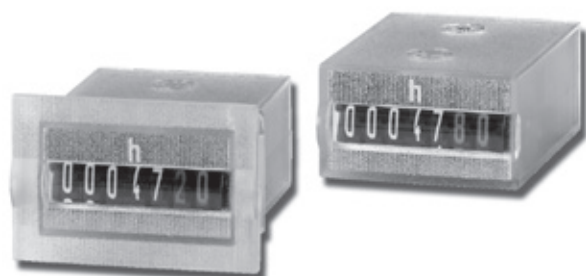


# Hour meters / timers, electromechanical

Micro timers	High shock resistance (DC)	HK 47
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The micro timers HK 47 have a very high shock resistance. Available as panel and PCB mount versions, they can be used in many different fields of application. Thanks to their encapsulated housing, these non-resettable counters are extremely tamper-proof.

## Characteristics

- 7-digit micro hour meter
- Low cost
- High shock resistance
- Small dimensions
- Magnified large figures
- Different reading possibilities
- Panel-mount counter with integrated spring clip (HK 47.20)
- PCB mount counter (HK 47.80)

## Benefits

- Low power consumption; suitable for battery operation
- Solderable and wash-proof (HK 47.80)
- Data retention in case of power failure
- Long service life

## Applications

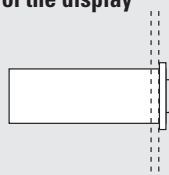
Time registration, maintenance intervals for measuring instruments (respiration units, oxygen, dialysis), small appliances, UV lamps, display panels

## Type series

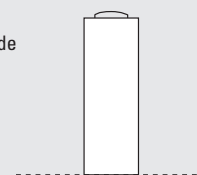
Fig.	Mounting options	Display	Protection	El. connection	Order-No.
1)	Panel mount with latch	front side	IP65, front side	flying leads	<b>HK 47.20</b>
2)	PCB mount, upright	front side	IP65, front side/on rear	solder pins	<b>HK 47.80</b>

## Mounting options and position of the display

1) Panel mount / display front side



2) PCB mount, upright / display front side



Technical data	
<b>Drive</b>	pulse-driven, precision crystal controller via electronic divider circuit
<b>Pulse duration</b>	32 ms; every 36 s = 0.01 h power on times < 36 s are not counted
<b>Electrical connection</b>	HK 47.20 flying leads AWG 22, approx. 150 mm [5.91"] long (red +, black -)
	HK 47.80 solder pins ø 0.64 mm [0.025"]
<b>Display</b>	99999.99 h
<b>Counting drum</b>	figures white on black, decimal place red on black
<b>Rated Voltage</b>	4.5 ... 35 V DC
<b>Residual ripple</b>	< 1 %
<b>Current consumption</b>	< 1.5 mA (average)
<b>Power consumption</b> (count pulses every 36 s with a pulse duration of 32 ms)	
at U <sub>B</sub> = 5 V DC	typ. 82 mW
at U <sub>B</sub> = 12 V DC	typ. 135 mW
at U <sub>B</sub> = 24 V DC	typ. 135 mW max. 170 mW

Accuracy	22.5 ppm at 25°C [77°F]	
Height of figures	4 x 1.25 mm [0.16 x 0.049"]	
Reset	no reset	
Operating temperature	-10°C ... +60°C [+14°F ... +140°F] (non-condensing)	
Storage temperature	-20°C ... +70°C [-4°F ... +158°F]	
Mounting position	horizontal (other on request)	
Solderable and wash proof version	HK 47.80	
Soldering temperature	265°C [+509°F], 3 s	
Protection (acc. to EN 60529)	HK 47.80	IP65
	HK 47.20	IP65 (front side)
EMC	Emitted interference	EN 55011 class B
	Immunity to interference	EN 61000-6-2
Housing	PC transparent; HK 47.80 fully sealed (potted)	
Weight	13 ... 15 g [0.46 ... 0.53 oz]	

