

# Pulse counters, electromechanical

**Micro counters**      **Magnetic field resistant and high shock resistance (DC)**      **K66 / K67**



The micro adding counters K66 (6-digit) and K67 (7-digit) boast a very high level of shock resistance and, as a result of the patented ACR counting system, are not affected by magnetic fields.

They can be used as either panel mount or as PCB mount devices in a wide variety of application areas, where a high level of resistance against tampering is required.

## Characteristics

- Not affected by magnetic fields, as moving parts are made of plastic or non-ferrous metal (patented system)
- Maximum shock resistance, as a counter-rotating movement is required for counting, ACR system (Air Coil Reverse, patented)
- Low power consumption; suitable for battery operation
- Very compact size, large figures
- Different viewing possibilities

## Benefits

- Machine solderable and washable
- IP65 protection
- Long service life
- Stores values if power fails

## Applications

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

## Type series

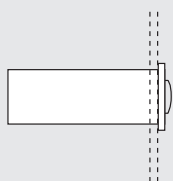
Fig.	Mounting options	Display	el. connection	IP protection	6 digits	7 digits
1)	Panel mount with latch	front side	flying leads	front side	–	<b>K67.20</b>
2)	PCB mount, upright	front side	solder pins	front side/on rear	–	<b>K67.80</b>
3)	PCB mount, lying	on the top	solder pins	front side/on rear	–	<b>K67.90</b>
4)	PCB mount, hanging	front side	solder pins	front side/on rear	<b>K66.91</b>	<b>K67.91</b>
5)	PCB mount, lying	front side	solder pins	front side/on rear	<b>K66.95</b>	<b>K67.95</b>

### Order information

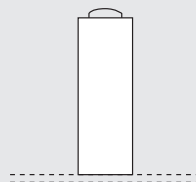
- Art. no. 1.680.9X0.0XX
- For options please give exact counter type, voltage and options e.g.:  
K67.20 – 9 V DC/0 – temperature range -20 °C ... +70 °C [-4 °F ... +158 °F]

## Mounting options and position of the display

1) Panel mount  
display front side



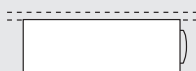
2) PCB mount, upright  
display front side



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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Technical data		
<b>Electrical connection</b>	panel mout PCB mount	flying leads, AWG 22 approx. 150 mm [5.91"], 6 mm [0.24"] stripped wire ends, tinned solder pins ø 0.64 mm [0.025"]
<b>Power consumption:</b> at 20 °C [68 °F]	up to 6 V DC up to 12 V DC at 24 V DC	approx. 70 mW approx. 120 mW approx. 500 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>Counting system</b>	adding	
<b>Height of figures (optical)</b>	K66 K67	4 x 1.7 mm [0.16 x 0.067"] 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>9</sup> pulses	
<b>Soldering temperature</b>	max. 265 °C [+509 °F], 3 s	
<b>Protection</b>	IP65 (K66.20, K67.20: only front side)	
<b>Housing</b>	PC (Polycarbonate), transparent types with protection IP65 are sealed	
<b>Weight</b>	9 ... 11 g [0.32 ... 0.39 oz]	

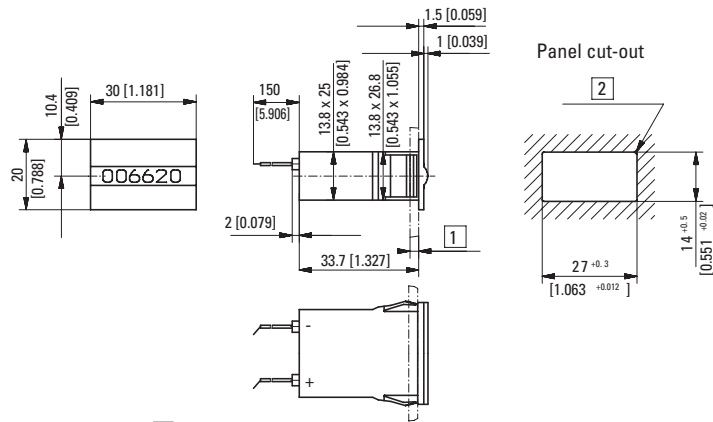
Options	
<b>K66.20, K66.80, K67.20, K67.80</b>	flat pin 0.8 x 2.8 mm [0.032 x 0.11"] and push on connectors X.XX7.XXX.XXX
<b>K66.20, K67.20</b>	solder pins ø 0.64 mm [0.025"] X.XX1.XXX.XXX
<b>K66.80, K67.80</b>	flying leads, AWG 22 approx. 150 mm [5.91"]
<b>Further options</b>	<ul style="list-style-type: 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> <li>- solderable and washable version</li> </ul>

Approvals		
<b>CE compliant</b> in accordance with		
EMC Directive		2014/30/EU
RoHS Directive		2011/65/EU
Low Voltage Directive		2014/35/EU
<b>UKCA compliant</b> in accordance with		
EMC Regulations		S.I. 2016/1091
RoHS Regulations		S.I. 2012/3032
Low Voltage Regulations		S.I. 2016/1101

