Pulse counters, electromechanical

Micro counters | **High shock resistance (DC)** | **K46 / K47**



The micro adding counters K46 and K47 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 (K46) or 7-digit (K47) 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	**K46.20**	**K47.20**
2)	PCB mount, upright	front side	solder pins	front side/on rear	**K46.80**	**K47.80**
3)	PCB mount, lying	on the top	solder pins	front side/on rear	–	**K47.90**
4)	PCB mount, hanging	front side	solder pins	front side/on rear	–	**K47.91**
5)	PCB mount, lying	front side	solder pins	front side/on rear	**K46.95**	–

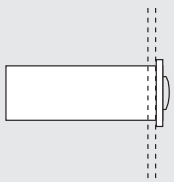
Order information

· Art. no. 1.7X0.XX0.0XX

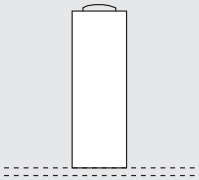
· For options please give exact counter type, voltage and options e.g.:
K46.20 – 12 V DC/0 – temperature range -20 °C ... +70 °C [-4 °F ... +158 °F]

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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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	up to 12 V DC	approx. 70 mW
	at 24 V DC	approx. 150 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 %
Number of digits		6 (K46), 7 (K47)
Counting system		adding
Height of figures (optical)	K46	4 x 1.7 mm [0.16 x 0.067“]
	K47	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 (K46.20, K47.20: only front side)
Housing		PC (Polycarbonate)
Weight		12 ... 14 g [0.42 ...0.49 oz]

Options

K46.20, K46.80, K47.20, K47.80	flat pin 0.8 x 2.8 mm [0.032 x 0.11“] and push on connectors
K46.20, K47.20	solder pins ø 0.64 mm [0.025“]
Further options	- different voltages - counting frequency > 10 Hz - differend color of figures - extended temperature range: -30 °C ... +85 °C [-22 °F ... +185 °F] or -20 °C ... +70 °C [-4 °F ... +158 °F]

Approvals

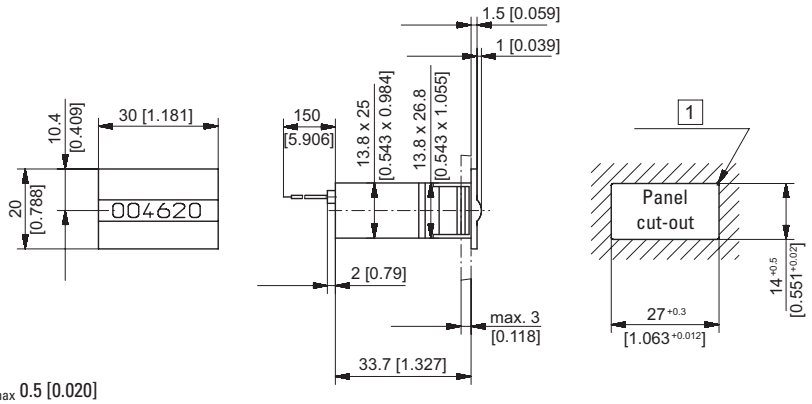
UL compliant in accordance with	File no. E128604
CE compliant in accordance with	
EMC Directive	2014/30/EU
RoHS Directive	2011/65/EU
Low Voltage Directive	2014/35/EU
UKCA compliant in accordance with	
EMC Regulations	S.I. 2016/1091
RoHS Regulations	S.I. 2012/3032
Low Voltage Regulations	S.I. 2016/1101

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Panel mount
display front side
Type K46.20 / K47.20

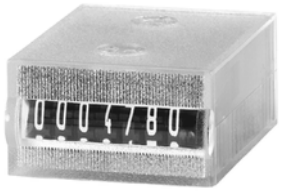


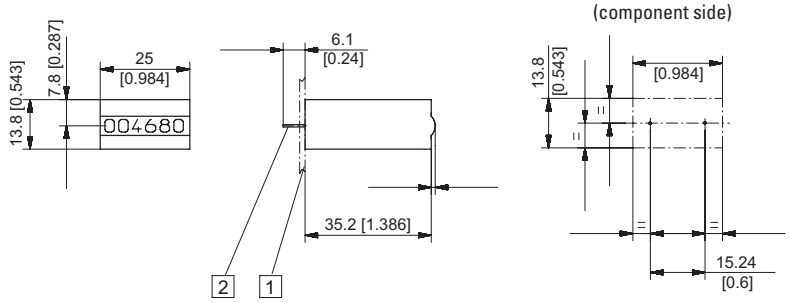


1 R_{max} 0.5 [0.020]

Type	Voltage	Display	Art. no. 3 V	4.5 V	5 V	6 V	12 V	24 V	
K46.20	DC (10 Hz) / 0	6 digits	**on request**	**on request**	**on request**	**on request**	**1.700.200.012** 1)	**1.700.200.013** 1)	
K47.20	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** 1)	**1.710.200.013** 1)	

