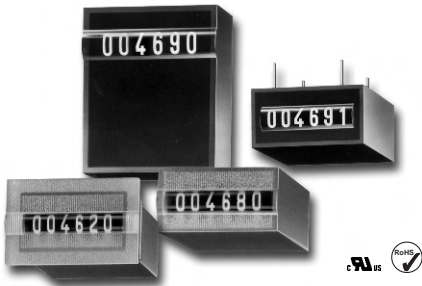


Micro Counters – K 46/ K 47 shock resistant



- 6/7-digit micro adding counter
- Low cost
- **High shock resistance**
- Low power consumption; suitable for battery operation
- Small dimensions
- Magnified large figures
- Different mounting solutions
- Flush mount with integrated spring clip (snap in)
- PCB-mount versions

- Solderable and wash proof
- Protection to IP 65
- Stores value also at power failure
- Long service life

Applications:

charge counting, KWh registration alarm systems, compact units, copiers, fuel dispensers, medical equipment, miniature pumps, dosing machines, gates, general event counting

Technical data:

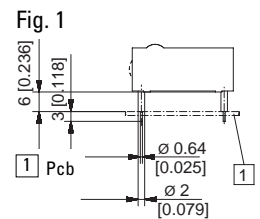
Electrical connection:	flush mount:	flying leads AWG 22 approx. 150 mm [5.906"]
	PCB mount:	solder pins \varnothing 0.64 mm [0.025"]
Power consumption:	up to 12 V DC:	approx. 70 mW
	at 24 V DC:	approx. 150 mW
Rated voltage:	1.5/3/4.5/5/6/12/24 V DC -10% $+20\%$	
Counting frequency:	max. 10 Imp/s (type 0)	
Pulse duration:	min. 50 ms	
Pulse interval:	min. 50 ms	
Cycle duration factor:	100 %	
Number of digits:	6 (K46), 7 (K47)	
Counting system:	adding	
Height of figures:	K 46: 4 x 1.7 mm [0.067"]	
	K 47: 4 x 1.25 mm [0.049"] optical	
Colour of figures:	white on black	
Reset:	no reset	
Ambient temperature:	$-10 \dots +60$ °C [14 °F ... 140 °F] non condensing	
Soldering temperature:	max. 265 °C, max. 3 sec.	

Mounting position:	number of wheel view horizontal (other on request)
Operating life:	$> 50 \times 10^6$ impulses
solderable and wash proof types:	K 46.80, K 46.90, K 46.91, K 46.94, K 46.95
protection:	IP 65 (K 46.20, K 47.20: front side)
Housing:	clear plastic
Weight:	12 ... 14 g
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 solder pins \varnothing 0.64 [0.025"]
K46.20, K47.20	
K46.80, K47.80	flying leads AWG22 approx. 150 mm [5.906"]
K 46.9x ... 71:	connectors types with spacer (high 6 mm [0.236"] draw. 1)
K 47.9x ... 71:	
Further options:	
	– different voltages
	– counting frequency > 10 Imp/s
	– different colour of figures
	– extended temperature range: $-30 \dots +85$ °C or $-20 \dots +70$ °C ... [$-22 \dots 185$ °F or $-4 \dots 158$ °F]

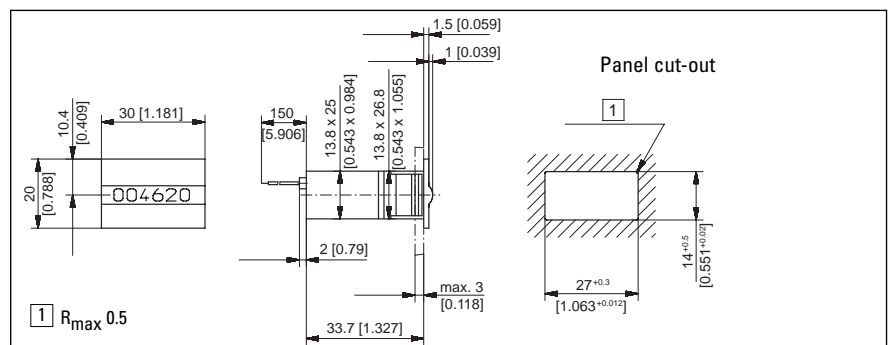
Series:

Type	Display	el. Connection	Description
K46.20, K47.20	Small side	Flying leads	Panel mount with latch
K46.80, K47.80	Small side	Solder pins	PCB mount wash proof
K46.90, K47.90	Large side	Solder pins	PCB mount wash proof
K46.91, K47.91	Small side	Solder pins	PCB mount wash proof
K46.94	Large side	Solder pins	PCB mount wash proof
K46.95	Small side	Solder pins	PCB mount wash proof

