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

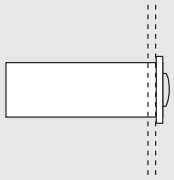
Fig.	*Mounting options*	*Display*	*el. connection*	*IP protection*	*6 digits*	*7 digits*
1)	Panel mount with latch	front side	flying leads	front side	–	**K67.20**
2)	PCB mount, upright	front side	solder pins	front side/on rear	–	**K67.80**
3)	PCB mount, lying	on the top	solder pins	front side/on rear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

Order information

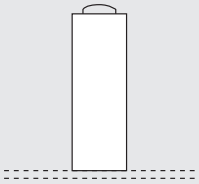
- Art. no. 1.680.9X0.0XX
- For options please give exact counter type, voltage and options e.g.:
  K67.20 – 9 V DC/0 – temperature range -20 °C ... +70 °C [-4 °F ... +158 °F]

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

Electrical connection	panel mout	flying leads, AWG 22 approx. 150 mm [5.91“], 6 mm [0.24“] stripped wire ends, tinned
	PCB mount	solder pins ø 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	approx. 120 mW
	at 24 V DC	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)	K66	4 x 1.7 mm [0.16 x 0.067“]
	K67	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 (K66.20, K67.20: only front side)
Housing		PC (Polycarbonate), transparent types with protection IP65 are sealed
Weight		9 ... 11 g [0.32 ... 0.39 oz]

Options

K66.20, K66.80, K67.20, K67.80	flat pin 0.8 x 2.8 mm [0.032 x 0.11“] and push on connectors X.XX**7**.XXX.XXX
K66.20, K67.20	solder pins ø 0.64 mm [0.025“] X.XX**1**.XXX.XXX
K66.80, K67.80	flying leads, AWG 22 approx. 150 mm [5.91“]
Further options	- 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

Approvals

CE compliant in accordance with	
EMC Directive	2014/30/EU
RoHS Directive	2011/65/EU
Low Voltage Directive	2014/35/EU
UKCA compliant 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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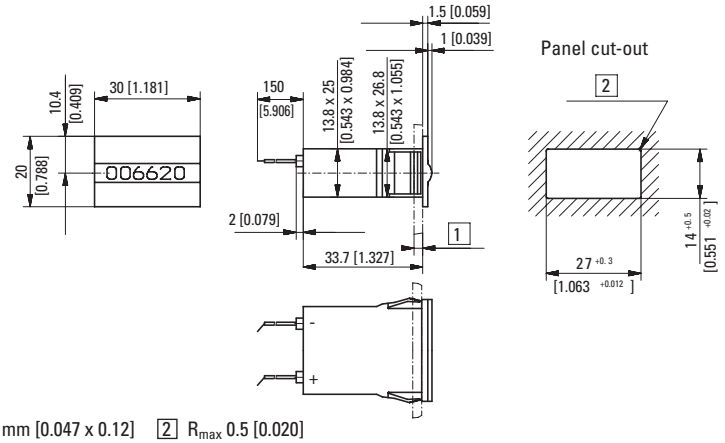
Panel mount with latch display front side Type K67.20



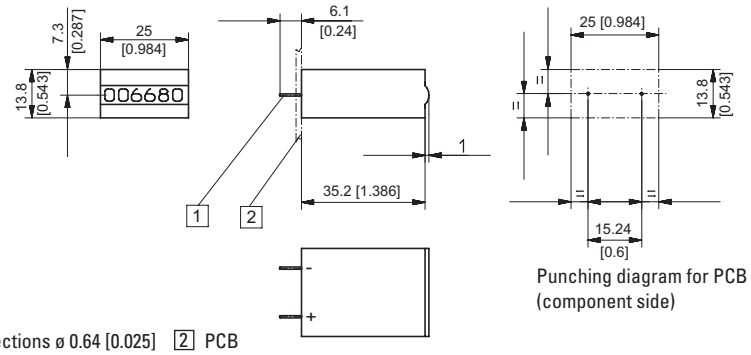


1 1.2 ... 3 mm [0.047 x 0.12] 2 R_{max} 0.5 [0.020]

