

Электромеханические таймеры НК47, НК07, SHK07.1, НК17, НЗ7, Н57, НР47, НР76, НВ26, НВ27, SH17, НВ66М, АН57, АНК07

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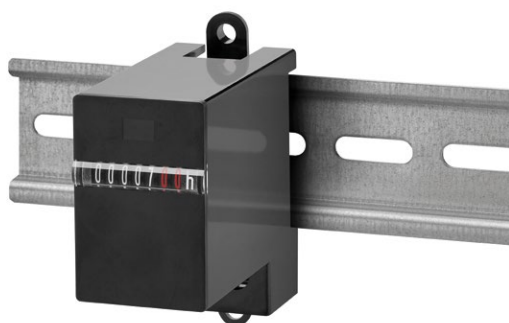
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Hour meters / timers, electromechanical

Timers for DIN rail mounting

Micro DIN rail housing (AC+DC)

SHK07.1



The micro timers SHK07.1 feature a very high shock resistance.

These base and DIN rail mount counters can be used in many different fields of application. These non-resettable counters are extremely tamper-proof.

Characteristics

- 7-digit micro hour meter.
- DIN rail mount according to EN 50022.
- Base mount counter.
- High shock resistance.
- Low power consumption.
- Small dimensions.
- Magnified large figures.
- Display range 99999.99 h.

Benefits

- Wide voltage range 4.5 ... 35 V DC, 20 ... 264 V AC.
- Data retention in case of power failure.
- Long service life.

Applications

General time measurement, integration in control cabinets.

Type series

Description	Mounting	Type
Timer	DIN rail 35 mm [1.38"] acc. to DIN EN 50022	SHK07.1

Technical data

Electrical connection		clamp terminal	up to 2.5 mm ² [AWG13]
		tightening torque max.	0.8 Nm
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
		at U _B = 22 ... 32 V DC	typ. 170 mW
		20 ... 30 V AC	approx. 0.43 VA
		100 ... 130 V AC	approx. 0.82 VA
		187 ... 264 V AC	approx. 1.8 VA
On time			100 %
Number of digits			7 (99999.99 h)
Accuracy			22.5 ppm at 25 °C [77 °F]
EMC standards			EN 55011 class B EN 61000-6-2, EN 61000-6-3
Device safety		designed to protection class application area	EN 61010 part 1 2 pollution level 2
Height of figures			1.2 x 4 mm [0.047 x 0.016"]
Color of figures			white and red on black
Operating temperature		AC	-10 °C ... +50 °C [+14 °F ... +122 °F] (non-condensing)
		DC	-10 °C ... +60 °C [+14 °F ... +140 °F] (non-condensing)

Relative humidity at +30 °C [+86 °F]	≤ 80 % (non-condensing)
Altitude	up to 2000 m [6562']
Mounting position	horizontal, other on request
Protection	up to IP52 depends on version
Housing	plastic PC (Polycarbonate)
Weight	approx. 55 g [1.94 oz]

Options

Temperature range	-20 °C ... +70 °C [-4 °F ... +158 °F]
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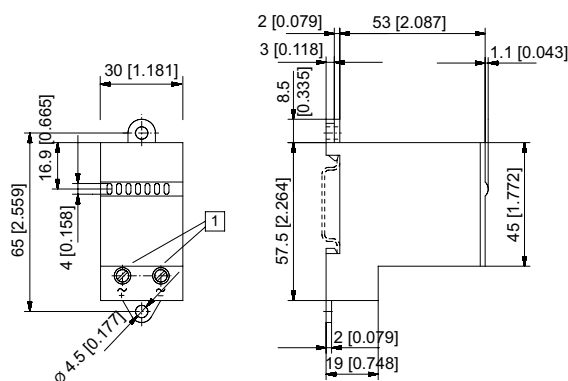
Approvals

CE compliant in accordance with		
EMC Directive	2014/30/EU	
RoHS Directive	2011/65/EU	
Low Voltage Directive	2014/35/EU	

Hour meters / timers, electromechanical

Timers for DIN rail mounting	Micro DIN rail housing (AC+DC)	SHK07.1
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Timer for DIN rail mount
Type SHK07.1



1) Electrical connection

Type	Display	Voltage	Art. no.	4,5 ... 35 V	20 ... 30 V	100 ... 130 V	187 ... 264 V
SHK07.1	7 digits	AC (50...60 Hz)			3.102.101.310	3.102.101.312	3.102.101.313 1)
	7 digits	DC		3.102.101.383 1)			

Hour meters / timers, electromechanical

Dual function counters	Pulse + time for DIN rail (AC+DC)	SHC77
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The counter combinations SHC77 comprise an hour meter and a totalizer. They can be controlled both simultaneously and separately.

These DIN rail mount counters have a reduced mounting depth. They can be used in many different fields of application.

Characteristics

- Hour meter and totalizer in one single device
optional: counters controlled separately.
- Without reset.
- High shock resistance.
- Magnified large figures.
- Protection IP52 (on the front side).
- Data retention in case of power failure.

- Long service life.
- UL-approved.

Applications

General counting, alarm systems, pay stations, electricity meters, vending and gaming machines, copying machines, medical equipment, car washes, lifts, heating burners.

Type series

Description	Type	Options
Dual function counter, common connections	SHC77	SHC77: The two meters are connected in parallel, this means, that the adding counter registers the total number of events and the time meter the total operating time of the device.
Dual function counter, separate connections	SHC77.60	SHC77.60: Hour meter and adding counter have two separate connections. This version is available for either AC or DC version (not mixed).
Order information: Art. no. (for special voltages etc. indicate exact counter types, voltage and frequency e.g. SHC77, 120 V AC, 60 Hz)		

General technical data

Operating indicator of the hour meter	AC	fast rotating wheels with red dashes: 99999.99 h
	DC	1/100 h display turns continuously by 1 digit per 36 s: 999999.99 h
Height of figures	4 x 1.7 mm [0.16 x 0.067"] optical	
Color of figures	hour meter	hours: white figures on black
	1/10 u. 1/100 h adding counter	red figures on black white figures on black
Operating temperature	-15 °C ... +50 °C [+5 °F ... +122 °F] (non-condensing)	
Relative humidity at +30 °C [+86 °F]	≤ 80 % (non-condensing)	
Altitude	up to 2000 m [6562']	
Mounting position	any	

