

Pulse counters, electromechanical

Micro counters	Magnetic field resistant and high shock resistance (DC)	K 66 / K 67
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The micro adding counters K 66 (6-digit) and K 67 (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

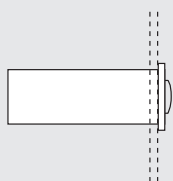
Fig.	Mounting options	Display	el. connection	IP protection	6 digits	7 digits
1)	Panel mount with latch	front side	flying leads	front side	–	K 67.20
2)	PCB mount, upright	front side	solder pins	front side/on rear	–	K 67.80
3)	PCB mount, lying	on the top	solder pins	front side/on rear	–	K 67.90
4)	PCB mount, hanging	front side	solder pins	front side/on rear	K 66.91	K 67.91
5)	PCB mount, lying	front side	solder pins	front side/on rear	K 66.95	K 67.95

Order information

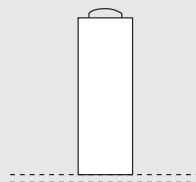
- Art. no. 1.680.9X0.0XX
- For options please give exact counter type, voltage and options e.g.:
K 67.20 – 9 V DC/0 – temperature range -20°C ... +70°C [-4°F ... +158°F]

Mounting options and position of the display

1) Panel mount
display front side



2) PCB mount, upright
display front side



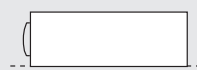
3) PCB mount, lying
display on the top



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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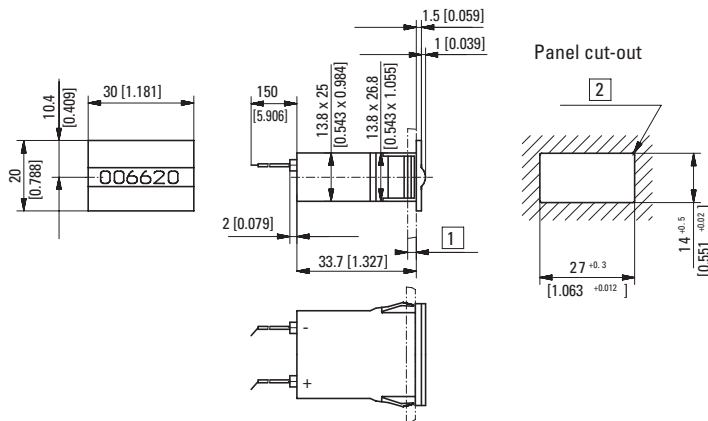
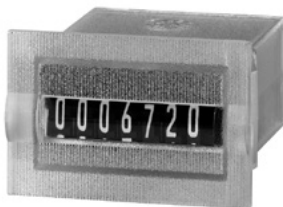
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Technical data		
Electrical connection	panel mount	flying leads, AWG 22 approx. 150 mm [5.91"], 6 mm [0.24"] stripped wire ends, tinned
	PCB mount	solder pins \varnothing 0.64 mm [0.025"]
Power consumption: at 20°C [68°F]	up to 6 V DC	approx. 70 mW
	up to 12 V DC at 24 V DC	approx. 120 mW approx. 500 mW
Rated voltage	1.5 / 3 / 4.5 / 5 / 6 / 12 / 24 V DC, -10 % / +20 %	
Counting frequency	max. 10 Hz (type 0)	
Pulse duration / pulse interval	min. 50 ms / min. 50 ms	
Cycle duration factor	100 %	
Counting system	adding	
Height of figures (optical)	K 66	4 x 1.7 mm [0.16 x 0.067"]
	K 67	4 x 1.25 mm [0.16 x 0.049"]
Color of figures	white on black	
Reset	no reset	
Operating temperature	-10°C ... +60°C [+14°F ... +140°F] (non-condensing)	
Mounting position	horizontal, other on request	
Operating life	> 50 x 10 ⁶ pulses	
Soldering temperature	max. 265°C [+509°F], 3 s	

Protection	IP65 (K 66.20, K 67.20: only front side)
Housing	PC (Polycarbonate), transparent types with protection IP65 are sealed
Weight	9 ... 11 g [0.32 ... 0.39 oz]
EMC standards	EN 55011 class B EN 61000-6-2, EN 61000-6-3

Options	
K 66.20, K 66.80, K 67.20, K 67.80	flat pin 0.8 x 2.8 mm [0.032 x 0.11"] and push on connectors X.XX7.XXX.XXX
K 66.20, K 67.20	solder pins \varnothing 0.64 mm [0.025"] X.XX1.XXX.XXX
K 66.80, K 67.80	flying leads, AWG 22 approx. 150 mm [5.91"]
Further options	<ul style="list-style-type: none"> - different voltages - counting frequency > 10 Hz - different color of figures - extended temperature range -30°C ... +85°C [-22°F ... +185°F] or -20°C ... +70°C [-4°F ... +158°F] - solderable and washable version