PCB mount, upright
display front side
Type K46.80 / K47.80



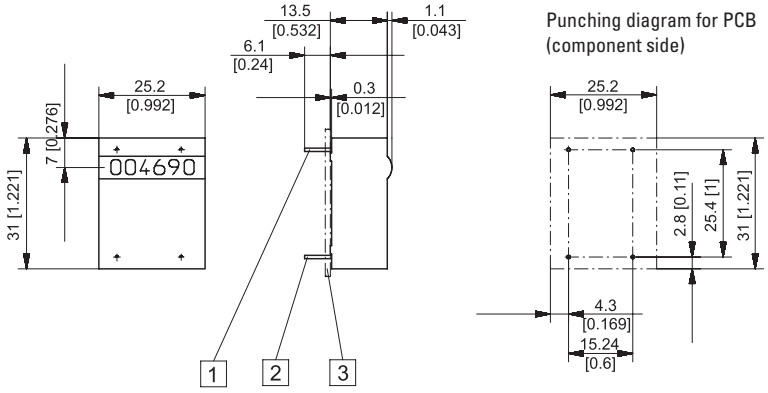


1 PCB 2 Coil connections ø 0.64 [0.025]

Type	Voltage	Display	Art. no. 3 V	4.5 V	5 V	6 V	12 V	24 V	
K46.80	DC (10 Hz) / 0	6 digits	**on request**	**on request**	**on request**	**on request**	**1.700.800.012**	**1.700.800.013** 1)	
K47.80	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**	

PCB mount, lying
display on the top
Type K47.90





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	
K47.90	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**	

Dimensions in mm [inch]

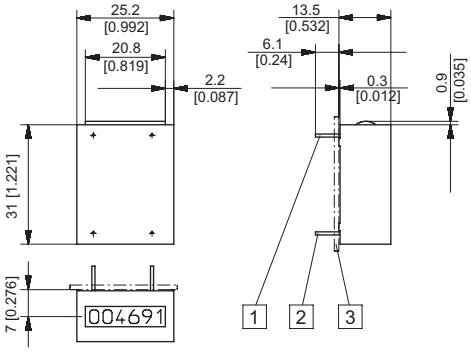
1) Stock types.

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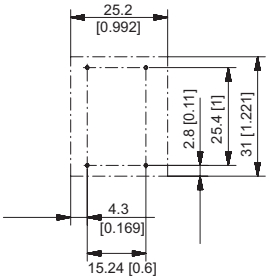
Micro counters | High shock resistance (DC) | K46 / K47

PCB mount, hanging display front side Type K47.91





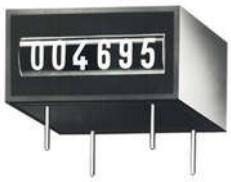
Punching diagram for PCB (component side)

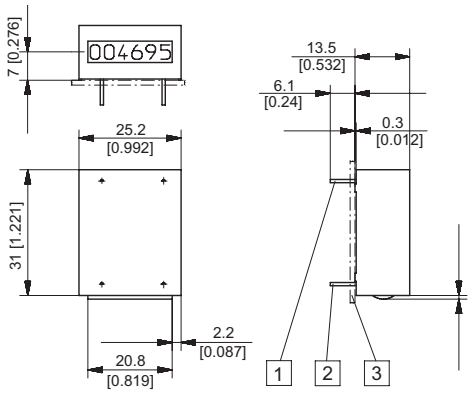


1 Mounting pin without el. function ø 0.64 [0.025] 2 Coil connections ø 0.64 [0.025] 3 PCB

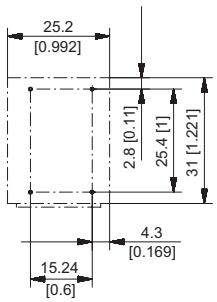
Type	Voltage	Display	Art. no. 3 V	4.5 V	5 V	6 V	12 V	24 V
K47.91	DC (10 Hz) / 0	7 digits	**1.710.910.006**	**1.710.910.008**	**1.710.910.009**	**1.710.910.010**	**1.710.910.012**	**1.710.910.013**

PCB mount, lying display front side Type K46.95





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
K46.95	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]

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