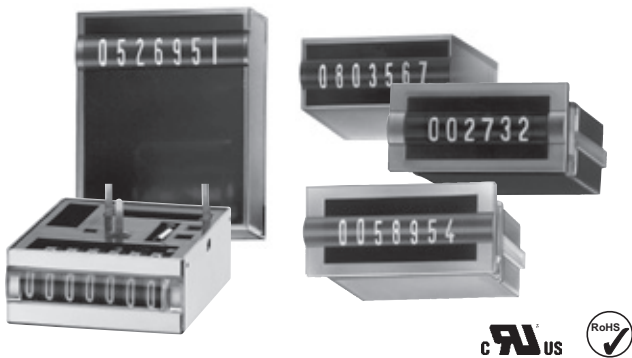


# Pulse counters, electromechanical

Micro counters

High shock resistance (AC+DC)

K 04 ... K 07 / AK 07



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

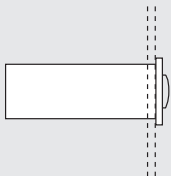
General quantity counting, alarm systems, coin-operated machines, electricity meters, vending and slot machines, photocopiers, medical equipment, car washes

## Type series

Fig.	Mounting options	Display	Housing	IP protection	4 digits	5 digits	6 digits	7 digits	Order information
1)	Panel mount with latch	front side	plastic	front side	<b>K 04.20</b>	<b>K 05.20</b>	<b>K 06.20</b>	<b>K 07.20</b>	- Art.-No.
2)	PCB mount, lying	on the top	sheet steel	-	<b>K 04.40</b>	-	-	<b>K 07.40</b>	- For options please give exact counter type, voltage and options e.g.:
3)	PCB mount, hanging	front side	sheet steel	-	-	-	-	<b>K 07.50</b>	K 06.20
4)	PCB mount, upright	front side	plastic	front side	-	-	<b>K 06.80</b>	<b>K 07.80</b>	9 V DC/0
5)	PCB mount, lying	on the top	plastic	front side/on rear	-	-	-	<b>K 07.90</b>	temperature range
6)	Base mount, upright	front side	plastic	front side	-	-	-	<b>AK 07.00</b>	-20°C ... +70°C

## Mounting options and position of the display

1) Panel mount / display front side



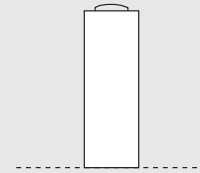
2) PCB mount, lying / display on the top



3) PCB mount, hanging / display front side



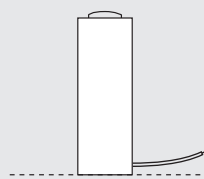
4) PCB mount, upright / display front side



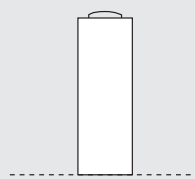
5) PCB mount, lying / display on the top



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**

Technical data	
<b>Electrical connection</b>	
Panel mount, base mount	flying leads, AWG 22 approx. 150 mm, 6 mm stripped wire ends, tinned
PCB mount	solder pins $\varnothing$ 0.4 x 1.2 mm
<b>Power consumption</b> (at 20°C 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
<b>Rated voltage</b>	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%
<b>Counting frequency</b>	max. 10 and 25 Hz
<b>Pulse duration</b>	
at 10 Hz (type 0 and a0)	min. 50 ms
at 25 Hz (type 1)	min. 20 ms
<b>Pulse interval</b>	
at 10 Hz (type 0 a0)	min. 50 ms
at 25 Hz (type 1)	min. 20 ms
<b>Cycle duration factor</b>	100%
<b>Number of digits</b>	4, 5, 6 and 7
<b>Counting system</b>	adding
<b>Height of figures</b>	K 04, K 06, AK 06 1.7 x 4 mm optical
	K 05, K 07, AK 07 1.2 x 4 mm optical
<b>Colour of figures</b>	white on black
<b>Reset</b>	no reset

