

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

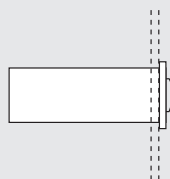
Time registration, maintenance intervals for measuring instruments (respiration units, oxygen, dialysis), small appliances, UV lamps, display panels.

Type series

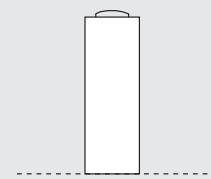
Fig.	Mounting options	Display	Protection	El. connection	Type
1)	Panel mount with latch	front side	IP65, front side	flying leads	HK 47.20
2)	PCB mount, upright	front side	IP65, front side/on rear	solder pins	HK 47.80

Mounting options and position of the display

1) Panel mount
display front side



2) PCB mount, upright
display front side



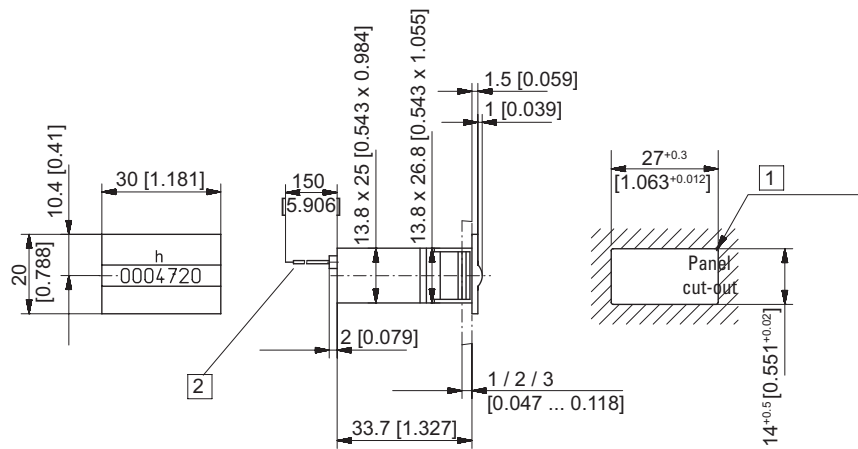
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Micro timers		High shock resistance (DC)	HK 47
Technical data			
Drive		pulse-driven, precision crystal controller via electronic divider circuit	
Pulse duration		32 ms; every 36 s = 0.01 h power on times < 36 s are not counted	
Electrical connection	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"]	
Display		99999.99 h	
Counting drum		figures white on black, decimal place red on black	
Rated Voltage		4.5 ... 35 V DC	
Residual ripple		< 1 %	
Current consumption		< 1.5 mA (average)	
Power consumption		(count pulses every 36 s with a pulse duration of 32 ms)	
		at U _B = 5 V DC typ. 82 mW	
		at U _B = 12 V DC typ. 135 mW	
		at U _B = 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	HK 47.80	IP65	
(acc. to EN 60529)	HK 47.20	IP65 (front side)	
EMC standards		EN 55011 class B EN 61000-6-2, EN 61000-6-3	
Housing		PC transparent; HK 47.80 fully sealed (potted)	
Weight		13 ... 15 g [0.46 ... 0.53 oz]	
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	

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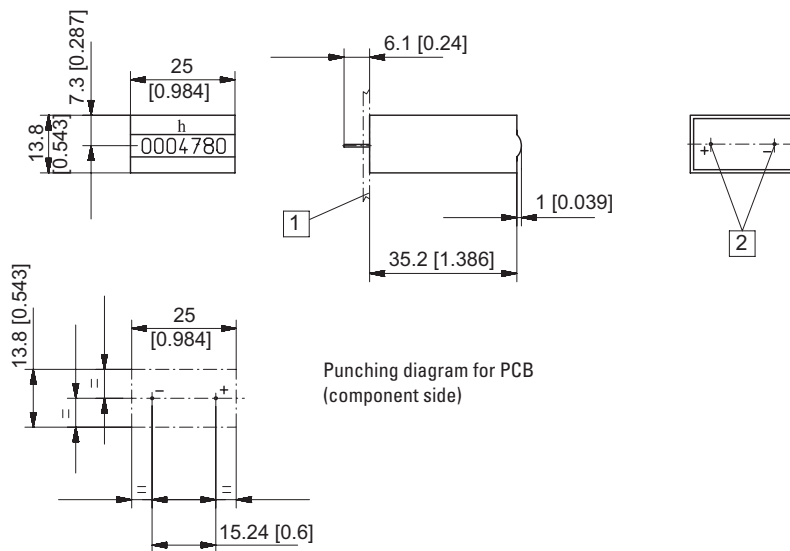
Panel mount
with injection-moulded spring-clips
Type HK 47.20



1) $R_{max} 0.5$ 2) Flying leads AWG 22 (red+ / black-)

Type	Display	Art. no.
HK 47.20	99999.99 h	4.5 ... 35 V DC 3.060.200.383 ¹⁾

PCB mount
Type HK 47.80



Punching diagram for PCB
(component side)

1) PCB 2) Solder pins $\varnothing 0.64 [0.025]$

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