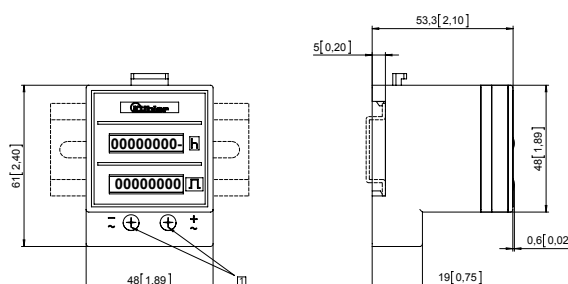
Electrical characteristics

Electrical connection	SHC77	screw terminal (tightening torque max. 0.8 Nm)
	SHC77.60	2 x cable – 2 x 0.5 mm ² [AWG20] NYFAZ, 0.5 m [1.64'] hour meter red/black adding counter grey
Power consumption	10 ... 30 V DC	approx. 1 W
	36 ... 80 V DC	approx. 1.65 W
	100 ... 130 V DC	approx. 1.75 W
	20 ... 30 V AC, 50 Hz	approx. 0.53 VA
	42 ... 48 V AC, 50 Hz	approx. 0.53 VA
	100 ... 130 V AC, 50 Hz	approx. 1.43 VA
Rated voltages	AC (50 or 60 Hz)	20 ... 30/42 ... 48/100 ... 130/187 ... 264 V
	DC	10 ... 30/36 ... 80/100 ... 130 V
On time	100 %	
Count mode	adding	
Accuracy	AC	supply frequency + 30 ms
	DC	< 0.003 % (at 24 h)
Reset	no reset	
Test voltage	2500 V AC, 50 Hz	
Device safety	designed to protection class	EN 61010 part 1
	application area	2 pollution level 2

Hour meters / timers, electromechanical

Dual function counters		Pulse + time for DIN rail (AC+DC)	SHC77
Mechanical characteristics			
Protection	IP52 (front side) when built-in		
Housing color	black (standard)		
Weight	SHC77	85 g [3.00 oz]	
	SHC77.60	105 g [3.70 oz]	
Approvals			
UL compliant in accordance with		File no. E128604	
CE compliant in accordance with			
		EMC Directive	2014/30/EU
		RoHS Directive	2011/65/EU
		Low Voltage Directive	2014/35/EU

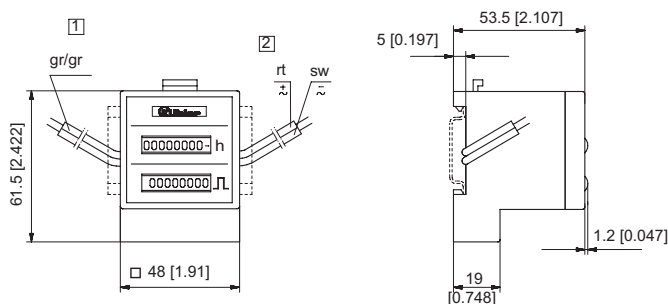
Dual function counter with common connections Type SHC77



1 screw terminal

Type	Display	Voltage	Art. no. 10 ... 30 V	20 ... 30 V	36 ... 80 V	42 ... 48 V	100 ... 130 V	187 ... 264 V
SHC77	7/8 digits	AC (50 Hz)		3.553.401.071		3.553.401.072	3.553.401.074	3.553.401.075
	7/8 digits	AC (60 Hz)		3.553.401.081		3.553.401.082	3.553.401.084	3.553.401.085
	7/8 digits	DC	3.553.401.351		3.553.401.353		3.553.401.381	

Dual function counter with separate connections Type SHC77.60



1 adding counter

2 hour meter

Type	Display	Voltage	Art. no. 10 ... 30 V	20 ... 30 V	36 ... 80 V	42 ... 48 V	100 ... 130 V	187 ... 264 V
SHC77.60	7/8 digits	AC (50 Hz)		3.553.401.071.060		3.553.401.072.060	3.553.401.074.060	3.553.401.075.060
	7/8 digits	AC (60 Hz)		3.553.401.081.060		3.553.401.082.060	3.553.401.084.060	3.553.401.085.060
	7/8 digits	DC	3.553.401.351.060		on request		3.553.401.381.060	

Hour meters / timers, electromechanical

Timers for DIN rail mounting

DIN rail housing, 2 modules wide (AC+DC)

SH17



The hour meters SH17 feature a very high shock resistance.

These DIN rail mount counters can be used in many different fields of application. These non-resettable counters are extremely tamper-proof.

Characteristics

- 7-digit hour meter.
- DIN rail-mount housing, width 2 modules.
- High shock and impact resistance.
- Without reset.
- Magnified large figures.
- Protection IP65 on the front side.

Benefits

- Easy mounting.
- Data retention in case of power failure.
- Long service life.

Applications

General time measurement, maintenance intervals for measuring instruments, small appliances, UV lamps, integration in control cabinets.

Type series

Description	Mounting	Type
Standard timer	DIN rail 35 mm [1.38"] acc. to DIN EN 50022	SH17

Technical data

Electrical connection		screw terminals
	finely-stranded	0 ... 2.5 mm ² [AWG13]
	single-wires	0 ... 4 mm ² [AWG11]
	tightening torque max.	0.5 Nm
Power consumption	DC	approx. 1 W
	AC	approx. 2.5 VA
Rated voltages		24, 115, 230 V AC ±10 %, 50Hz
		115 V AC ±10 %, 60Hz
		10 ... 27 V DC
On time		100 %
Number of digits		7: 99999.99 h
Height of figures		1.8 x 3.6 mm [0.071 x 0.14"]
Color of figures		white on black
Decimal figures		black on white
Housing		plastic PC (Polycarbonate)
Weight		approx. 60 g [2.12 oz]
Housing color		grey, Ral 7035
Reset		no reset
Operating temperature	AC/DC	-10 °C ... +70 °C [+14 °F ... +158 °F] (non-condensing)
Storage temperature	AC/DC	-40 °C ... +80 °C [-40 °F ... +176 °F]
Relative humidity at +25 °C [+77 °F]		≤ 80 % (non-condensing)
Altitude		up to 2000 m [6562']

Mounting position	any
Protection acc. to EN 60529 screw terminal	IP65 (front side) IP20
Vibration resistance	1 g (10 ... 500 Hz) acc. to EN 60028-2-34
Shock resistance	30 g (18 ms) acc. to EN 60068-2-27 25 g (6 ms) acc. to EN 60068-2-29
Device safety designed to protection class application area	EN 61010 part 1 2 pollution level 2
Accuracy	< 0.01%, for all versions

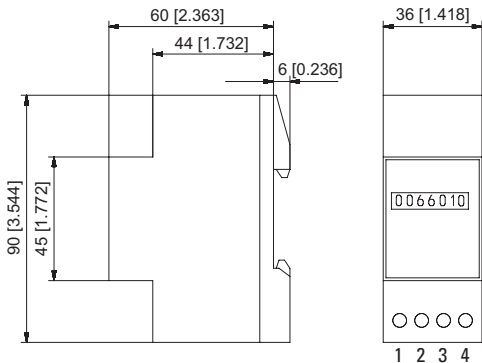
Approvals

CE compliant in accordance with		
EMC Directive		2014/30/EU
RoHS Directive		2011/65/EU
Low Voltage Directive		2014/35/EU

Hour meters / timers, electromechanical

Timers for DIN rail mounting	DIN rail housing, 2 modules wide (AC+DC)	SH17
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Standard timer
Type SH17



Terminal assignment

PIN	DC	AC
1	n.c.	n.c.
2	+	~
3	-	~
4	n.c.	n.c.

