

# Pulse counters, electromechanical

<b>Micro counters</b>	<b>High shock resistance (DC)</b>	<b>K 46 / K 47</b>
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The micro adding counters K 46 and K 47 boast a very high level of shock resistance. As panel mount and PCB mount counters they can be used in a wide variety of applications.

The counters are non-resettable and are highly tamper-proof thanks to their sealed (potted) housings.

### Characteristics

- 6-digit (K 46) or 7-digit (K 47) micro adding counters.
- Economical.
- Low power consumption; suitable for battery operation.
- Small dimensions, large optical figures.
- Different viewing possibilities.
- Panel mount with spring clips or PCB mount versions.

### Benefits

- Machine solderable and washable.
- High shock resistance.
- Long service life.
- IP65 protection.
- Stores values if power fails.

### Applications

General quantity counting, alarm systems, coin-operated machines, electricity meters, vending and slot machines, photocopiers, medical equipment, car washes

### Type series

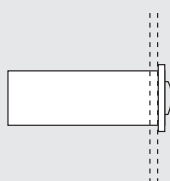
Fig.	Mounting options	Display	el. connection	IP protection	6 digits	7 digits
1)	Panel mount with latch	front side	flying leads	front side	<b>K 46.20</b>	<b>K 47.20</b>
2)	PCB mount, upright	front side	solder pins	front side/on rear	<b>K 46.80</b>	<b>K 47.80</b>
3)	PCB mount, lying	on the top	solder pins	front side/on rear	–	<b>K 47.90</b>
4)	PCB mount, hanging	front side	solder pins	front side/on rear	–	<b>K 47.91</b>
5)	PCB mount, lying	front side	solder pins	front side/on rear	<b>K 46.95</b>	–

#### Order information

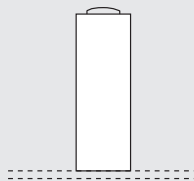
- Art. no. 1.7X0.XX0.0XX
- For options please give exact counter type, voltage and options e.g.:  
K 46.20 – 12 V DC/0 – temperature range -20°C ... +70°C [-4°F ... +158°F]

### Mounting options and position of the display

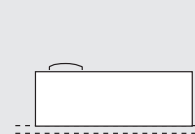
1) Panel mount  
display front side



2) PCB mount, upright  
display front side



3) PCB mount, lying  
display on the top



4) PCB mount, hanging  
display front side



5) PCB mount, lying  
display front side



Optional: PCB mount, lying  
display at the bottom



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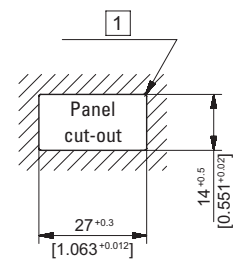
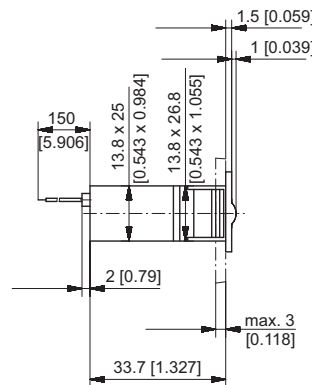
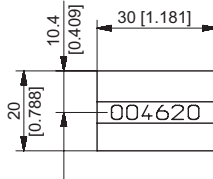
<b>Micro counters</b>	<b>High shock resistance (DC)</b>	<b>K 46 / K 47</b>
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Technical data		
<b>Electrical connection</b>	panel mount	flying leads, AWG 22 approx. 150 mm [5.91"], 6 mm [0.24"] stripped wire ends, tinned
	PCB mount	solder pins $\varnothing$ 0.64 mm [0.025"]
<b>Power consumption</b>	up to 12 V DC	approx. 70 mW
	at 24 V DC	approx. 150 mW
<b>Rated voltage</b>	1.5 / 3 / 4.5 / 5 / 6 / 12 / 24 V DC, -10% / +20%	
<b>Counting frequency</b>	max. 10 Hz (type 0)	
<b>Pulse duration / pulse interval</b>	min. 50 ms / min. 50 ms	
<b>Cycle duration factor</b>	100 %	
<b>Number of digits</b>	6 (K 46), 7 (K 47)	
<b>Counting system</b>	adding	
<b>Height of figures (optical)</b>	K 46	4 x 1.7 mm [0.16 x 0.067"]
	K 47	4 x 1.25 mm [0.16 x 0.049"]
<b>Color of figures</b>	white on black	
<b>Reset</b>	no reset	
<b>Operating temperature</b>	-10°C ... +60°C [+14°F ... +140°F] (non-condensing)	
<b>Mounting position</b>	horizontal, other on request	