Order code:
 – Article number
 – For options please give exact counter type, voltage and options e.g. 1.700.200.012 K 46.20, 12 V DC/0 temperature range $-20 \dots +70$ °C [$-4 \dots 158$ °F]



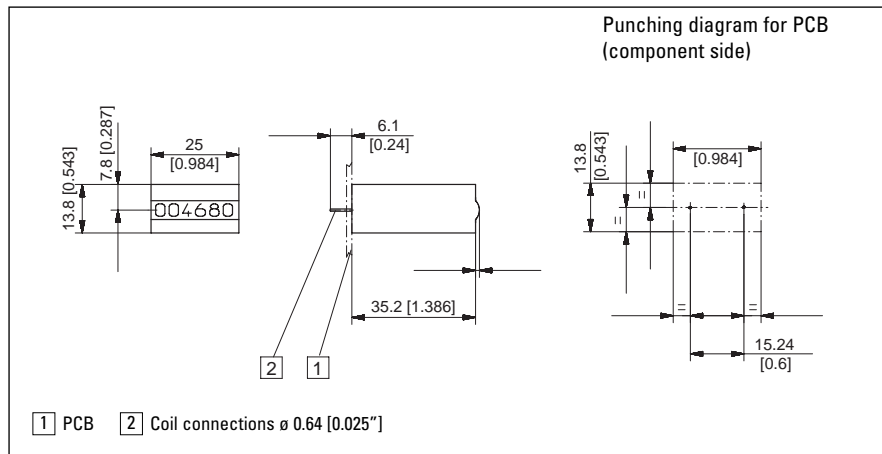
Type K 46.20/K47.20



	1.5 V	3 V	4.5 V	5 V	6 V	12 V	24 V
K 46.20	Art. no.	Art. no.	Art. no.	Art. no.	Art. no.	Art. no.	Art. no.
DC (10 Imp/s)	1.700.200.002	1.700.200.006	1.700.200.008	1.700.200.009*	1.700.200.010	1.700.200.012*	1.700.200.013*
K 47.20	Art. no.	Art. no.	Art. no.	Art. no.	Art. no.	Art. no.	Art. no.
DC (10 Imp/s)	1.710.200.002	1.710.200.006	1.710.200.008	1.710.200.009*	1.710.200.010	1.710.200.012*	1.710.200.013*

*standard stock model

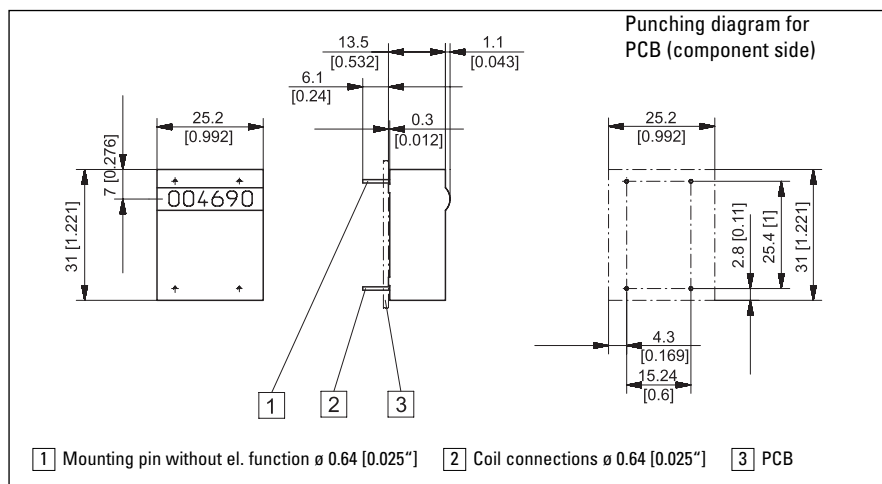
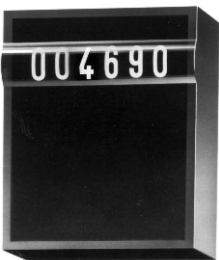
Type K 46.80/K 47.80



K 46.80	1.5 V Art. no.	3 V Art. no.	4.5 V Art. no.	5 V Art. no.	6 V Art. no.	12 V Art. no.	24 V Art. no.
DC (10 Imp/s)	1.700.800.002	1.700.800.006	1.700.800.008	1.700.800.009	1.700.800.010	1.700.800.012	1.700.800.013*

K 47.80	1.5 V Art. no.	3 V Art. no.	4.5 V Art. no.	5 V Art. no.	6 V Art. no.	12 V Art. no.	24 V Art. no.
DC (10 Imp/s)	1.710.800.002	1.710.800.006	1.710.800.008	1.710.800.009	1.710.800.010	1.710.800.012	1.710.800.013

