

The micro adding counter families K 04 to K 07 and AK 07 are available in a very wide variety of models and can be used in both DC as well as in AC applications.

As panel mount, base mount and PCB mount counters with a very high level of shock resistance they can be used for numerous diverse application areas.

Characteristics

- Low power consumption; suitable for battery operation.
- Very compact size, large optical figures.
- Different viewing possibilities.
- Panel mount counter with moulded spring clips, base mount counter with screw fixing or PCB mount versions.
- Version with additional magnetic shielding thanks to sheet-steel enclosure (K 0X.40 and K 0X.50).

Benefits

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

Applications

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

Type series

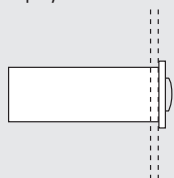
Fig.	Mounting options	Display	Housing	IP protection	4 digits	5 digits	6 digits	7 digits
1)	Panel mount with latch	front side	plastic	front side	K 04.20	K 05.20	K 06.20	K 07.20
2)	PCB mount, lying	on the top	sheet steel	–	K 04.40	–	–	K 07.40
3)	PCB mount, hanging	front side	sheet steel	–	–	–	–	K 07.50
4)	PCB mount, upright	front side	plastic	front side	–	–	K 06.80	K 07.80
5)	PCB mount, lying	on the top	plastic	front side/on rear	–	–	–	K 07.90
6)	Base mount, upright	front side	plastic	front side	–	–	–	AK 07.00

Order information

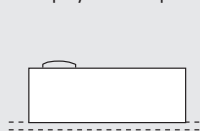
- Art.-No.
- For options please give exact counter type, voltage and options e.g.: K 06.20 – 9 V DC/0 – temperature range -20°C ... +70°C [-4°F ... +158°F]

Mounting options and position of the display

1) Panel mount / display front side



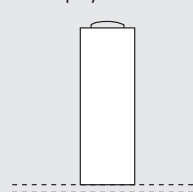
2) PCB mount, lying / display on the top



3) PCB mount, hanging / display front side



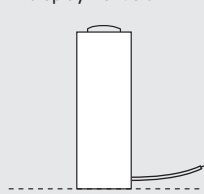
4) PCB mount, upright / display front side



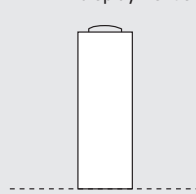
5) PCB mount, lying / display on the top



6) Base mount upright / display front side



Optional: PCB mount, upright / display front side



Pulse counters, electromechanical

Micro counters	High shock resistance (AC+DC)	K 04 ... K 07 / AK 07
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Technical data		
Electrical connection		
Panel mount, base mount	flying leads, AWG 22 approx. 150 mm [5.91"], 6 mm [0.24"] stripped wire ends, tinned	
PCB mount	solder pins \varnothing 0.4 x 1.2 mm [0.016 x 0.047"]	
Power consumption (at 20°C [68°F] and normal voltage)		
at 10 Hz (type 0)	approx. 50 mW	
at 25 Hz (type 1)	approx. 250 mW	
at 10 Hz (type a0)	approx. 800 mVA	
Rated voltage		
type 0	1.5/3/4.5/5/6/12/24 V DC, -10%, +20%	
type 1	3/4.5/5/6/12/24 V DC, \pm 10%	
type a0	12/24/115/230 V AC, \pm 10%	
Counting frequency		
max. 10 and 25 Hz		
Pulse duration		
at 10 Hz (type 0 and a0)	min. 50 ms	
at 25 Hz (type 1)	min. 20 ms	
Pulse interval		
at 10 Hz (type 0 a0)	min. 50 ms	
at 25 Hz (type 1)	min. 20 ms	
Cycle duration factor		
100 %		
Number of digits		
4, 5, 6 and 7		
Counting system		
adding		
Height of figures		
K 04, K 06, AK 06	4 x 1.7 mm [0.16 x 0.067"]	
(optical) K 05, K 07, AK 07	4 x 1.2 mm [0.16 x 0.047"]	
Colour 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	
Soldering temperature	265°C [+509°F], 3 s	
Operating life	> 50 x 10 ⁶ pulses	
Solderable and wash proof types	K 0X.92, K 06.90, K 07.90	
Protection	K 0X.92, K 0X.90	IP65
	AK 0X.00, K 0X.80, K 0X.20	IP65 (only front side)
	other types	depending on kind of mounting
UL approval	File E43429	
Housing	PC (Polycarbonate), transparent or sheet steel types (see table) with IP65 protection, fully sealed (potted)	
Weight	15 ... 18 g [0.53 ... 0.63 oz]	