<b>Operating life</b>	> 50 x 10 <sup>6</sup> pulses
<b>Soldering temperature</b>	max. 265°C [+509°F], 3 s
<b>Protection</b>	IP65 (K 46.20, K 47.20: only front side)
<b>Housing</b>	PC (Polycarbonate)
<b>Weight</b>	12 ... 14 g [0.42 ... 0.49 oz]
<b>EMC standards</b>	EN 55011 class B EN 61000-6-2, EN 61000-6-3
<b>UL approval</b>	file E128604

Options	
<b>K 46.20, K 46.80, K 47.20, K 47.80</b>	flat pin 0.8 x 2.8 mm [0.032 x 0.11"] and push on connectors
<b>K 46.20, K 47.20</b>	solder pins $\varnothing$ 0.64 mm [0.025"]
<b>Further options</b>	<ul style="list-style-type: none"> <li>- different voltages</li> <li>- counting frequency &gt; 10 Hz</li> <li>- different color of figures</li> <li>- extended temperature range: -30°C ... +85°C [-22°F ... +185°F] or -20°C ... +70°C [-4°F ... +158°F]</li> </ul>

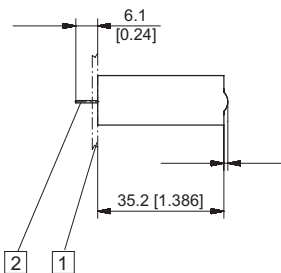
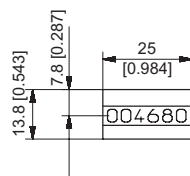
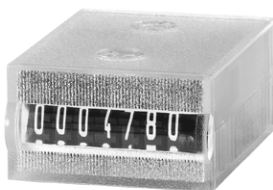
**Panel mount display front side**  
Type K 46.20 / K 47.20



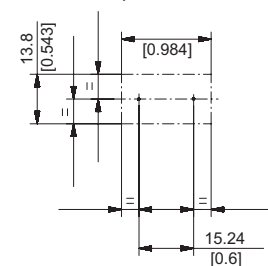
1) R<sub>max</sub> 0.5 [0.020]

Type	Voltage	Display	Art. no.						
			3 V	4.5 V	5 V	6 V	12 V	24 V	
K 46.20	DC (10 Hz) / 0	6 digits	on request	on request	on request	on request	1.700.200.012 <sup>1)</sup>	1.700.200.013 <sup>1)</sup>	
K 47.20	DC (10 Hz) / 0	7 digits	1.710.200.006	1.710.200.008	1.710.200.009	1.710.200.010	1.710.200.012 <sup>1)</sup>	1.710.200.013 <sup>1)</sup>	

**PCB mount, upright display front side**  
Type K 46.80 / K 47.80



Punching diagram for PCB (component side)



1) PCB 2) Coil connections  $\varnothing$  0.64 [0.025]

Type	Voltage	Display	Art. no.						
			3 V	4.5 V	5 V	6 V	12 V	24 V	
K 46.80	DC (10 Hz) / 0	6 digits	on request	on request	on request	on request	1.700.800.012	1.700.800.013 <sup>1)</sup>	
K 47.80	DC (10 Hz) / 0	7 digits	1.710.800.006	1.710.800.008	1.710.800.009	1.710.800.010	1.710.800.012	1.710.800.013	

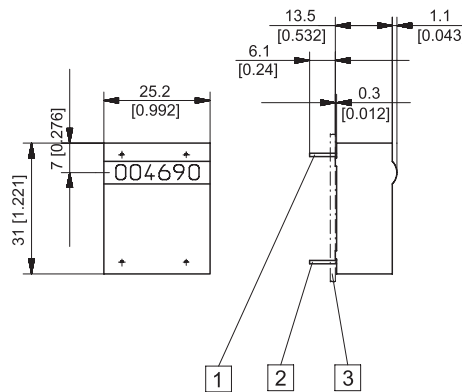
Dimensions in mm [inch]

1) Stock types.