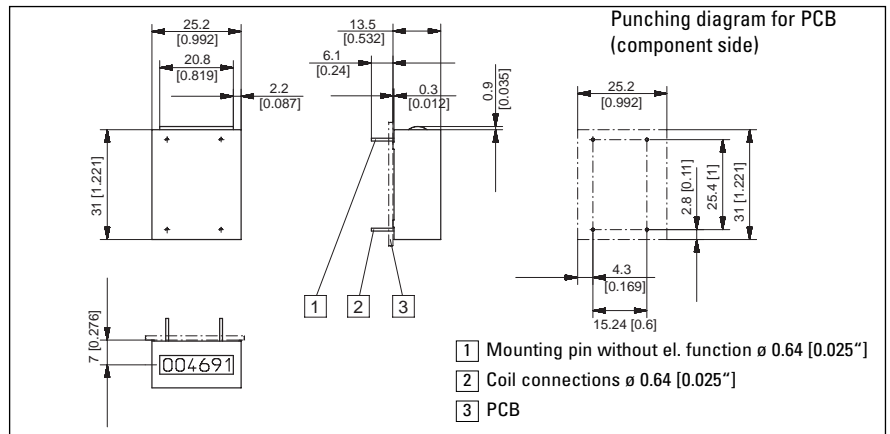
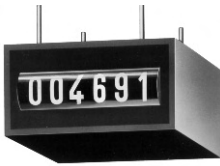
Type K 46.90/K 47.90



K 46.90	1,5 V Art. no.	3 V Art. no.	4,5 V Art. no.	5 V Art. no.	6 V Art. no.	12 V Art. no.	24 V Art. no.
DC (10 Imp/s)	1.700.900.002	1.700.900.006	1.700.900.008*	1.700.900.009	1.700.900.010*	1.700.900.012	1.700.900.013*

K 47.90	1,5 V Art. no.	3 V Art. no.	4,5 V Art. no.	5 V Art. no.	6 V Art. no.	12 V Art. no.	24 V Art. no.
DC (10 Imp/s)	1.710.900.002	1.710.900.006	1.710.900.008	1.710.900.009	1.710.900.010	1.710.900.012	1.710.900.013

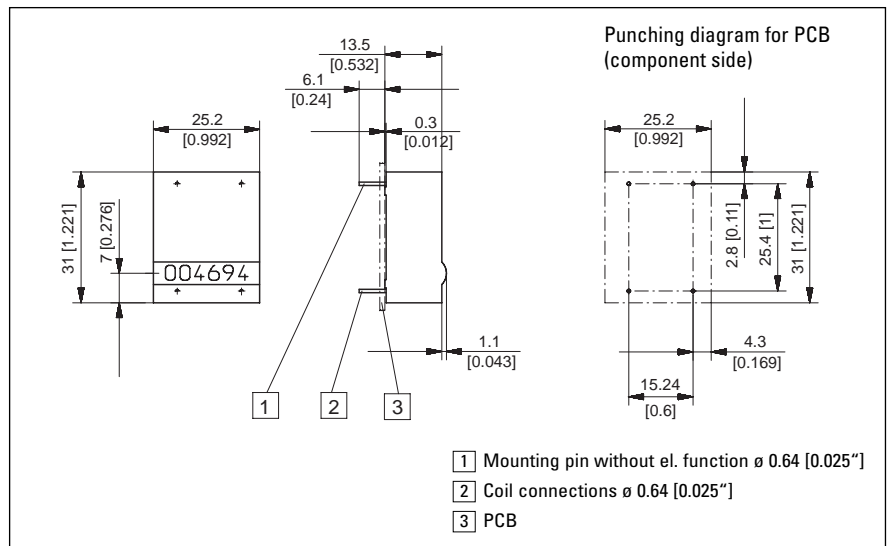
Type K 46.91/K 47.91



K 46.91	1.5 V Art. no.	3 V Art. no.	4.5 V Art. no.	5 V Art. no.	6 V Art. no.	12 V Art. no.	24 V Art. no.
DC (10 Imp/s)	1.700.910.002	1.700.910.006	1.700.910.008	1.700.910.009	1.700.910.010	1.700.910.012	1.700.910.013