Options		
K 0x.20	flat pin 0.5 x 2.8 mm [0,020 x 0.11"] Art.-No.: 1.1X7.XX0.XXX	
	flat pin 0.4 x 1.2 mm [0,016 x 0.047"] Art.-No.: 1.1X9.XX0.XXX	
	– different voltages	
	– version not potted	
	– different figure colours	
	– different lengths of flying leads	
	– different connections	
	– different temperature range, depends on version	
	-30°C ... +85°C [-22°F ... +185°F] or	
	-20°C ... +70°C [-4°F ... +158°F]	

Pulse
counters

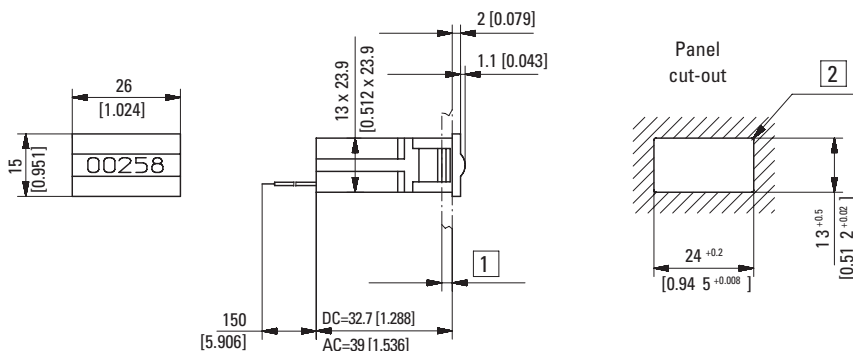
Pulse counters, electromechanical

Micro counters

High shock resistance (AC+DC)

K 04 ... K 07 / AK 07

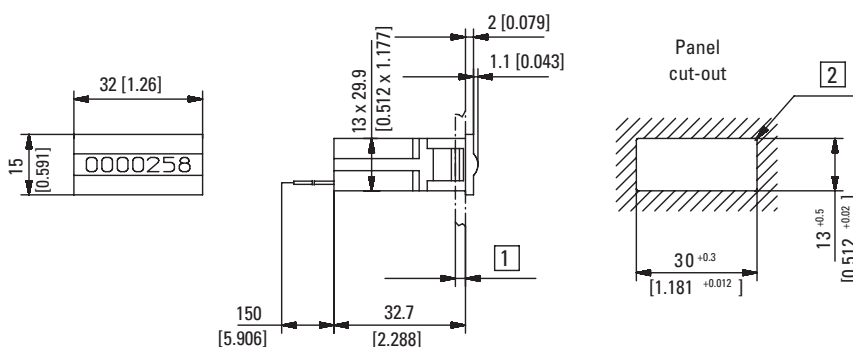
**Panel mount counter
4- and 5-digit display front side
Type K 04.20 / K 05.20**



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

Type	Voltage	Display	Art.-No.							
			3 V	4.5 V	12 V	24 V	115 V	230 V		
K 04.20	DC (10 Hz) / 0	4 digits	1.100.200.006	1.100.200.008	on request	on request	1.100.200.054	1.100.200.056		
	DC (25 Hz) / 1				1.100.200.032	1.100.200.033				
	AC (10 Hz) / a0				1.100.200.051					
K 05.20	DC (10 Hz) / 0	5 digits	1.110.200.006	1.110.200.008	on request	1.110.200.013 ¹⁾	1.110.200.054	1.110.200.056 ¹⁾		
	DC (25 Hz) / 1				1.110.200.032	1.110.200.033				
	AC (10 Hz) / a0				1.110.200.051					