<b>Operating temperature</b>	-10°C ... +60°C (non-condensing)
<b>Mounting position</b>	horizontal, other on request
<b>Soldering temperature</b>	265°C, 3 s
<b>Operating life</b>	> 50 x 10 <sup>6</sup> pulses
<b>Solderable and wash proof types</b>	K 0X.92, K 06.90, K 07.90
<b>Protection</b>	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
<b>UL approval</b>	File E43429
<b>Housing</b>	PC (Polycarbonate), transparent or sheet steel types (see table) with IP65 protection, fully sealed (potted)
<b>Weight</b>	15 ... 18 g

Options	
<b>K 0x.20</b>	flat pin 0.5 x 2.8 mm Art.-No.: 1.1X7.XX0.XXX flat pin 0.4 x 1.2 mm 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, -20°C ... +70°C

Pulse counters

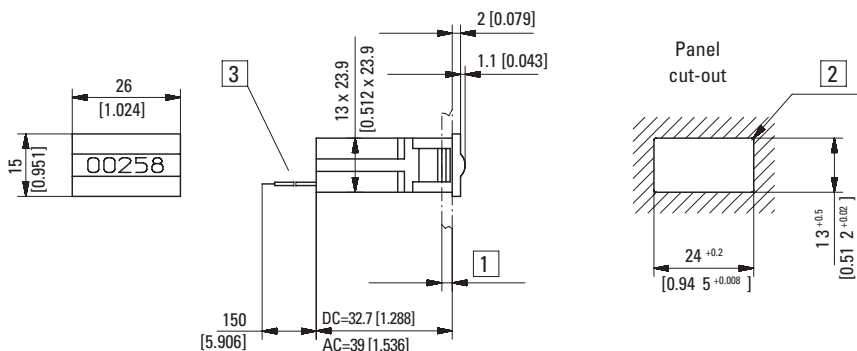
# Pulse counters, electromechanical

**Micro counters**

**High shock resistance (AC+DC)**

**K 04 ... K 07 / AK 07**

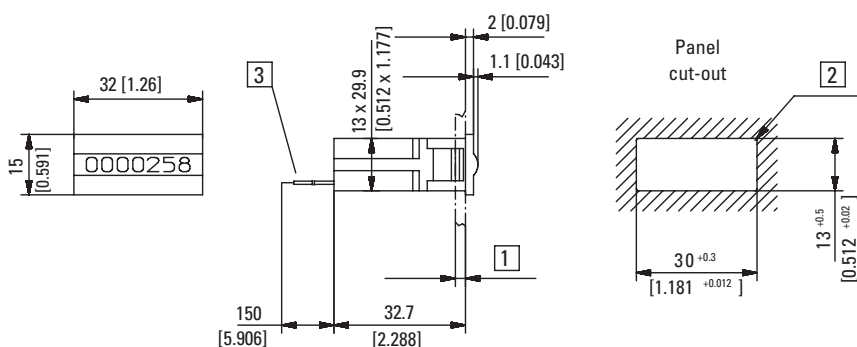
**Panel mount counter  
4- and 5-digit display front side  
Type K 04.20 / K 05.20**



1) 1.2 ... 3 mm 2)  $R_{max} 0.5$  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	1.110.200.418 <sup>1)</sup>	1.110.200.054	1.110.200.056 <sup>1)</sup>		
	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 mm 2)  $R_{max} 0.5$  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	1.120.200.418	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 <sup>1)</sup>	1.130.200.418	1.130.200.054 <sup>1)</sup>	1.130.200.056 <sup>1)</sup>		
	DC (25 Hz) / 1				1.130.200.032 <sup>1)</sup>	1.130.200.033 <sup>1)</sup>				
	AC (10 Hz) / a0				1.130.200.051					