Type	Display	Voltage	Art. no.				
			24 V	115 V	230 V	10 ... 27 V DC	
SH17	7 digits	AC (50 Hz)	0.170.000.071	0.170.000.284	0.170.000.075	0.170.000.351	
	7 digits	AC (60 Hz)		0.170.000.287			
	7 digits	DC					

Energy meters

Dual function counters

Energy and time (AC)

HW66M



MID
approved



The HW66M combination meter consists of an hour meter and an energy meter.

This panel-mounted device requires only a limited installation depth and can be used in a wide variety of application areas. The count pulses can be read out via the S0 output.

AC 115...230V	 -20°...+55°C	 DIN 48x48	 IP65	 No reset	 2 x 6 2 x 6 digit	 kWh	 Timer
Supply voltage	Temperature range	DIN front bezel	High protection level	No reset	Display	Energy meter	Timer

Product features

- Metering of hours run and energy consumption in one compact device – panel mounting.
- Wide temperature range.
- Remote readout via S0 outputs on request.
- Shows both values in parallel.
- Easy-to-read display – can also be read if no voltage present.

Benefits

- Tamper-proof fixed installation with high degree of protection.
- High measuring accuracy.
- Can be officially calibrated (MID).

Applications

Dehumidifiers, hire equipment and machinery, air-conditioning, production equipment, current generators.

Order specifications

Type	Voltage	Order no.	Delivery includes	Type plate
HW66M	230 V AC	3.56M.201.075	• Counter • Flat gasket • Mounting clip • Instruction manual	If the type plate on the side of the HW66M is no longer legible after the installation, the provided additional type plate can be affixed on the front panel of the device in order to comply if necessary with the legal requirements relating to calibration.

Accessories

		Type / size	Description		Order no.
Mounting frame			with cut-out 50 x 50 [2.36 x 2.36] via separate adapter also for 45 x 45 [1.77 x 1.77] for snap-on mounting on 35 [1.38] top-hat DIN rail	chromated	G300003
Gasket counter		48 x 48 mm [1.89 x 1.89]			N511018
incl. in delivery					

Energy meters

Dual function counters	Energy and time (AC)	HW66M
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Technical data

General technical data		
Supply voltage	230 V AC, -20 % / +15 %	50 Hz
Digits	2 x 6 digit (decimale places red)	
Height of figures (optical)	4 x 1.7 mm [0.16 x 0.067"]	
Colour of figures	white and red on black	
Operating temperature	10 °C ... +55 °C [+14 °F ... +131 °F] (non-condensing)	
Storage temperature	-25 °C ... +65 °C [-13 °F ... +149 °F]	
Relative humidity at +30 °C [+86 °F]	≤ 80 % (non-condensing)	
Altitude	up to 2000 m [6562']	
Housing	DIN panel-mount 48 x 48 mm [1.89 x 1.89"]	
Depth	55 mm [2.17"]	
Protection	IP65, EN 60529 (front side) IP20 (rear side)	
Max. core cross-section	inputs/outputs	2.5 mm ² [AWG 13]
	S0 output	2.5 mm ² [AWG 13]
LED function	LED on	when supply voltage is connected
	LED blinks	when energy is being measured

Approvals		
CE compliant in accordance with		
	EMC Directive	2014/30/EU
	Measuring Instruments Directive	2014/32/EU
	Low Voltage Directive	2014/35/EU
	RoHS Directive	2011/65/EU

Energy meter	
Display	99999.9 kWh
Accuracy	class B, acc. to MID
Current	I _B = 5 A, I _{max} = 16 A
Current limits	≥ 20 mA up to 16 A
Start current	≥ 20 mA
S0 output	1000 pulses/kWh, 5 ... 30 V DC, I _{max} = 20 mA
Pulse duration	50 ms

Hour meter	
Display	99999.9 h (0.1 h = 6 min)
Accuracy	± 2 %
S0 output	10 imp/h, 5 ... 30 V DC, I _{max} = 20 mA
Pulse duration	50 ms
Start (Operating time)	with voltage applied to L _{in}
This hour meter shall not be used for electricity consumption calculation.	

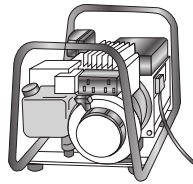
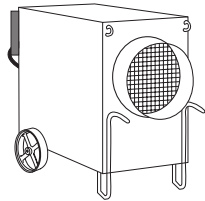
Energy meters

Dual function counters

Energy and time (AC)

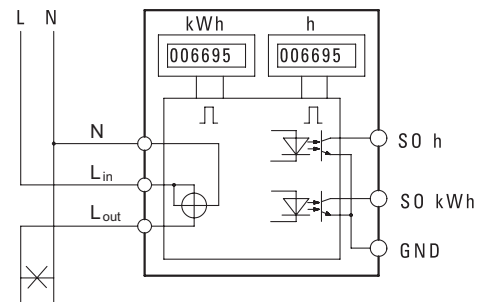
HW66M

Applications



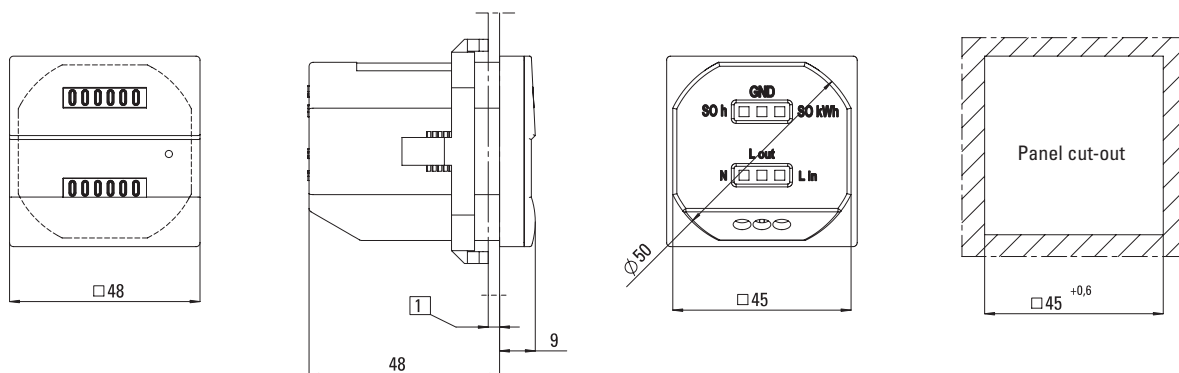
Retro- or standard fitting in dehumidifiers, current generators, air-conditioning, production equipment etc. for the accurate, traceable billing of operating and energy costs – especially also for hire equipment.