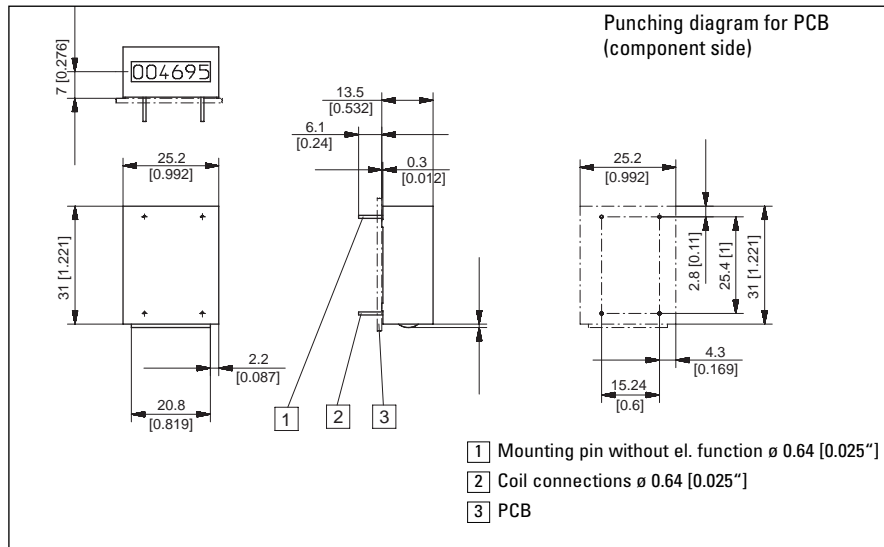
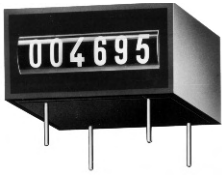
K 47.91	1.5 V Art. no.	3 V Art. no.	4.5 V Art. no.	5 V Art. no.	6 V Art. no.	12 V Art. no.	24 V Art. no.
DC (10 Imp/s)	1.710.910.002	1.710.910.006	1.710.910.008	1.710.910.009	1.710.910.010	1.710.910.012	1.710.910.013

Type K 46.94



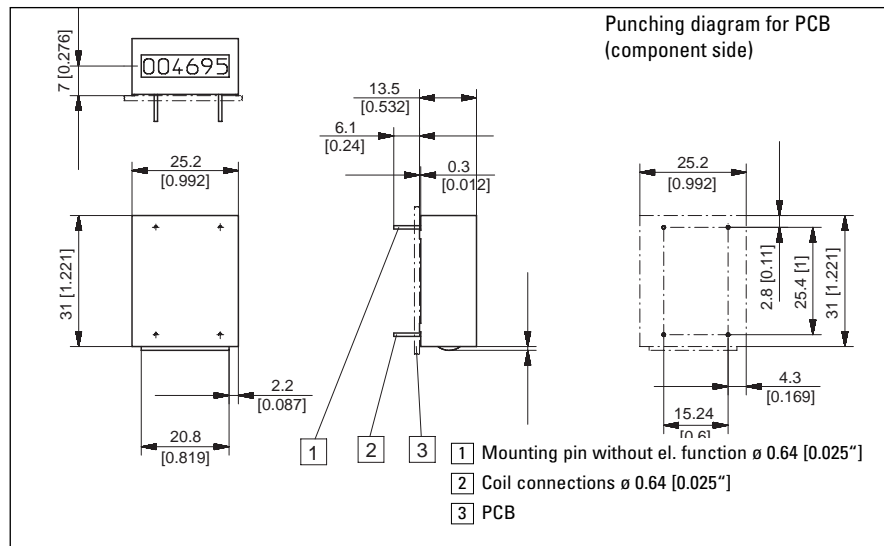
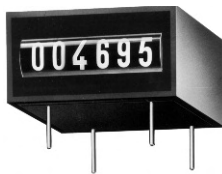
K 46.94	1.5 V Art. no.	3 V Art. no.	4.5 V Art. no.	5 V Art. no.	6 V Art. no.	12 V Art. no.	24 V Art. no.
DC (10 Imp/s)	1.700.940.002	1.700.940.006	1.700.940.008	1.700.940.009	1.700.940.010	1.700.940.012	1.700.940.013

Type K 46.95



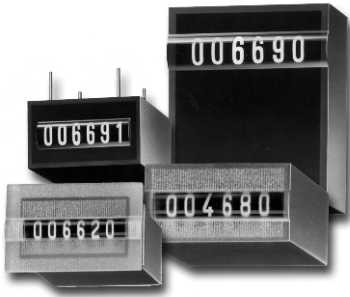
K 46.95	1.5 V Art. no.	3 V Art. no.	4.5 V Art. no.	5 V Art. no.	6 V Art. no.	12 V Art. no.	24 V Art. no.
DC (10 Imp/s)	1.700.950.002	1.700.950.006	1.700.950.008	1.700.950.009	1.700.950.010	1.700.950.012	1.700.950.013

Type K 47.95



K 47.95	1,5 V Art. no.	3 V Art. no.	4,5 V Art. no.	5 V Art. no.	6 V Art. no.	12 V Art. no.	24 V Art. no.
DC (10 imp/s)	1.710.950.002	1.710.950.006	1.710.950.008	1.710.950.009	1.710.950.010	1.710.950.012	1.710.950.013

