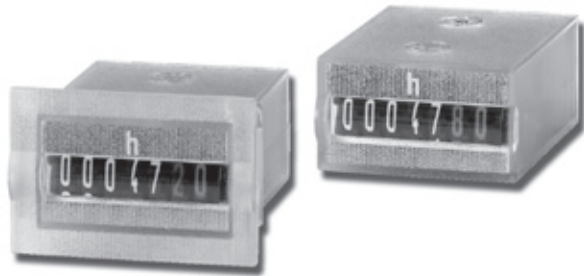


# Hour meters / timers, electromechanical

**Micro timers**      **High shock resistance (DC)**      **HK 47**



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.



Hour meters /  
Timers

### 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

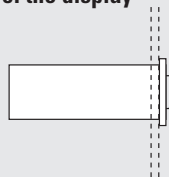
Time registration, maintenance intervals for measuring instruments (respiration units, oxygen, dialysis), small appliances, UV lamps, display panels

### Type series

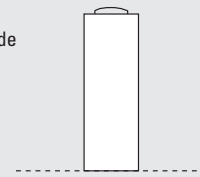
Fig.	Mounting options	Display	Protection	El. connection	Order-No.
1)	Panel mount with latch	front side	IP65, front side	flying leads	<b>HK 47.20</b>
2)	PCB mount, upright	front side	IP65, front side/on rear	solder pins	<b>HK 47.80</b>

### 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

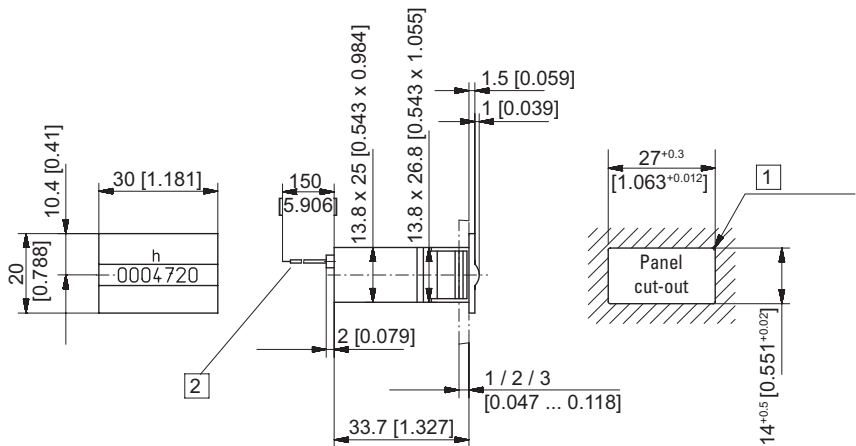
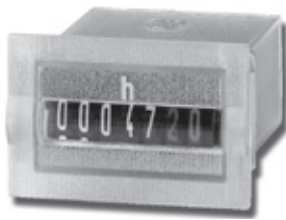
<b>Accuracy</b>	22.5 ppm at 25°C [77°F]
<b>Height of figures</b>	4 x 1.25 mm [0.16 x 0.049"]
<b>Reset</b>	no reset
<b>Operating temperature</b>	-10°C ... +60°C [+14°F ... +140°F] (non-condensing)
<b>Storage temperature</b>	-20°C ... +70°C [-4°F ... +158°F]
<b>Mounting position</b>	horizontal (other on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

# Hour meters / timers, electromechanical

<b>Micro timers</b>	<b>High shock resistance (DC)</b>	<b>HK 47</b>
---------------------	-----------------------------------	--------------

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 $\varnothing$ 0.64 x 1.2 mm [0.025 x 0.047"]
HK 47.80	flying leads AWG 22 approx. 150 mm [5.91"] long

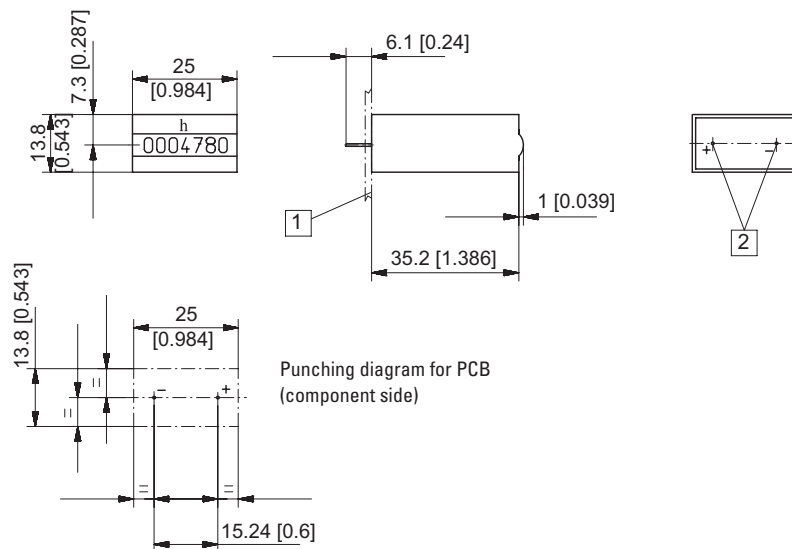
## Panel mount with injection-moulded spring-clips Type HK 47.20



1)  $R_{max}$  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  $\varnothing$  0.64 [0.025]

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