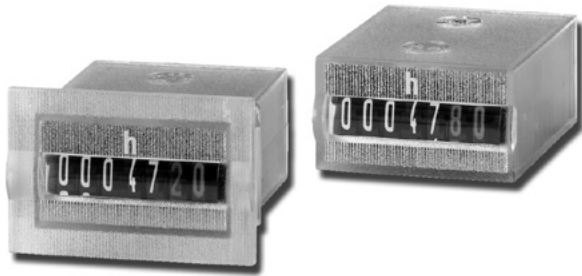


Hour meters / timers, electromechanical

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

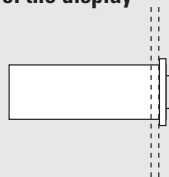
Time registration, maintenance intervals for measuring instruments (respiration units, oxygen, dialysis), small appliances, UV lamps, display panels.

Type series

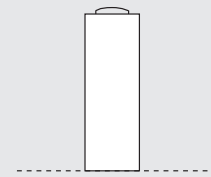
Fig.	Mounting options	Display	Protection	El. connection	Type
1)	Panel mount with latch	front side	IP65, front side	flying leads	HK 47.20
2)	PCB mount, upright	front side	IP65, front side/on rear	solder pins	HK 47.80

Mounting options and position of the display

1) Panel mount
display front side



2) PCB mount, upright
display front side



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 \varnothing 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]

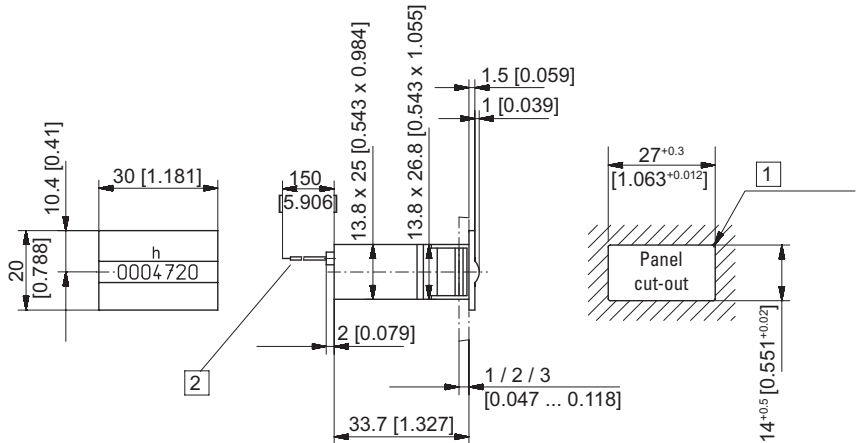
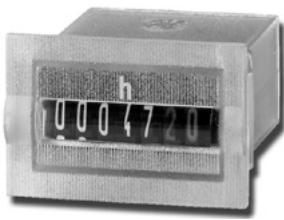
Hour meters / timers, electromechanical

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 \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

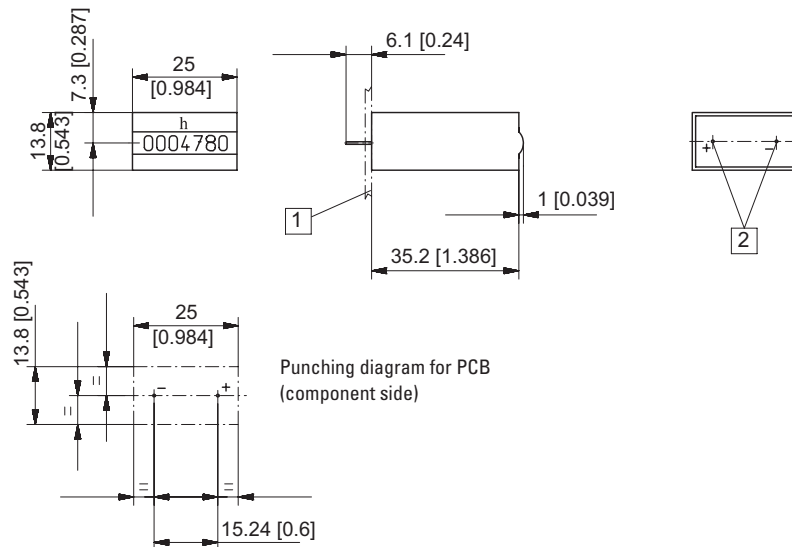


1) R_{max} 0.5 2) Flying leads AWG 22 (red+ / black-)

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

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