**Panel mount counter
6- and 7-digit display front side
Type K 06.20 / K 07.20**



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

Type	Voltage	Display	Art.-No.							
			3 V	4.5 V	12 V	24 V	115 V	230 V		
K 06.20	DC (10 Hz) / 0	6 digits	1.120.200.006	1.120.200.008	on request	1.120.200.013	1.120.200.054	1.120.200.056		
	DC (25 Hz) / 1				1.120.200.032	1.120.200.033				
	AC (10 Hz) / a0				1.120.200.051					
K 07.20	DC (10 Hz) / 0	7 digits	1.130.200.006	1.130.200.008	1.130.200.012 ¹⁾	1.130.200.013	1.130.200.054 ¹⁾	1.130.200.056		
	DC (25 Hz) / 1				1.130.200.032 ¹⁾	1.130.200.033 ¹⁾				
	AC (10 Hz) / a0				1.130.200.051					

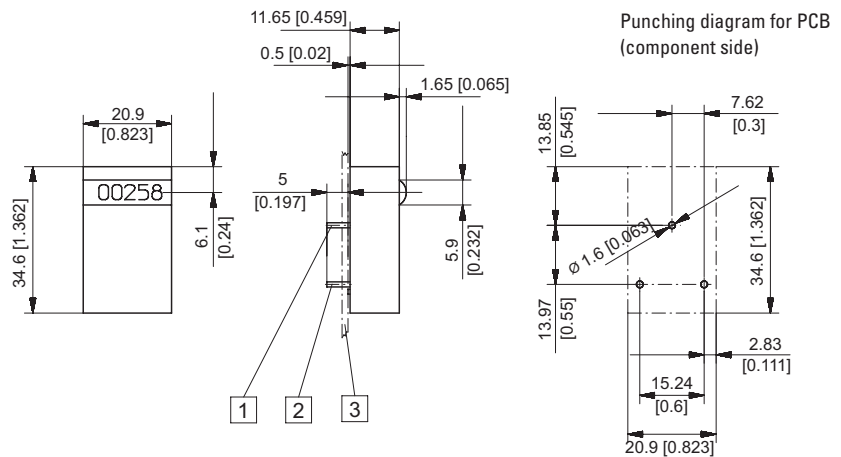
Pulse counters, electromechanical

Micro counters **High shock resistance (AC+DC)** **K 04 ... K 07 / AK 07**

PCB mount, lying
4- digit display on the top

Type K 04.40

Colour of housing blue (zinc-plated)



1) Mounting pin without el. function 0.4 x 1.2 [0.016 x 0.047]

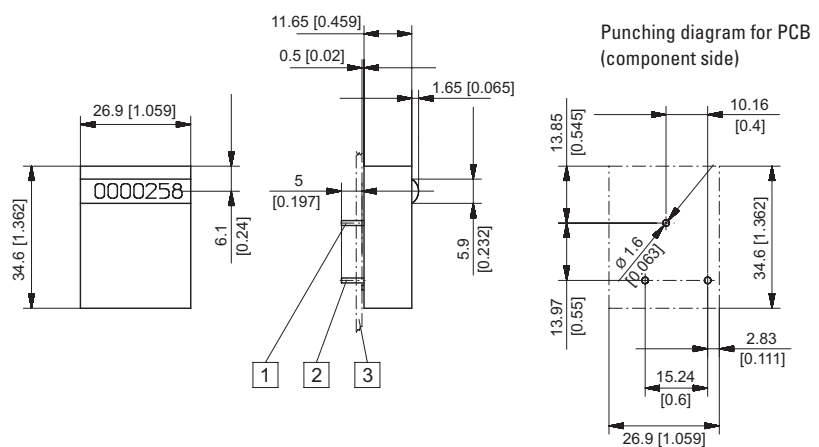
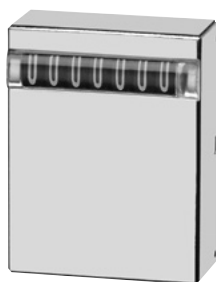
2) Coil connections 0.4 x 1.2 [0.016 x 0.047] 3) PCB