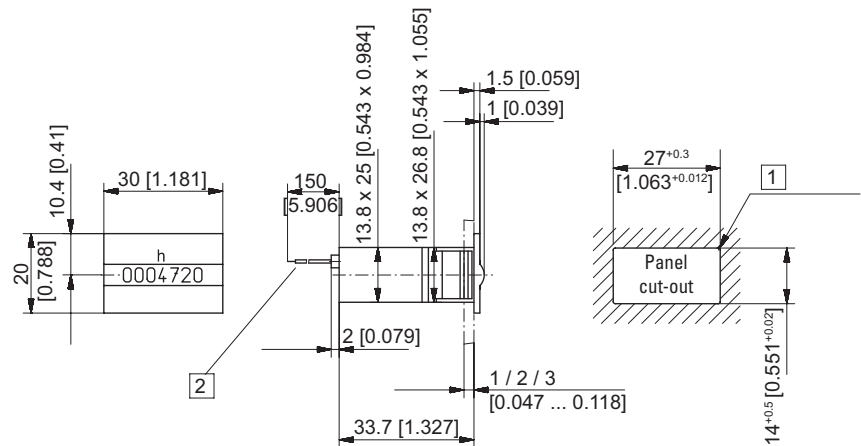
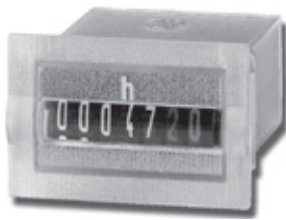
# Hour meters / timers, electromechanical

Micro timers	High shock resistance (DC)	HK 47
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Options	
HK 47.20, HK 47.80	flat pin 0.8 x 2.8 mm [0.031 x 0.11"] and push-on connectors
HK 47.20	solder pins ø 0.64 x 1.2 mm [0.025 x 0.047"]
HK 47.80	flying leads AWG 22 approx. 150 mm [5.91"] long

## Panel mount with injection-moulded spring-clips

### Type HK 47.20

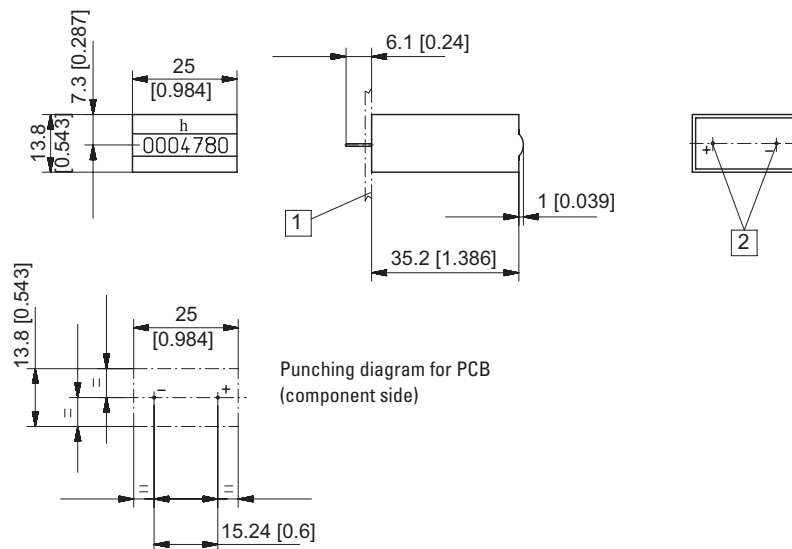


1) R<sub>max</sub> 0.5 2) Flying leads AWG 22 (red+ / black-)

Type	Display	Art.-No. 4.5 ... 35 V DC
HK 47.20	99999.99 h	3.060.200.383 <sup>1)</sup>

## PCB mount

### Type HK 47.80



1) PCB 2) Solder pins ø 0.64 [0.025]

Type	Display	Art.-No. 4.5 ... 35 V DC
HK 47.80	99999.99 h	3.060.800.383