Terminal assignment



Dimensions

Dimensions in mm



1 max. 6.5

Hour meters / timers, electromechanical

Timers, round design

High protection rating (AC+DC)

HR76



The hour meter HR76 feature a very high shock resistance.

These panel-mount counters for round panel cut-outs can be used in many different fields of application. These non-resettable counters are very robust and extremely tamper-proof.

Characteristics

- 6-digit hour meter.
- Low cost.
- High shock resistance.
- Low energy consumption.
- Magnified large figures.
- Protection IP65.
- Data retention in case of power failure.
- Long service life.

Benefits

- 50/60 Hz in the same device.
- Small mounting depth.
- Waterproof on the front and on the rear.

Applications

Operating hours measurement with construction and agricultural machinery, compressors, power units.

Type series

Description	Mounting	Type
Timer, round	screw mounting front side	HR76.1
Timer, round	clip mounting	HR76.2

Accessories

		Type / size	Description		Order no.
Mounting support (only HR76.2)			for round counters with cutout ø 53 mm	black	N510199
Gasket counter (only HR76.1)		ø 71,1 mm [2.80"]	for cut-out ø 50 mm		N511150

Hour meters / timers, electromechanical

Timers, round design		High protection rating (AC+DC)		HR76	
Technical data					
Electrical connection		flat pin 0.8 x 6.3 mm [0.031 x 0.25"]			
Power consumption		AC	max. 0.4 VA		
		12 V DC	max. 0.08 W		
		48 V DC	max. 0.7 W		
Rated voltages		AC (50 or 60 Hz)	115/230 V AC, ±10 %, 50/60 Hz		
		DC	10 ... 80 V DC		
On time		100 %			
Number of digits		6: 99999.9 h			
Count mode		adding			
Height of figures		3.5 mm [0.14"] heigh			
Color of figures		white on black			
Reset		no reset			
Operating temperature		-30 °C ... +65 °C [-22 °F ... +185 °F] (non-condensing)			
Storage temperature		-40 °C ... +85 °C [-40 °F ... +149 °F]			
Relative humidity at +25 °C [+77 °F]		≤ 95 % (non-condensing)			
Altitude		up to 2000 m [6562']			
Mounting position		any			
Protection		IP65 (except the connections)			
Housing		plastic PC (Polycarbonate)			
Accuracy		< 0.02 % over the full range			
Weight		HR76.1	56 g [1.98 oz]		
		HR76.2	54 g [1.91 oz]		
Device safety		designed to	EN 61010 part 1		
		protection class	2		
		application area	pollution level 2		

Approvals		
UL compliant in accordance with		File no. E128604
CE compliant in accordance with		
	EMC Directive	2014/30/EU
	RoHS Directive	2011/65/EU
	Low Voltage Directive	2014/35/EU

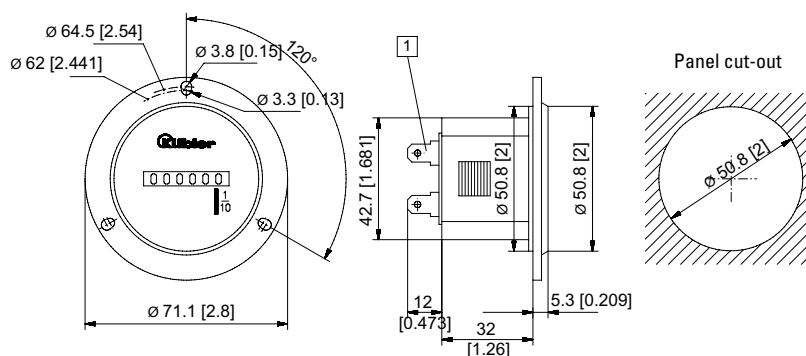
Hour meters / timers, electromechanical

Timers, round design

High protection rating (AC+DC)

HR76

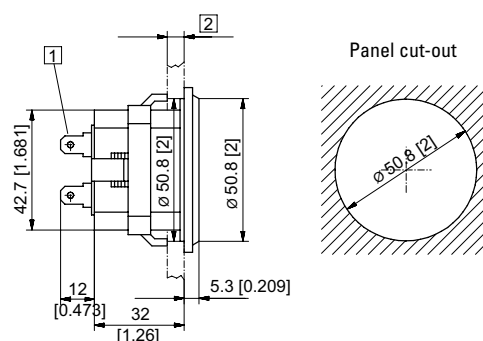
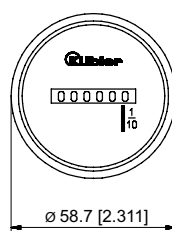
Timer, round
screw mounting front side
Type HR76.1



1) Electrical connection: flat pin 0.8 x 6.3 [0.031 x 0.25]

Type	Display	Voltage	Art. no. 10 ... 80 V DC	115 V	230 V	
HR76.1	6 digits	AC (50/60 Hz)		0.135.100.301	0.135.100.302	Gasket for front bezel N511150
	6 digits	DC	0.135.100.373 1)			not included in delivery

Timer, round
clip mounting
Type HR76.2



For mounting the counter onto a flat plate, see accessories chapter
Art. no.: N510199

1) Electrical connection: flat pin 0.8 x 6.3 [0.031 x 0.25] 2) max. 9 [035]

Type	Display	Voltage	Art. no. 10 ... 80 V DC	115 V	230 V	
HR76.2	6 digits	AC (50/60 Hz)		0.135.200.301 1)	0.135.200.302	Gasket integrated in counter
	6 digits	DC	0.135.200.373 1)			

Hour meters / timers, electromechanical

Timers, round design

With LED run indicator (AC+DC)

HR47



The hour meter HR47 with run indicator feature a very high shock resistance.

These panel-mount counters for round panel cut-outs can be used in many different fields of application. These non-resettable counters are very robust and extremely tamper-proof.



Characteristics

- 7-digit hour meter.
- For voltage ranges 10 ... 80 V DC, 100 ... 130 V AC and 187 ... 264 V AC.
- Magnified large figures.
- Protection IP65 on the front and rear sides.
- Suitable for any mounting position.
- Without reset, and thus tamper-proof.
- High shock and impact resistance.

Benefits

- With run indicator (AC version), optional LED (DC version).
- For panel cut-out $\varnothing$ 50.5 mm with front panel dimensions $\varnothing$ 58 mm.
- Simple and secure mounting with screwed clamping clip.

Applications

General time measurement, construction machinery and industrial trucks, small appliances, UV lamps, display panels in vehicles, compressors, air-conditioning equipment, etc..