Micro Counters – K 66, K 67 PTB tested



- 6-digit (K66) or 7-digit (K67) micro adding counter
- **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 consumption
- Small dimensions

- Large optical figures
- Flush mount with integrated spring clip
- PCB-mount versions
- Solderable and wash proof
- Protection IP 65
- Stores value also at power failure
- Long service life

Applications:

charge counting, KWh registration alarm systems, compact units, copiers, fuel dispensers, medical techniques, miniature pumps, dosing techniques, gates, general event counting

Technical data:

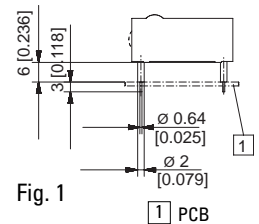
Electrical connection:	flush mount:	flying leads AWG 22 approx. 150 mm [5.906"]
	PCB-mount:	solder pins \varnothing 0.64 mm [0.025"]
Power consumption:	up to 6 V DC:	approx. 70 mW
(at 20 °C)	at 12 V DC:	approx. 120 mW
	at 24 V DC:	approx. 500 mW
Rated voltage:	1.5/3/4.5/5/6/12/24 V DC-10 % +20 %	
Counting frequency:	max. 10 Imp/s (type 0)	
Pulse duration:	min. 50 ms	
Pulse interval:	min. 50 ms	
Cycle duration factor:	100 %	
Number of digits:	6 (K 66), 7 (K 67)	
Counting system:	adding	
Height of figures:	K 66: 4 x 1.7 mm [0.067"]	
	K 67: 4 x 1.25 mm [0.049"] optical	
Colour of figures:	white on black	
Reset:	no reset	
Ambient temperature:	-10 ... +60 °C [14 ... 140 °F]	
Soldering temperature:	max. 265 °C, max. 3 sec.	

Mounting position:	number of wheel view horizontal (other on request)
Operating life:	> 50 x 10 ⁵ pulses
solderable and wash proof types	K 66.80, K 66.90, K 66.91, K 66.94, K 66.95 K 67.80, K 67.90, K 67.91
Protection:	IP 65 (K 66.20, K 67.20: only front side)
Housing:	clear plastic, types with protection IP 65 are sealed
Weight:	9 ... 11 g [0.317 ... 0.388 oz]
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 66.70, K 66.80	flying leads AWG22 approx. 150 mm [5.906"]
K 66.9x ... 71, K 67.9x ... 71:	types with spacer (High 6 mm [0.236"] Draw.1)
Further options:	
	different voltages, counting frequency > 10 Imp/s
	different colour of figures, extended temperature range -30 ... +85 °C or -20 ... +70 °C, [-22 ... 185 °F or -4 ... 158 °F]

Series:

Type	Display	el. Connection	Description
K66.20, K 67.20	Small side	Flying leads	Panel mount with latch
K66.80, K 67.80	Small side	Solder pins	PCB mount wash proof
K66.90, K 67.90	Large side	Solder pins	PCB mount wash proof
K66.91, K 67.91	Small side	Solder pins	PCB mount wash proof
K66.94	Large side	Solder pins	PCB mount wash proof
K66.95	Small side	Solder pins	PCB mount wash proof

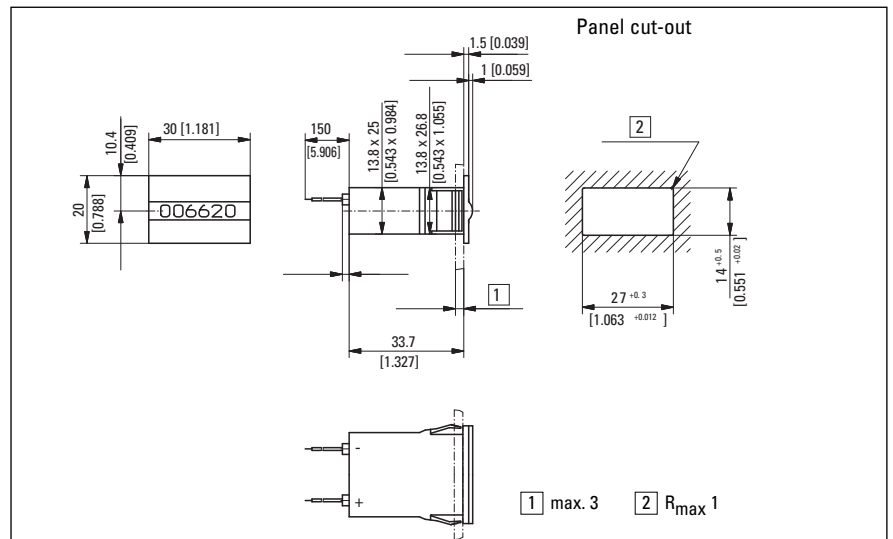
Order code:
 – Article number 1.680.9X0.XXX
 – For options please give exact counter type, voltage and options e.g. K 66.20, 9 V DC/0 temperature range -20 ... +70 °C [-4 ... 158 °F]