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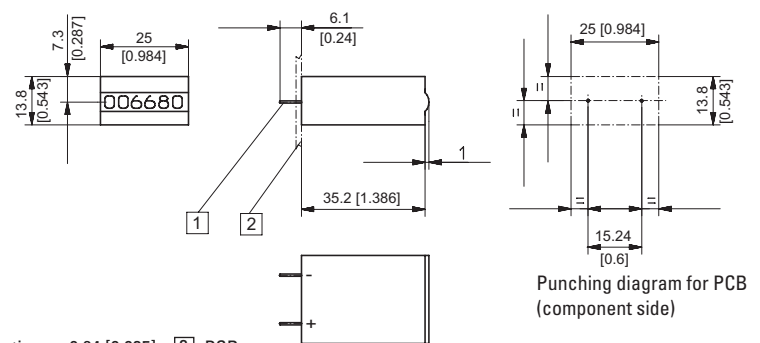
**Panel mount with latch display front side**  
Type K67.20



1) 1.2 ... 3 mm [0.047 x 0.12]    2) 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
K67.20	DC (10 Hz) / 0	7 digits	1.660.200.006	1.660.200.008	1.660.200.009 <sup>1)</sup>	1.660.200.010	1.660.200.012 <sup>1)</sup>	1.660.200.013 <sup>1)</sup>

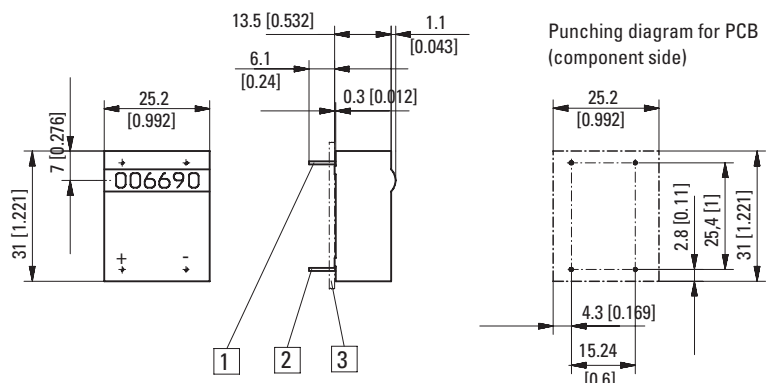
**PCB mount upright display front side**  
Type K67.80



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

Type	Voltage	Display	Art. no.					
			3 V	4.5 V	5 V	6 V	12 V	24 V
K67.80	DC (10 Hz) / 0	7 digits	1.660.800.006	1.660.800.008	1.660.800.009	1.660.800.010	1.660.800.012	1.660.800.013

**PCB mount, lying display on the top**  
Type K67.90



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
K67.90	DC (10 Hz) / 0	7 digits	1.660.900.006	1.660.900.008	1.660.900.009	1.660.900.010	1.660.900.012	1.660.900.013

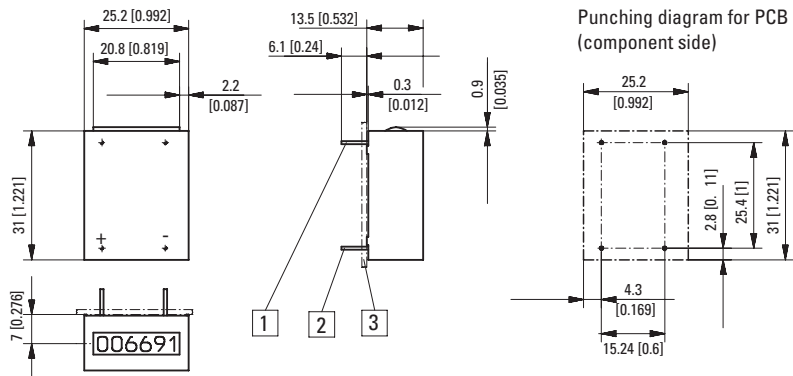
# Pulse counters, electromechanical

## Micro counters

## Magnetic field resistant and high shock resistance (DC)

## K66 / K67

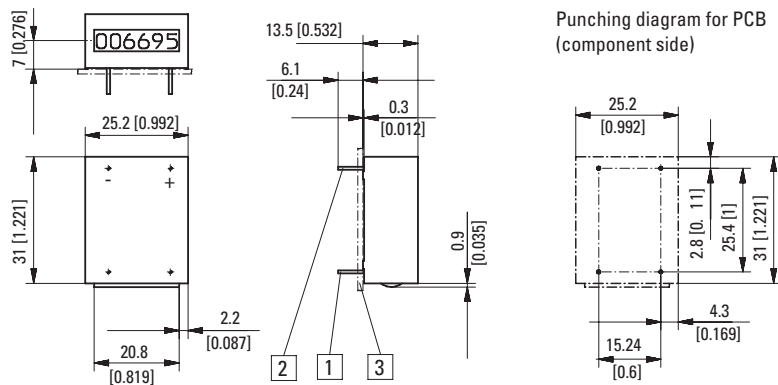
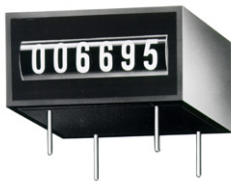
PCB mount, hanging  
display front side  
Type K66.91 / K67.91



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		
K66.91	DC (10 Hz) / 0	6 digits	on request	on request	1.650.910.009	on request	1.650.910.012	1.650.910.013		
K67.91	DC (10 Hz) / 0	7 digits	1.660.910.006	1.660.910.008	1.660.910.009	1.660.910.010	1.660.910.012	1.660.910.013		

PCB mount lying  
display front side  
Type K66.95 / K67.95



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		
K66.95	DC (10 Hz) / 0	6 digits	on request	on request	1.650.950.009	on request	1.650.950.012	1.650.950.013		
K67.95	DC (10 Hz) / 0	7 digits	1.660.950.006	1.660.950.008	1.660.950.009	1.660.950.010	1.660.950.012	1.660.950.013		