Type series

Description	Mounting	Type
Timer, round	Clamping clip fixing, screw-on	HR47

Accessories

		Type / size	Description		Order no.
Mounting support			for round counters with cutout $\varnothing$ 53 mm	black	N510199
Gasket counter		$\varnothing$ 58 mm [2.28"]	for cut-out $\varnothing$ 50 mm		N511182
Adapter and anti-vibration set		$\varnothing$ 80 mm [3.15"]	for cut-out $\varnothing$ 71 mm	black	255319

Hour meters / timers, electromechanical

Timers, round design	With LED run indicator (AC+DC)	HR47
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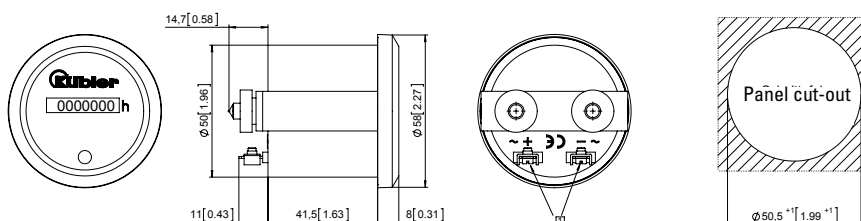
Technical data	
Electrical connection	screw terminal for flat pin 6.3 x 0.8 mm [0.25 x 0.031"]
Power consumption	10 ... 80 V DC max. 720 mW 100 ... 130 V AC, 60 Hz max. 1.1 VA 187 ... 264 V AC, 50 Hz approx. 1.2 VA
Rated voltages	AC (50 or 60 Hz) 100 ... 130/187 ... 264 V AC, DC 10 ... 80 V DC
On time	100 %
Number of digits	AC 7: 99999.99 h DC 7: 999999.9 h
Resolution	AC 0.01 h equals 36 s DC 0.1 h equals 6 min
Count mode	adding
Height of figures	4 mm [0.16"]
Color of figures	hours white on black decimal position 50 Hz - red on black 60 Hz - red on white
Count position at delivery	1.00 - 1.02
Operating temperature	AC -25 °C ... +80 °C [-13 °F ... +176 °F] (non-condensing) DC -20 °C ... +70 °C [-4 °F ... +158 °F] (non-condensing)
Relative humidity at +25 °C [+77 °F]	≤ 80 % (non-condensing)
Altitude	up to 2000 m [6562']
Mounting position	any
Protection	IP65, EN 60529 (except the connections)

Housing	plastic PC (Polycarbonate)
Accuracy	AC ±0.02 % DC ±0.002 %
Weight	approx. 50 g [1.76 oz]
Run indicator	AC fast rotating wheel in viewing window DC optional LED
Test voltage	2000 V AC, 50 Hz for AC version
EMC standards	EN 55011 class B EN 61000-6-2, EN 61000-6-3
Device safety	designed to protection class 2 application area pollution level 2

Options
Counter for ø 52 mm [0.20"] with screwed clamping bracket or screw thread on request

Approvals
CE compliant in accordance with
EMC Directive 2014/30/EU
RoHS Directive 2011/65/EU
Low Voltage Directive 2014/35/EU

Timer, round Type HR47



1) Electrical connection: +/- left, -/~ right (rear view)

Front bezel thickness max. 6 [0.24] without having to shorten the clamping bracket

Type	Display	Voltage	Art. no.	10 ... 80 V DC	100 ... 130 V 60 Hz	187 ... 264 V 50 Hz	
HR47	7 digits	V AC, with run indicator			3.474.901.084 1)	3.474.901.075	
	7 digits	V DC, without run indicator	3.474.901.373 1)				further types on request
	7 digits	V DC, with run indicator	3.474.911.373 1)				

Hour meters / timers, electromechanical

Micro timers

High shock resistance (DC)

HK47



The micro timers HK47 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 (HK47.20).
- PCB mount counter (HK47.80).

Benefits

- Low power consumption; suitable for battery operation.
- Solderable and wash-proof (HK47.80).
- Data retention in case of power failure.
- Long service life.

Applications

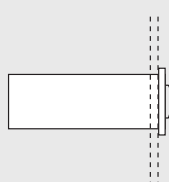
Time registration, maintenance intervals for measuring instruments (respiration units, oxygen, dialysis), small appliances, UV lamps, display panels.

Type series

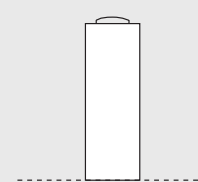
Fig.	Mounting options	Display	Protection	El. connection	Type
1)	Panel mount with latch	front side	IP65, front side	flying leads	HK47.20
2)	PCB mount, upright	front side	IP65, front side/on rear	solder pins	HK47.80

Mounting options and position of the display

- 1) Panel mount
display front side



- 2) PCB mount, upright
display front side



Hour meters / timers, electromechanical

Micro timers		High shock resistance (DC)		HK47	
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	HK47.20	flying leads AWG 22, approx. 150 mm [5.91"] long (red +, black -)			
	HK47.80	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		HK47.80			
Soldering temperature		265 °C [+509 °F], 3 s			
Protection (acc. to EN 60529)	HK47.80	IP65			
	HK47.20	IP65 (front side)			
Housing		PC transparent; HK47.80 fully sealed (potted)			
Weight		13 ... 15 g [0.46 ... 0.53 oz]			

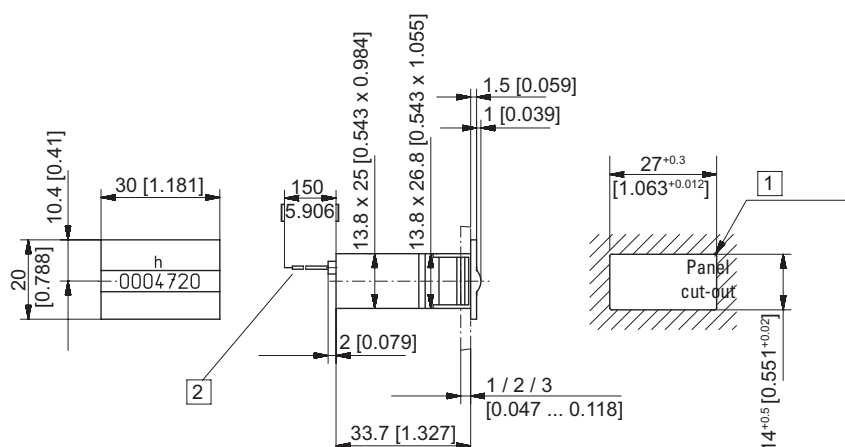
Options		
HK47.20, HK47.80		flat pin 0.8 x 2.8 mm [0.031 x 0.11"] and push-on connectors
HK47.20		solder pins ø 0.64 x 1.2 mm [0.025 x 0.047"]
HK47.80		flying leads AWG 22 approx. 150 mm [5.91"] long

Approvals		
CE compliant in accordance with		
EMC Directive	2014/30/EU	
RoHS Directive	2011/65/EU	