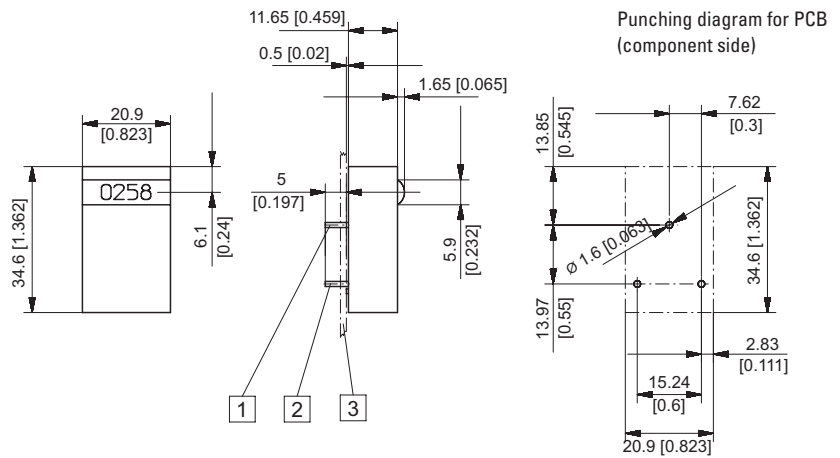
# Pulse counters, electromechanical

**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)



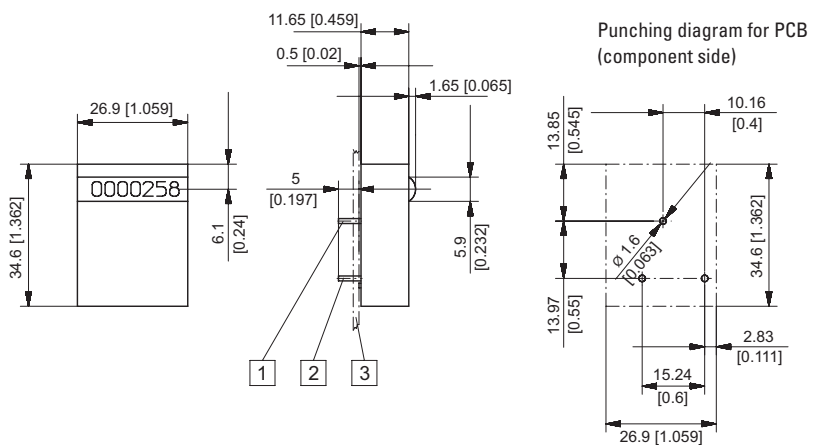
1] Mounting pin without el. function 0.4 x 1.2    2] Coil connections 0.4 x 1.2    3] PCB

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    2] Coil connections 0.4 x 1.2    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 <sup>1)</sup>	on request	on request
	DC (25 Hz) / 1				1.130.401.032	1.130.401.033

Pulse counters

# Pulse counters, electromechanical

**Micro counters**

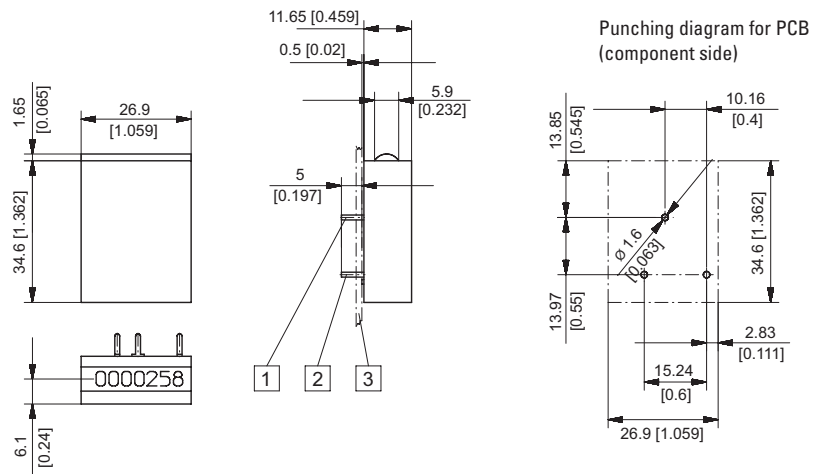
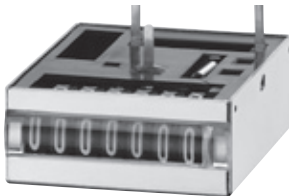
**High shock resistance (AC+DC)**