Type	Voltage	Display	Art.-No.			
			3 V	4.5 V	12 V	24 V
K 04.40	DC (10 Hz) / 0	4 digits	1.100.401.006	1.100.401.008	on request	on request
	DC (25 Hz) / 1				1.100.401.032	1.100.401.033

PCB mount, lying
7-digit display on the top

Type K 07.40

Colour of housing blue (zinc-plated)



1) Mounting pin without el. function 0.4 x 1.2 [0.016 x 0.047]

2) Coil connections 0.4 x 1.2 [0.016 x 0.047] 3) PCB

Type	Voltage	Display	Art.-No.			
			3 V	4.5 V	12 V	24 V
K 07.40	DC (10 Hz) / 0	7 digits	1.130.401.006	1.130.401.008 ¹⁾	on request	on request
	DC (25 Hz) / 1				1.130.401.032	1.130.401.033

Pulse counters, electromechanical

Micro counters

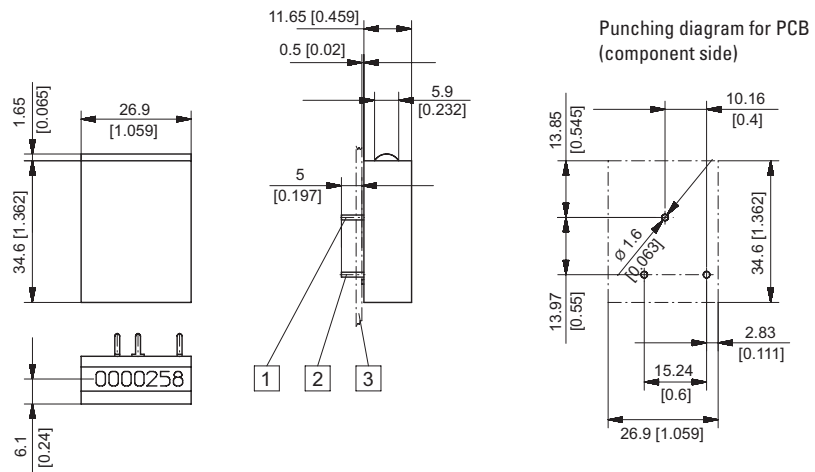
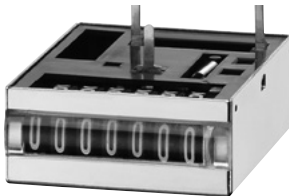
High shock resistance (AC+DC)

K 04 ... K 07 / AK 07

PCB mount, hanging
7-digit display front side

Type K 07.50

Colour of housing blue (zinc-plated)



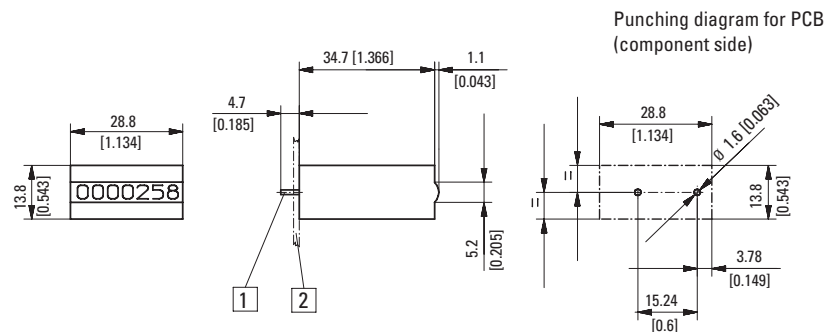
1) Mounting pin without el. function 0.4 x 1.2 [0.016 x 0.047]

2) Coil connections 0.4 x 1.2 [0.016 x 0.047] 3) PCB

Type	Voltage	Display	Art.-No.			
			3 V	4.5 V	12 V	24 V
K 07.50	DC (10 Hz) / 0	7 digits	1.130.501.006	1.130.501.008	on request	on request
	DC (25 Hz) / 1				1.130.501.032	1.130.501.033