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** 1)	**1.660.200.010**	**1.660.200.012** 1)	**1.660.200.013** 1)	

PCB mount upright display front side Type K67.80





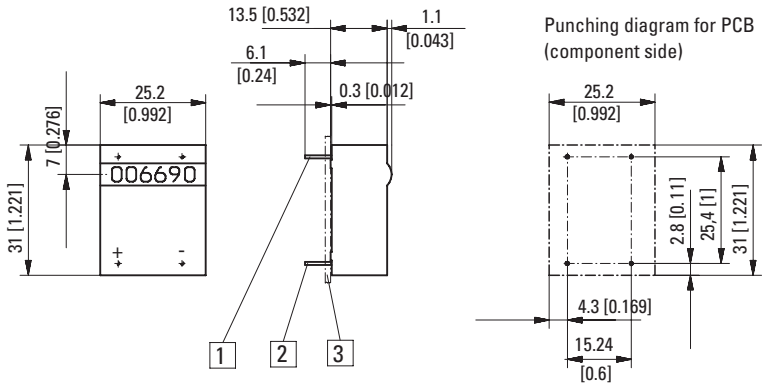
Punching diagram for PCB (component side)

1 Coil connections ø 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





Punching diagram for PCB (component side)

1 Mounting pin without el. function ø 0.64 [0.025] 2 Coil connections ø 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**	

Dimensions in mm [inch]

1) Stock types.

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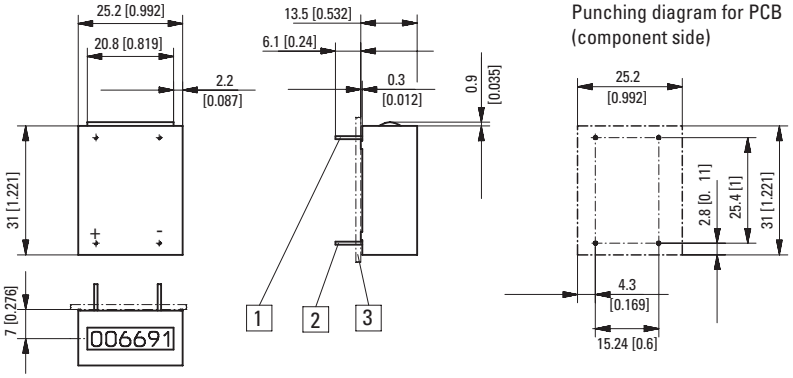
PCB mount, hanging display front side Type K66.91 / K67.91

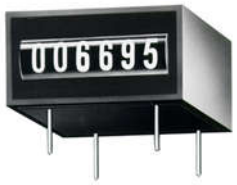


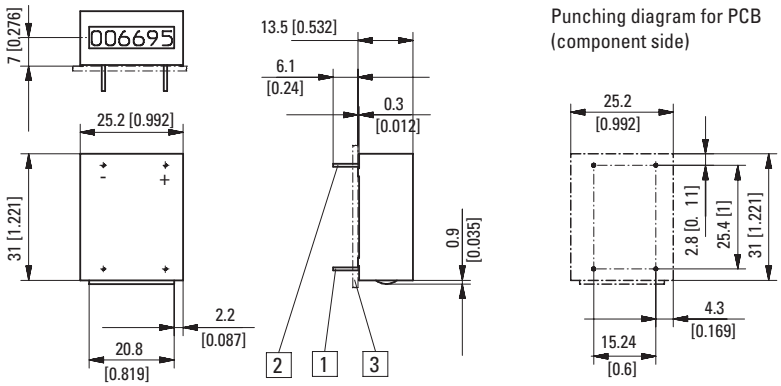


1 Mounting pin without el. function ø 0.64 [0.025] 2 Coil connections ø 0.64 [0.025] 3 PCB

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 ø 0.64 [0.025] 2 Coil connections ø 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**	

Dimensions in mm [inch]

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