Hour meters / timers, electromechanical

Micro timers	High shock resistance (DC)	HK47
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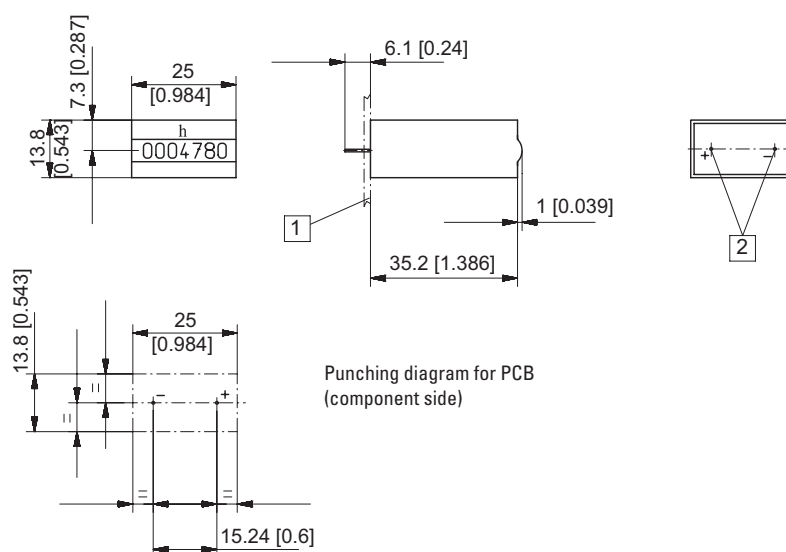
Panel mount
with injection-moulded spring-clips
Type HK47.20



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

Type	Display	Art. no.
HK47.20	99999.99 h	4.5 ... 35 V DC 3.060.200.383

PCB mount
Type HK47.80



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

Type	Display	Art. no.
HK47.80	99999.99 h	4.5 ... 35 V DC 3.060.800.383

Hour meters / timers, electromechanical

Timers with DIN dimensions

Small format (AC+DC)

HK17



The hour meters HK17 feature a very high shock resistance.

These panel-mount counters are available in many panel sizes. They can be used in many different fields of application. These non-resettable counters are extremely tamper-proof.

Characteristics

- 7 or 8-digit hour meter.
- Without reset.
- High shock resistance.
- Small dimensions.
- Magnified large figures.
- Protection IP65 on the front side.
- UL-approved.

Benefits

- Many different front panel sizes and cut-outs.
- Data retention in case of power failure.
- Long service life.

Applications

General time measurement, maintenance intervals for medical equipment (respiration units, oxygen, dialysis), small appliances, UV lamps, display panels in vehicles.

Order code

HK17 . XX1 . XX . 56¹⁾

a Front bezel

- 0 = without front bezel (through housing)
- 2 = small front bezel with clip
- 4 = front bezel with holes at the side

b Type of housing

- 5 = housing black with welded viewing window

c Color

- 1 = black

d Electrical connection

- 11 = flat pin 0.8 x 6.3 mm [0.031 x 0.25"] (optional)
- 39 = screw terminal (standard) with flat pin 0.8 x 6.3 mm [0.031 x 0.25"]

Accessories

	Type / size	Description	Order no.
Gasket counter	55 x 26 mm [2.16 x 1.02]	for HK17.451	N511043
	36 x 24 mm [1.42 x 0.94]	for HK17.251.39.56	N511040

1) 56 for front bezel 36 x 24 mm [1.42 x 0.94"]

Hour meters / timers, electromechanical

Timers with DIN dimensions		Small format (AC+DC)	HK17
Technical data			
Electrical connection		flat pins 0.8 x 6.3 mm [0.031 x 0.25"] with screw terminals (max. tightening torque 0.8 Nm) or flat pins 0.8 x 6.3 mm [0.031 x 0.25"]	
Power consumption	10 ... 30 V DC	approx. 500 mW	
	36 ... 80 V DC	approx. 900 mW	
	100 ... 130 V DC	approx. 750 mW	
	20 ... 30 V AC, 50 Hz	approx. 0.3 VA	
	42 ... 48 V AC, 50 Hz	approx. 0.25 VA	
	100 ... 130 V AC, 50 Hz	approx. 0.6 VA	
	187 ... 264 V AC, 50 Hz	approx. 1.2 VA	
	360 ... 440 V AC, 50 Hz	approx. 1.65 VA	
Rated voltages	AC (50 or 60 Hz)	20 ... 30 V, 42 ... 48 V, 100 ... 130 V, 187 ... 264 V, 360 ... 440 V	
	DC	10 ... 30 V, 36 ... 80 V, 100 ... 130 V	
Number of digits	7 at AC	99999.99 h	
	8 at DC	999999.99 h	
Accuracy	AC	supply frequency + 30 ms	
	DC	<0.003 % (at 24 h)	
Height of figures		3.8 x 1.7 mm [0.15 x 0.067"] optical	
Color of figures		white and red on black	
Operating temperature		-15 °C ... +50 °C [+5 °F ... +122 °F] (non-condensing)	
Storage temperature		-40 °C ... +85 °C [-40 °F ... +185 °F]	
Relative humidity at +30 °C [+86 °F]		≤ 80 % (non-condensing)	
Altitude		up to 2000 m [6562']	
Mounting position		any	
Protection		IP65 (front side)	
Device safety	designed to protection class application area	EN 61010 part 1 2 pollution level 2	
Housing		plastic PC (Polycarbonate) types with protection IP65 are sealed	
Weight		approx. 40 g [1.41 oz]	

Options		
Counter with flat pin 0.8 x 6.3 mm [0.031 x 0.25"]		Art. no. 3.138.X51.XXX

Approvals		
UL compliant	in accordance with	File no. E128604 ¹⁾
CE compliant	in accordance with	
	EMC Directive	2014/30/EU
	RoHS Directive	2011/65/EU
	Low Voltage Directive	2014/35/EU

1) The version 360 ... 440 V AC is not UL listed

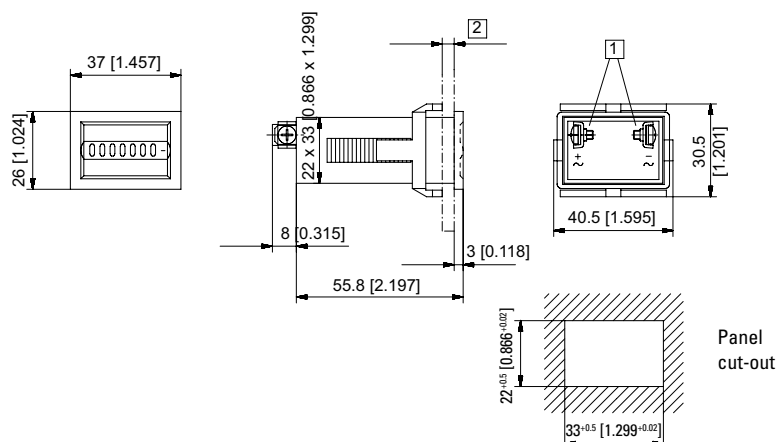
Hour meters / timers, electromechanical

Timers with DIN dimensions

Small format (AC+DC)