Type K 66.20/K 67.20



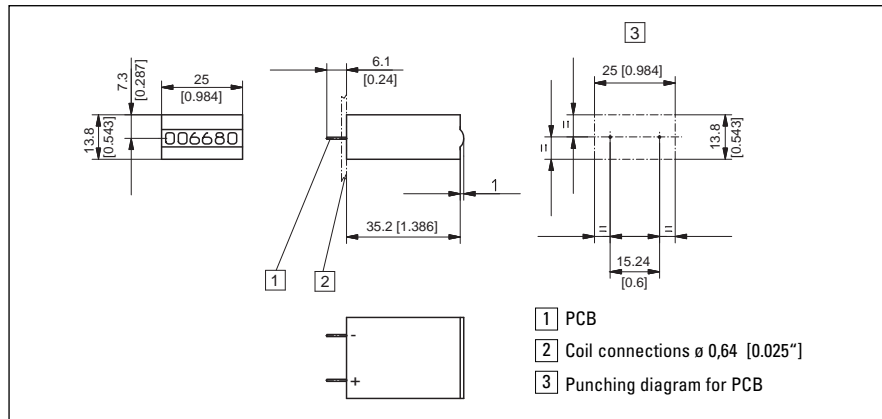
Order code see next page.



Type K 66.20/K 67.20

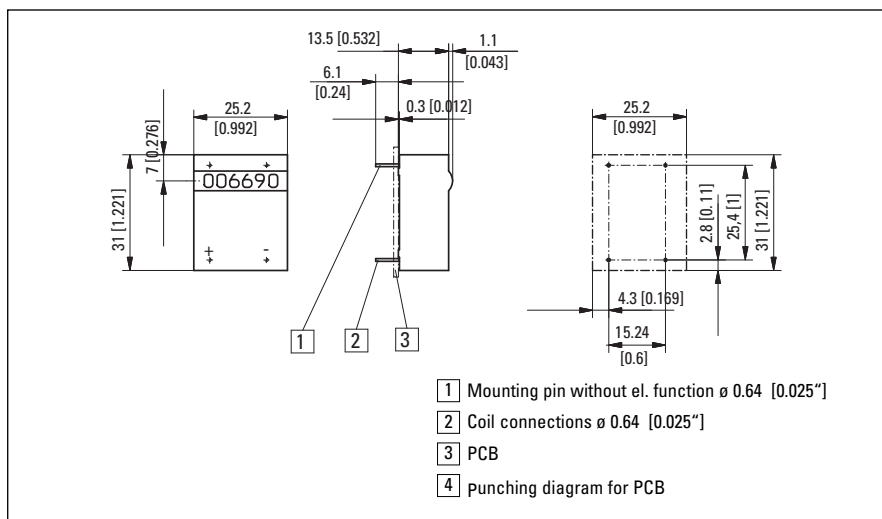
K 66.20	1.5 V Art. no.	3 V Art. no.	4.5 V Art. no.	5 V Art. no.	6 V Art. no.	12 V Art. no.	24 V Art. no.
DC (10 Imp/s)	1.650.200.002	1.650.200.006	1.650.200.008	1.650.200.009	1.650.200.010	1.650.200.012	1.650.200.013
K 67.20	1.5 V Art. no.	3 V Art. no.	4.5 V Art. no.	5 V Art. no.	6 V Art. no.	12 V Art. no.	24 V Art. no.
DC (10 Imp/s)	1.660.200.002	1.660.200.006	1.660.200.008	1.660.200.009*	1.660.200.010	1.660.200.012*	1.660.200.013*

Type K 66.80/K 67.80



K 66.80	1.5 V Art. no.	3 V Art. no.	4.5 V Art. no.	5 V Art. no.	6 V Art. no.	12 V Art. no.	24 V Art. no.
DC (10 Imp/s)	1.650.800.002	1.650.800.006	1.650.800.008	1.650.800.009	1.650.800.010	1.650.800.012	1.650.800.013
K 67.80	1.5 V Art. no.	3 V Art. no.	4.5 V Art. no.	5 V Art. no.	6 V Art. no.	12 V Art. no.	24 V Art. no.
DC (10 Imp/s)	1.660.800.002	1.660.800.006	1.660.800.008	1.660.800.009	1.660.800.010	1.660.800.012	1.660.800.013