PCB mount, upright
6- and 7-digit display front side

Type K 06.80 / K 07.80



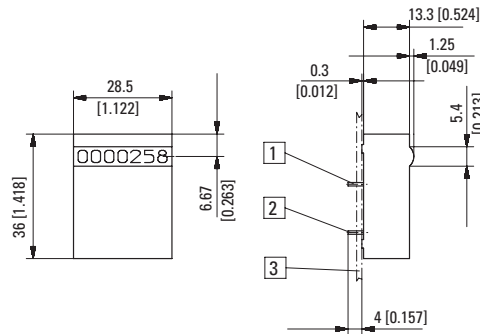
1) Coil connections 0.4 x 1.2 [0.016 x 0.047] 2) PCB

Type	Voltage	Display	Art.-No.							
			3 V	4.5 V	12 V	24 V	115 V	230 V		
K 06.80	DC (10 Hz) / 0	6 digits	1.120.800.006	1.120.800.008	on request	on request				
	DC (25 Hz) / 1				1.120.800.032	1.120.800.033				
	AC (10 Hz) / a0				1.120.800.051	1.120.800.051	1.120.800.054	1.120.800.056		
K 07.80	DC (10 Hz) / 0	7 digits	1.130.800.006	1.130.800.008	on request	on request				
	DC (25 Hz) / 1				1.130.800.032 ¹⁾	1.130.800.033				
	AC (10 Hz) / a0				1.130.800.051	1.130.800.051	1.130.800.054	1.130.800.056		

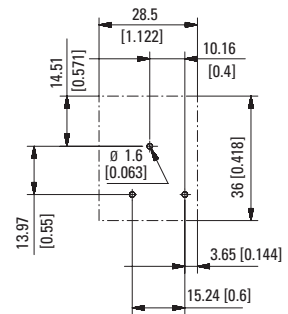
Pulse counters, electromechanical

Micro counters **High shock resistance (AC+DC)** **K 04 ... K 07 / AK 07**

PCB mount, lying
7-digit display on the top
Type K 07.90



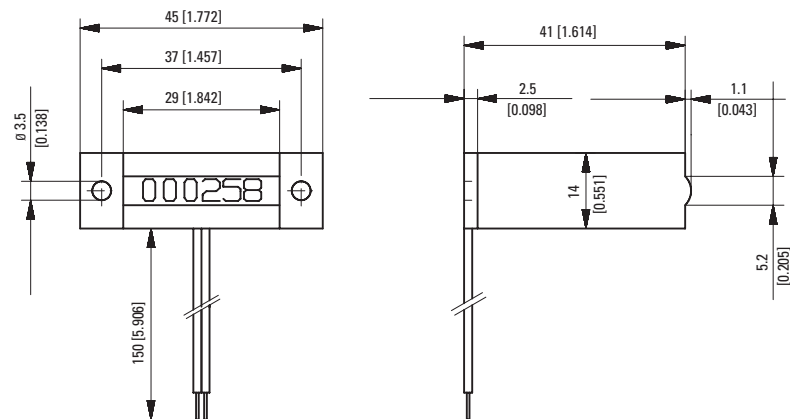
Punching diagram for PCB (component side)



- 1) Mounting pin without el. function 0.4 x 1.2 [0.016 x 0.047]
- 2) Coil connections 0.4 x 1.2 [0.016 x 0.047]
- 3) PCB

Type	Voltage	Display	Art.-No.					
			3 V	4.5 V	12 V	24 V	115 V	230 V
K 07.90	DC (10 Hz) / 0	7 digits	1.130.900.006	1.130.900.008	1.130.900.012 ¹⁾	on request	1.130.900.054	1.130.900.056
	DC (25 Hz) / 1					1.130.900.033		
	AC (10 Hz) / a0					1.130.900.051		

Base mount, upright
7-digit display front side
Type AK 07.00



- 1) Coil connections

Type	Voltage	Display	Art.-No.					
			3 V	4.5 V	12 V	24 V	115 V	230 V
AK 07.00	DC (10 Hz) / 0	7 digits	1.130.000.006	1.130.000.008	1.130.000.012	1.130.000.013	1.130.000.054	1.130.000.056 ¹⁾
	DC (25 Hz) / 1					1.130.000.033		
	AC (10 Hz) / a0					1.130.000.051		