HK17

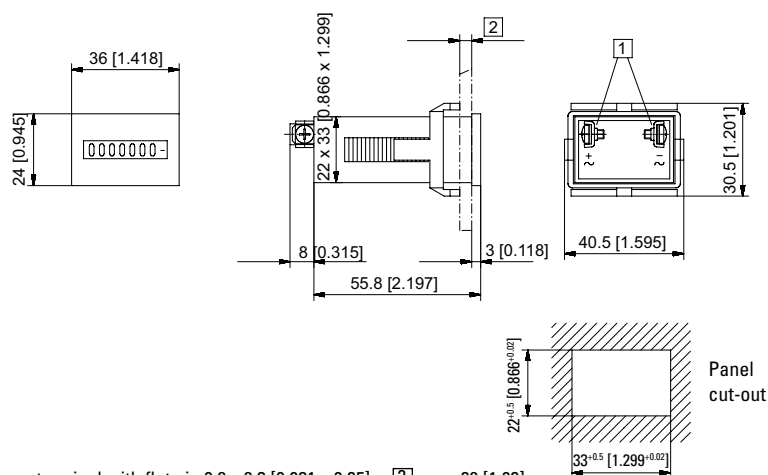
Panel mount with mounting clip Type HK17.251.39



[1] Screw terminal with flat pin 0.8 x 6.3 [0.031 x 0.25] [2] max. 26 [1.02]

Type	Display	Voltage	Art. no.	10 ... 30 V	20 ... 30 V	36 ... 80 V	42 ... 48 V	100 ... 130 V	187 ... 264 V	360 ... 440 V
HK17.251.39	7 digits	AC (50 Hz)			3.130.251.071		3.130.251.072	3.130.251.074	3.130.251.075 ¹⁾	3.130.251.079
	7 digits	AC (60 Hz)			3.130.251.081		3.130.251.082	3.130.251.084	3.130.251.085	3.130.251.089
	8 digits	DC	3.130.251.351			3.130.251.353		3.130.251.381		

Panel mount with mounting clips Type HK17.251.39.56



[1] Screw terminal with flat pin 0.8 x 6.3 [0.031 x 0.25] [2] max. 26 [1.02]

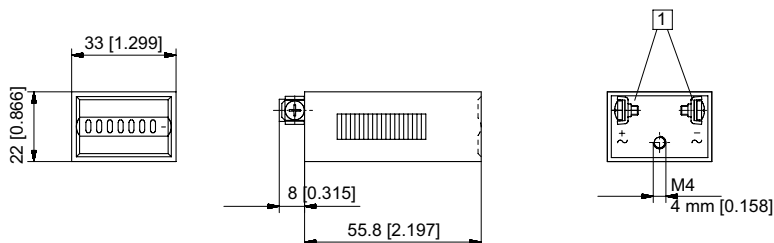
Type	Display	Voltage	Art. no.	10 ... 30 V	20 ... 30 V	36 ... 80 V	42 ... 48 V	100 ... 130 V	187 ... 264 V	360 ... 440 V
HK17.251.39.56	7 digits	AC (50 Hz)			3.130.251.071.056		3.130.251.072.056	3.130.251.074.056	3.130.251.075.056 ¹⁾	3.130.251.079.056
	7 digits	AC (60 Hz)			3.130.251.081.056		3.130.251.082.056	3.130.251.084.056	3.130.251.085.056	3.130.251.089.056
	8 digits	DC	3.130.251.351.056			3.130.251.353.056		3.130.251.381.056		

Hour meters / timers, electromechanical

Timers with DIN dimensions	Small format (AC+DC)	HK17
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Base mount with central fixing on rear

Type HK17.051.39

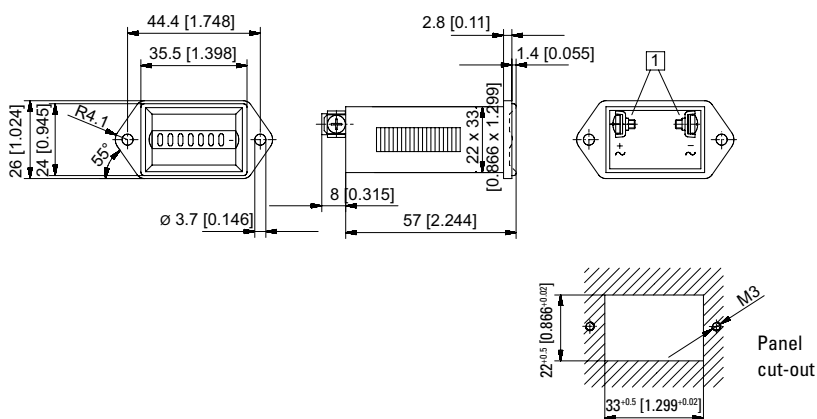


1 Screw terminal with flat pin 0.8 x 6.3 [0.031 x 0.25]

Type	Display	Voltage	Art. no.	10 ... 30 V	20 ... 30 V	36 ... 80 V	42 ... 48 V	100 ... 130 V	187 ... 264 V	360 ... 440 V
HK17.051.39	7 digits	AC (50 Hz)			3.130.051.071		3.130.051.072	3.130.051.074	3.130.051.075	3.130.051.079
	7 digits	AC (60 Hz)			3.130.051.081		3.130.051.082	3.130.051.084	3.130.051.085	3.130.051.089
	8 digits	DC	3.130.051.351			3.130.051.353		3.130.051.381		

Panel mount with 2 holes at the side

Type HK17.451.39



1 Screw terminal with flat pin 0.8 x 6.3 [0.031 x 0.25]

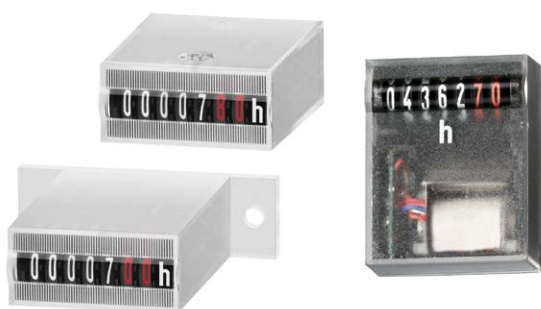
Type	Display	Voltage	Art. no.	10 ... 30 V	20 ... 30 V	36 ... 80 V	42 ... 48 V	100 ... 130 V	187 ... 264 V	360 ... 440 V
HK17.451.39	7 digits	AC (50 Hz)			3.130.451.071		3.130.451.072	3.130.451.074	3.130.451.075	3.130.451.079
	7 digits	AC (60 Hz)			3.130.451.081		3.130.451.082	3.130.451.084	3.130.451.085	3.130.451.089
	8 digits	DC	3.130.451.351			3.130.451.353		3.130.451.381		

Hour meters / timers, electromechanical

Micro timers

Many different installation options (DC)

HK07 / AHK07



The micro timers of the HK07 and AHK07 families offer a particularly large number of variants and can be used in many different applications thanks to their wide voltage range from 4.5 to 35 V DC.