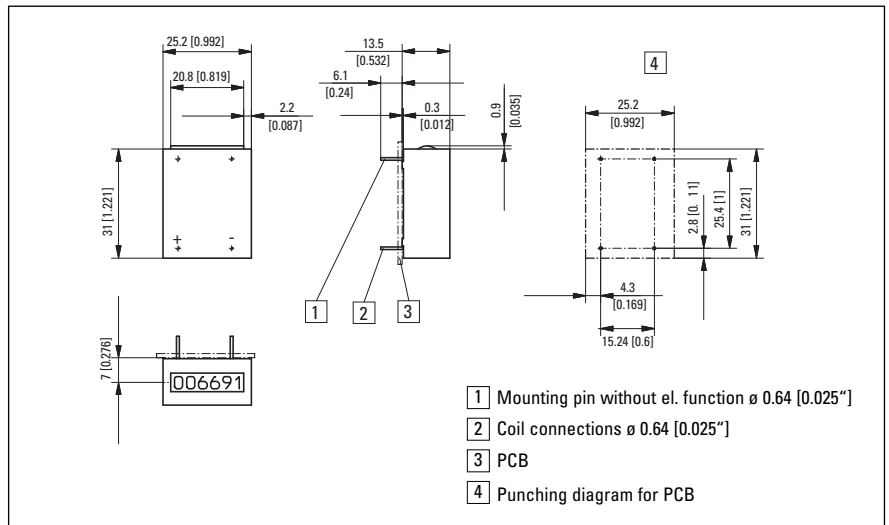
Type K 66.90/K 67.90



K 66.90	1.5 V Art. no.	3 V Art. no.	4.5 V Art. no.	5 V Art. no.	6 V Art. no.	12 V Art. no.	24 V Art. no.
DC (10 Imp/s)	1.650.900.002	1.650.900.006	1.650.900.008	1.650.900.009	1.650.900.010	1.650.900.012	1.650.900.013
K 67.90	1,5 V Art. no.	3 V Art. no.	4,5 V Art. no.	5 V Art. no.	6 V Art. no.	12 V Art. no.	24 V Art. no.
DC (10 Imp/s)	1.660.900.002	1.660.900.006	1.660.900.008	1.660.900.009	1.660.900.010	1.660.900.012	1.660.900.013

*standard stock model

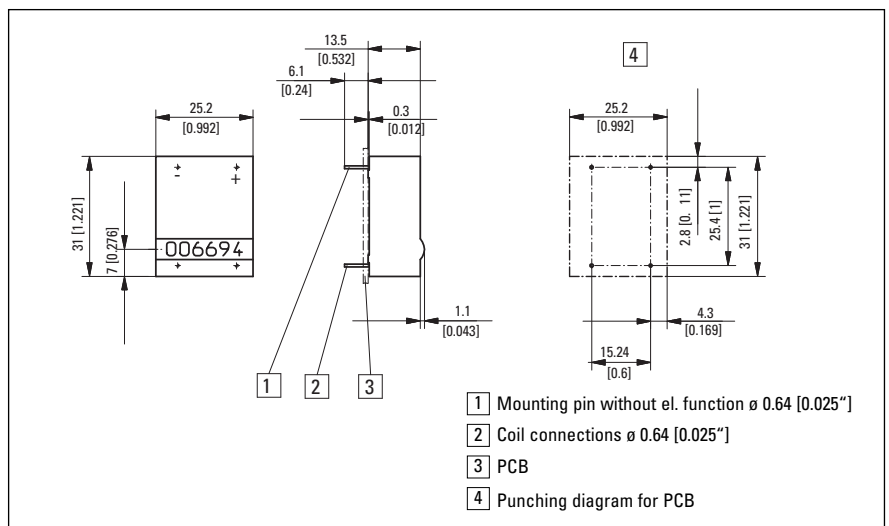
Type K 66.91/K 67.91



K 66.91	1.5 V Art. no.	3 V Art. no.	4.5 V Art. no.	5 V Art. no.	6 V Art. no.	12 V Art. no.	24 V Art. no.
DC (10 Imp/s)	1.650.910.002	1.650.910.006	1.650.910.008	1.650.910.009	1.650.910.010	1.650.910.012	1.650.910.013

