Hz	64 ms	40 ms	3 : 2	100 %	1 W	48 %	-10 °C ... +45 °C [+14 °F ... +113 °F]
V DC	1	25 Hz	24 ms	16 ms	3 : 2	100 %	2 W	48 %	-10 °C ... +45 °C [+14 °F ... +113 °F]
V AC	a	18 Hz	22.2 ms	33.3 ms	2 : 3	100 %	2.9 VA	–	-10 °C ... +45 °C [+14 °F ... +113 °F]

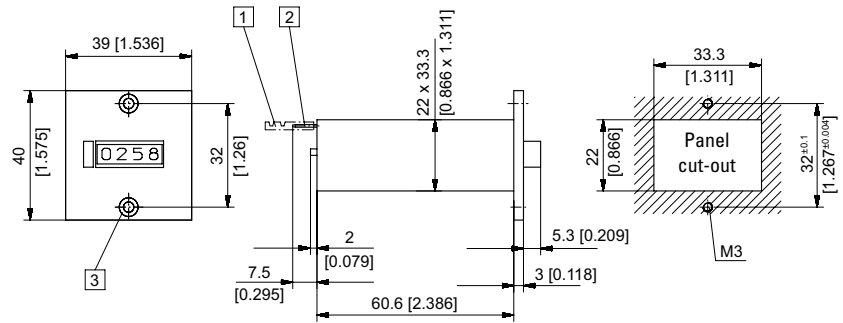
### Connection diagram



# Pulse counters, electromechanical

**Standard counters**      **4 or 6 digits with/without reset, electrical reset (AC+DC)**      **Mk14 / Mk16**

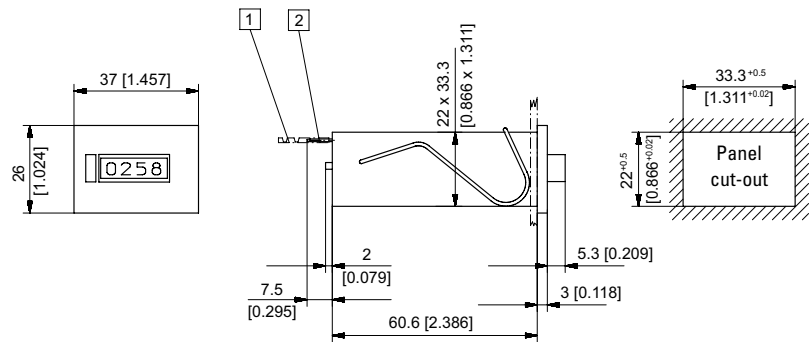
**Panel mount, front bezel with 2 mounting holes**  
4 digits, manual reset  
**Type Mk14.11**



- 1 Flat 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

Standard housing color gray RAL 7001 (Color of housing black: Order code 1.310.111.XXX)							
Type	Voltage	Display	Order code				
			12 V	24 V	115 V	230 V	
<b>Mk14.11</b>	DC (10 Hz) / 0	4 digits, manual reset	<b>1.310.110.012</b>	<b>1.310.110.013</b>			
	DC (25 Hz) / 1		<b>1.310.110.032</b>	<b>1.310.110.033</b>			
	AC (18 Hz) / a			<b>1.310.110.061</b>	<b>1.310.110.064</b>	<b>1.310.110.066</b>	

**Panel mount, for clip mounting**  
4 digits, manual reset  
**Type Mk14.21**



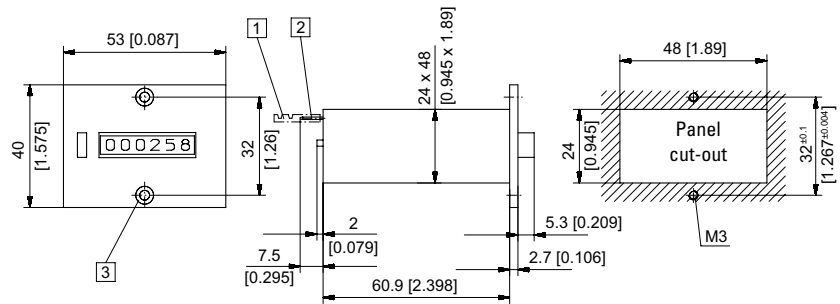
- 1 Flat push on connector 0.8 x 2.8 [0.032 x 0.11], tinned
  - 2 Flat pin 0.8 x 2.8 [0.032 x 0.11], tinned
- Color of housing black, Art. no. 1.310.211.XXX

Standard housing color gray RAL 7001 (Color of housing black: Order code 1.310.111.XXX)							
Type	Voltage	Display	Art. no.				
			12 V	24 V	115 V	230 V	
<b>Mk14.21</b>	DC (10 Hz) / 0	4 digits, manual reset	<b>1.310.210.012</b>	<b>1.310.210.013</b>			
	DC (25 Hz) / 1		<b>1.310.210.032</b>	<b>1.310.210.033</b>			
	AC (18 Hz) / a			<b>1.310.210.061</b>	<b>1.310.210.064</b>	<b>1.310.210.066</b>	