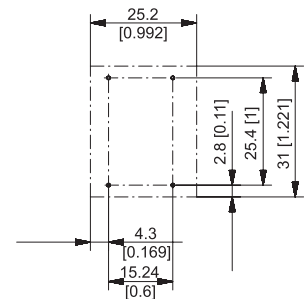
# Pulse counters, electromechanical

**Micro counters**      **High shock resistance (DC)**      **K 46 / K 47**

**PCB mount, lying display front side**  
Type K 47.90



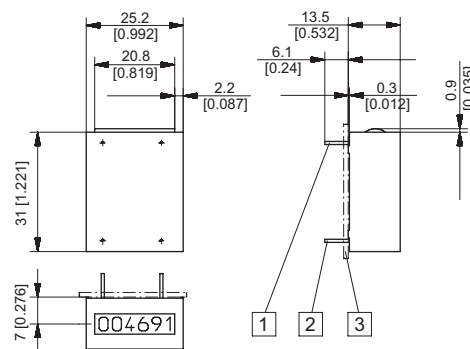
Punching diagram for PCB (component side)



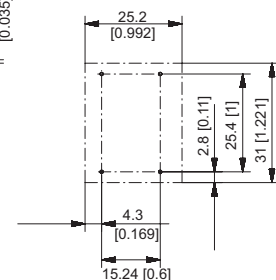
1 Mounting pin without el. function  $\varnothing$  0.64 [0.025]    2 Coil connections  $\varnothing$  0.64 [0.025]    3 PCB

Type	Voltage	Display	Art. no.							
			3 V	4.5 V	5 V	6 V	12 V	24 V		
K 47.90	DC (10 Hz) / 0	7 digits	1.710.900.006	1.710.900.008	1.710.900.009	1.710.900.010	1.710.900.012	1.710.900.013		

**PCB mount, hanging display front side**  
Type K 47.91



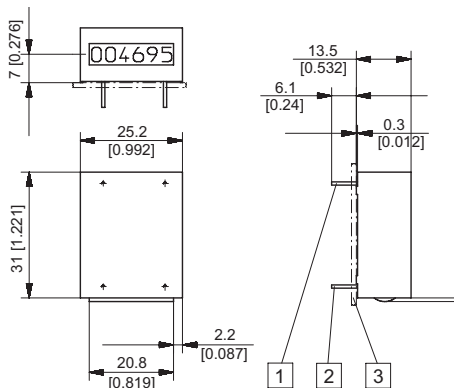
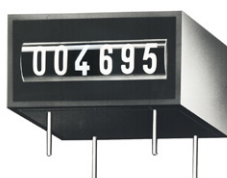
Punching diagram for PCB (component side)



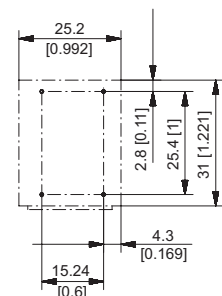
1 Mounting pin without el. function  $\varnothing$  0.64 [0.025]    2 Coil connections  $\varnothing$  0.64 [0.025]    3 PCB

Type	Voltage	Display	Art. no.							
			3 V	4.5 V	5 V	6 V	12 V	24 V		
K 47.91	DC (10 Hz) / 0	7 digits	1.710.910.006	1.710.910.008	1.710.910.009	1.710.910.010	1.710.910.012	1.710.910.013		

**PCB mount, lying display front side**  
Type K 46.95



Punching diagram for PCB (component side)



1 Mounting pin without el. function  $\varnothing$  0.64 [0.025]    2 Coil connections  $\varnothing$  0.64 [0.025]    3 PCB

Type	Voltage	Display	Art. no.							
			3 V	4.5 V	5 V	6 V	12 V	24 V		
K 46.95	DC (10 Hz) / 0	6 digits	on request	on request	1.700.950.009	on request	1.700.950.012	1.700.950.013		

Dimensions in mm [inch]