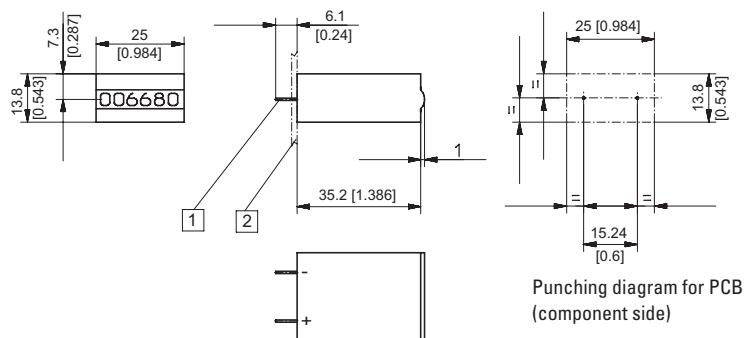
Panel mount with latch display front side Type K 67.20



1) 1.2 ... 3 mm [0.047 x 0.12] 2) R_{max} 0.5 [0.020]

Type	Voltage	Display	Art. no.					
			3 V	4.5 V	5 V	6 V	12 V	24 V
K 67.20	DC (10 Hz) / 0	7 digits	1.660.200.006	1.660.200.008	1.660.200.009 ¹⁾	1.660.200.010	1.660.200.012 ¹⁾	1.660.200.013 ¹⁾

PCB mount upright display front side Type K 67.80



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
K 67.80	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

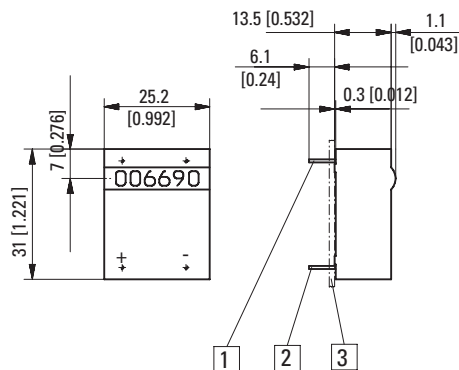
Dimensions in mm [inch]

1) Stock types.

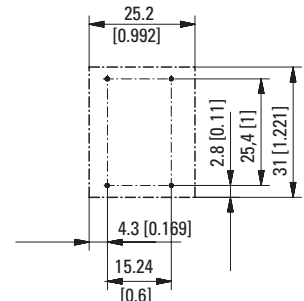
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PCB mount, lying display on the top
Type K 67.90



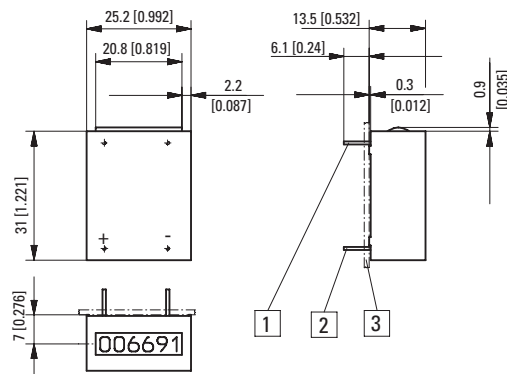
Punching diagram for PCB (component side)



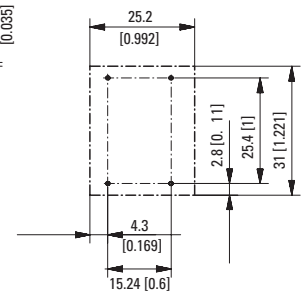
1 Mounting pin without el. function \varnothing 0.64 [0.025] 2 Coil connections \varnothing 0.64 [0.025] 3 PCB

Type	Voltage	Display	Art. no.					
			3 V	4.5 V	5 V	6 V	12 V	24 V
K 67.90	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

PCB mount, hanging display front side
Type K 66.91 / K 67.91



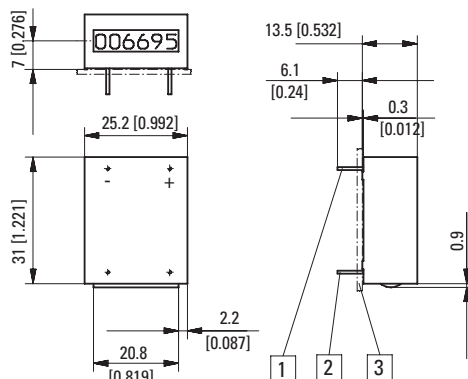
Punching diagram for PCB (component side)



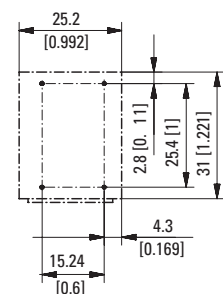
1 Mounting pin without el. function \varnothing 0.64 [0.025] 2 Coil connections \varnothing 0.64 [0.025] 3 PCB

Type	Voltage	Display	Art. no.					
			3 V	4.5 V	5 V	6 V	12 V	24 V
K 66.91	DC (10 Hz) / 0	6 digits	on request	on request	1.650.910.009	on request	1.650.910.012	1.650.910.013
K 67.91	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 K 66.95 / K 67.95



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 66.95	DC (10 Hz) / 0	6 digits	on request	on request	1.650.950.009	on request	1.650.950.012	1.650.950.013
K 67.95	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

Dimensions in mm [inch]