**K 04 ... K 07 / AK 07**

**PCB mount, hanging**  
**7-digit display front side**

**Type K 07.50**

Colour of housing blue (zinc-plated)

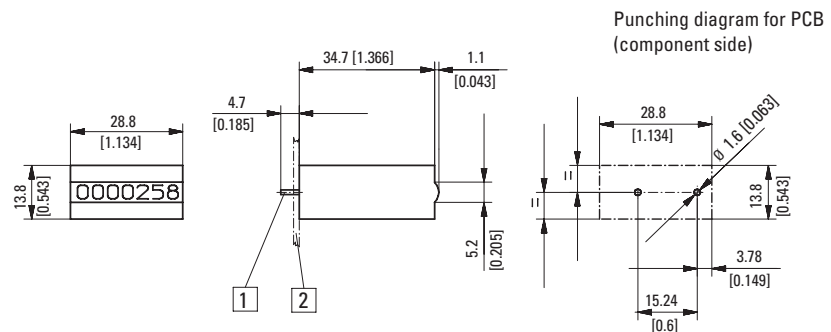


1) Mounting pin without el. function 0.4 x 1.2 2) Coil connections 0.4 x 1.2 3) PCB

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**



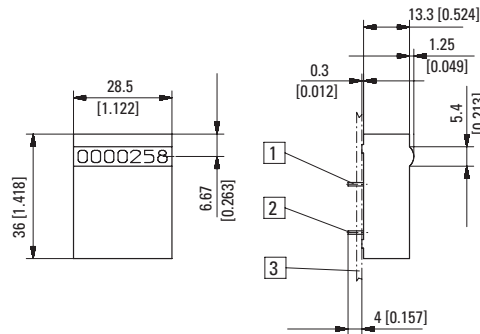
1) Coil connections 0.4 x 1.2 2) PCB

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	1.120.800.054	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 <sup>1)</sup>	1.130.800.033				
	AC (10 Hz) / a0					1.130.800.051	1.130.800.054	1.130.800.056		

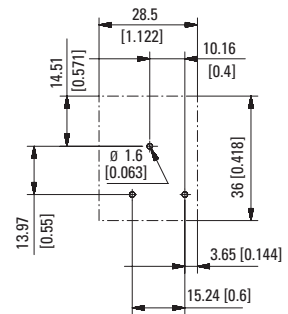
# Pulse counters, electromechanical

**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**



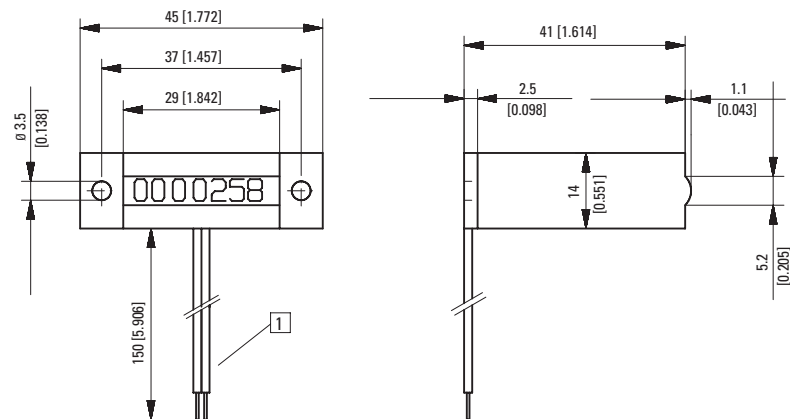
Punching diagram for PCB (component side)



1) Mounting pin without el. function 0.4 x 1.2    2) Coil connections 0.4 x 1.2    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 <sup>1)</sup>	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	1.130.000.418	1.130.000.054	1.130.000.056 <sup>1)</sup>
	DC (25 Hz) / 1					1.130.000.033		
	AC (10 Hz) / a0					1.130.000.051		

Pulse counters