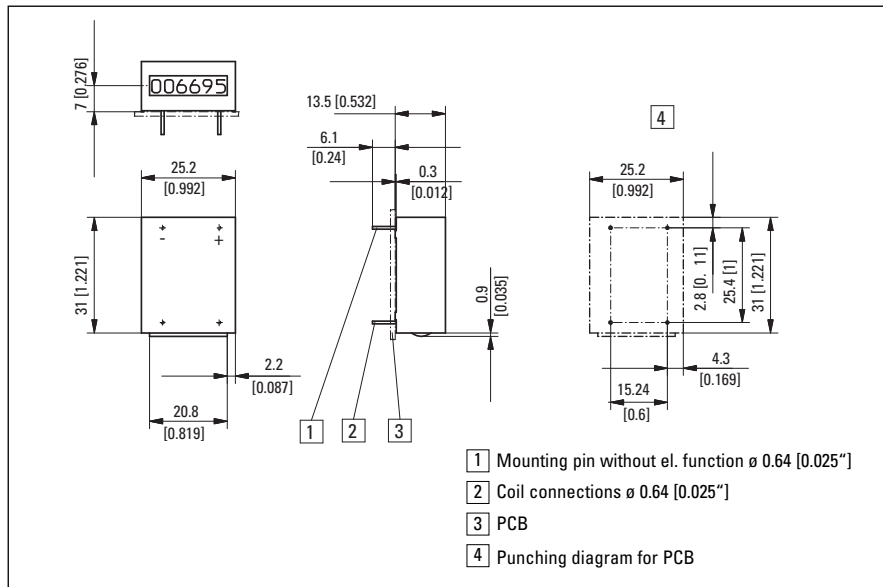
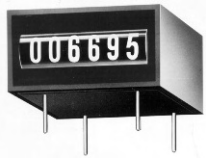
K 67.91	1.5 V Art. no.	3 V Art. no.	4.5 V Art. no.	5 V Art. no.	6 V Art. no.	12 V Art. no.	24 V Art. no.
DC (10 Imp/s)	1.660.910.002	1.660.910.006	1.660.910.008	1.660.910.009	1.660.910.010	1.660.910.012	1.660.910.013

Type K 66.94



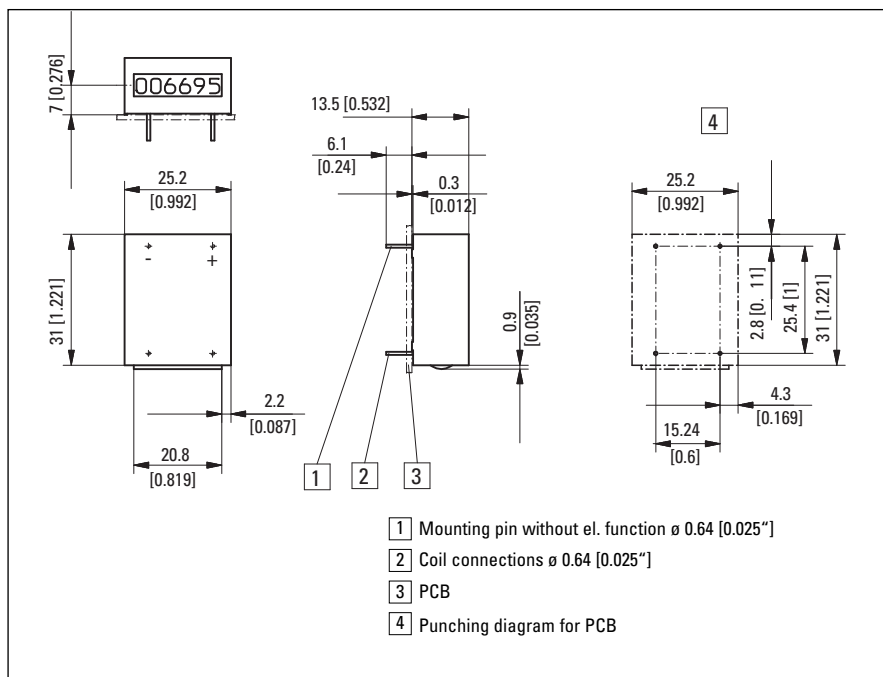
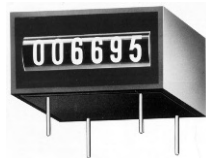
K 66.94	1.5 V Art. no.	3 V Art. no.	4.5 V Art. no.	5 V Art. no.	6 V Art. no.	12 V Art. no.	24 V Art. no.
DC (10 Imp/s)	1.650.940.002	1.650.940.006	1.650.940.008	1.650.940.009	1.650.940.010	1.650.940.012	1.650.940.013

Type K 66.95



K 66.95	1.5 V Art. no.	3 V Art. no.	4.5 V Art. no.	5 V Art. no.	6 V Art. no.	12 V Art. no.	24 V Art. no.
DC (10 Imp/s)	1.650.950.002	1.650.950.006	1.650.950.008	1.650.950.009	1.650.950.010	1.650.950.012	1.650.950.013

Type K 67.95



K 67.95	1,5 V Art. no.	3 V Art. no.	4,5 V Art. no.	5 V Art. no.	6 V Art. no.	12 V Art. no.	24 V Art. no.
DC (10 imp/s)	1.660.950.002	1.660.950.006	1.6650.950.008	1.660.950.009	1.660.950.010	1.660.950.012	1.660.950.013