# Pulse counters, electromechanical

**Standard counters**      **4 or 6 digits with/without reset, electrical reset (AC+DC)**      **Mk14 / Mk16**

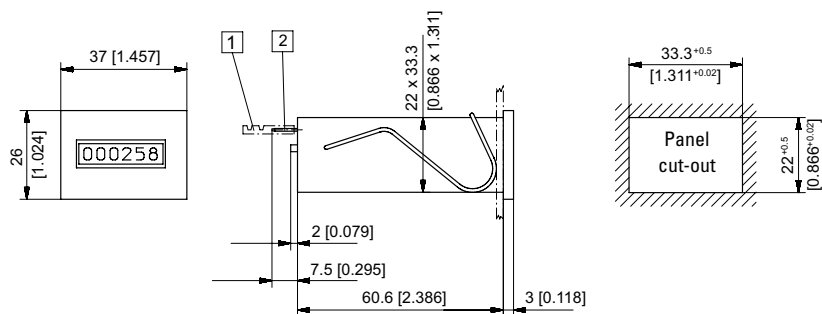
**Panel mount, front bezel with  
2 mounting holes**  
6 digits, manual reset  
**Type Mk16.11**



- 1 Flat 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 black, Art. no. 1.340.111.XXX

Type	Voltage	Display	Art. no.			
			12 V	24 V	115 V	230 V
Mk16.11	DC (10 Hz) / 0	6 digits, manual reset	1.340.110.012	1.340.110.013		
	DC (25 Hz) / 1		1.340.110.032	1.340.110.033		
	AC (18 Hz) / a			1.340.110.061	1.340.110.064	1.340.110.066

**Panel mount for clip mounting**  
6 digits, without reset  
**Type Mk16.20**



- 1 Flat 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 black, Art. no. 1.330.201.XXX

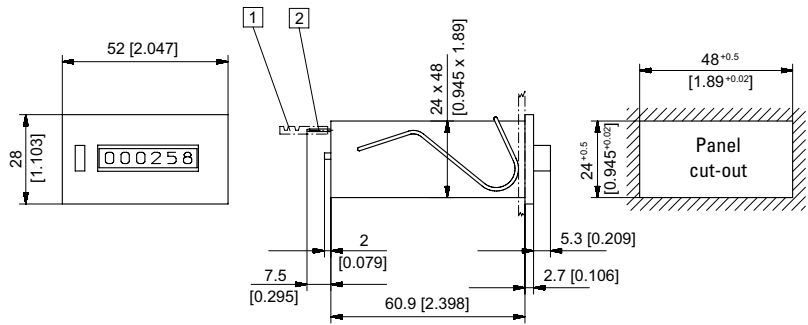
Type	Voltage	Display	Art. no.			
			12 V	24 V	115 V	230 V
Mk16.20	DC (10 Hz) / 0	6 digits, without reset	1.330.200.012	1.330.200.013		
	DC (25 Hz) / 1		1.330.200.032	1.330.200.033		
	AC (18 Hz) / a			1.330.200.061	1.330.200.064	1.330.200.066

# Pulse counters, electromechanical

**Standard counters**      **4 or 6 digits with/without reset, electrical reset (AC+DC)**      **Mk14 / Mk16**

**Panel mount for clip mounting**  
6 digits, manual reset

**Type Mk16.21**

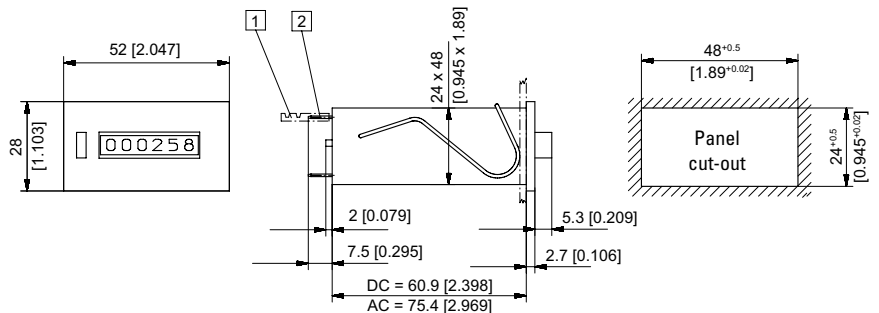


1 Flat push on connector 0.8 x 2.8 [0.032 x 0.11], tinned      2 Flat pin 0.8 x 2.8 [0.032 x 0.11], tinned  
Color of housing black, Art. no. 1.340.21 1.XXX

Type	Voltage	Display	Art. no.			
			12 V	24 V	115 V	230 V
Mk16.21	DC (10 Hz) / 0	6 digits, manual reset	1.340.210.012	1.340.210.013		
	DC (25 Hz) / 1		1.340.210.032	1.340.210.033		
	AC (18 Hz) / a			1.340.210.061	1.340.210.064	1.340.210.066

**Panel mount, for clip mounting**  
6 digits, manual and electrical reset

**Type Mk16.23**



1 Flat 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 black, Art. no. 1.340.23 1.XXX

Type	Voltage	Display	Art. no.			
			12 V	24 V	115 V	230 V
Mk16.23	DC (10 Hz) / 0	6 digits, manual and electr. reset	1.340.230.012	1.340.230.013		
	DC (25 Hz) / 1		1.340.230.032	1.340.230.033		
	AC (18 Hz) / a			1.340.230.061	1.340.230.064	1.340.230.066