Available as panel, base 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.
- High shock and impact resistance.
- Low power consumption; suitable for battery operation.
- Small dimensions – magnified large figures.
- Panel-mount counter with integrated spring clip.
- PCB-mount counter.
- Machine-solderable and wash-proof.
- Protection IP65.

Benefits

- Wide voltage range 4.5 ... 35 V DC.
- Count retention in case of power failure.
- Long service life.

Applications

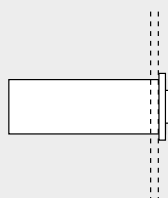
General time measurement, maintenance intervals for measuring instruments (respiration units, oxygen, dialysis), small appliances, UV lamps, display panels in vehicles.

Type series

Fig.	Mounting options	Display	Protection	El. connection	Housing	Height of fig.	Type
1)	Panel mount with latch	front side	IP65, front side	flying leads	plastic	4 mm [0.16"]	HK07.20
2)	PCB mount, lying	on the top	IP65, front side/on rear	solder pins	plastic	4 mm [0.16"]	HK07.90
4)	PCB mount, upright	front side	IP65, front side/on rear	solder pins	plastic	4 mm [0.16"]	HK07.92
5)	Base mount, upright	front side	IP40	flying leads	plastic	4 mm [0.16"]	AHK07.00

Mounting options and position of the display

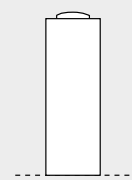
- 1) Panel mount
display front side



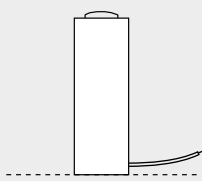
- 2) PCB mount, lying
display on the top



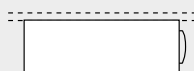
- 3) PCB mount, upright
display front side



- 4) Base mount, upright
display front side



- Optional: PCB mount, hanging
display front side



Hour meters / timers, electromechanical

Micro timers	Many different installation options (DC)	HK07 / AHK07
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Accessories					
		Type / size	Description		Order no.
Gasket counter		32 x 15 [1.26 x 0.59]	for cut-out 27 x 13 mm, suitable for HK07.20		N511058

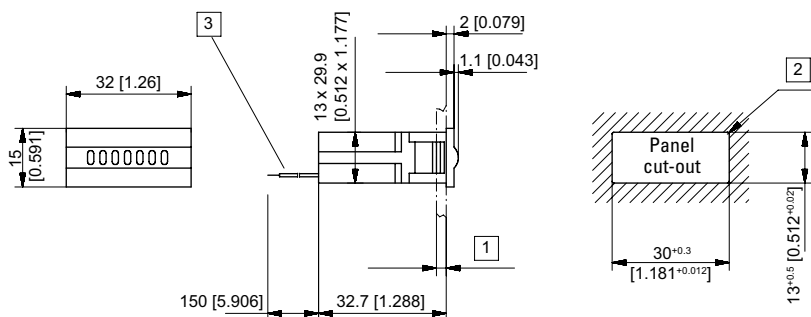
Technical data	
Electrical connection	panel mount flying leads, AWG 22 (red +, black -) approx. 150 mm [5.91"], 6 mm [0.24"] stripped wire ends, tinned
	PCB mount solder pins 0.4 x 1.2 mm [0.016 x 0.047"], tinned
Power consumption (every 36 s with a pulse length of 32 ms)	
	at $U_B = 5\text{ V DC}$ typ. 82 mW
	at $U_B = 12\text{ V DC}$ typ. 135 mW
	at $U_B = 24\text{ V DC}$ typ. 135 mW max. 170 mW
Rated voltage	4.5 ... 35 V DC
Residual ripple	< 1 %
Current consumption	< 1.5 mA (average)
On time	100 %
Pulse duration	32 ms; every 36 s = 0.01 h On-times < 36 s will not be counted
Number of digits	7: 99999.99 h
Accuracy	22.5 ppm at 25 °C [77 °F]
Height of figures	1.2 x 4.0 mm [0.047 x 0.16"]
Color of figures	white and red on black
Reset	no reset
Operating temperature	-10 °C ... +60 °C [+14 °F ... +140 °F] (non-condensing)
Mounting position	horizontal, other on request
Solderable and washproof versions	HK07.90, HK07.91, HK07.92
Soldering temperature	265 °C [+509 °F], 3 s
Protection	up to IP65, depending on kind of type
Housing	plastic PC (Polycarbonate)
Weight	15 ... 18 g [0.53 ... 0.63 oz]

Options
HK07.20 flat pin 0.8 x 2.8 mm [0.031 x 0.11"] (others on request)

Approvals
CE compliant in accordance with
EMC Directive 2014/30/EU
RoHS Directive 2011/65/EU

Panel mount with latch / display front side

Type HK07.20



1) 1.2 ... 3 [0.047 x 0.12"] 2) R_{max} 0.5 3) Flying leads (red+ / black-)

Type	Display	Art. no.
HK07.20	7 digits	4.5 ... 35 V DC 3.100.200.383 ¹⁾
HK07.20.35 with flat pins	7 digits	3.107.200.383 ¹⁾

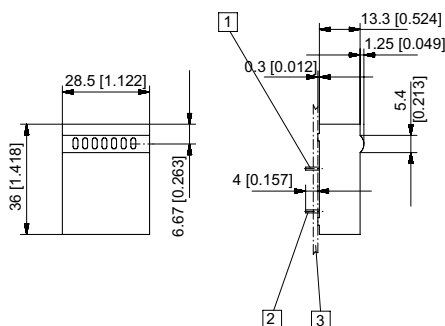
Dimensions in mm [inch]

1) Stock types

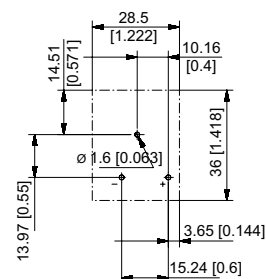
Hour meters / timers, electromechanical

Micro timers	Many different installation options (DC)	HK07 / AHK07
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PCB mount, lying / display on the top
Type HK07.90



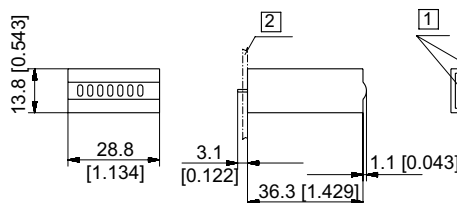
Punching diagram for PCB
(component side)



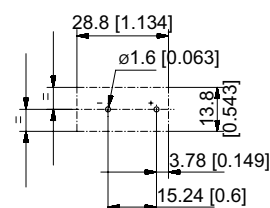
- 1 Mounting pin without el. function 0.4 x 1.2 [0.016 x 0.047]
2 Electrical connection 0.4 x 1.2 [0.016 x 0.047] 3 PCB

Type	Display	Art. no.
HK07.90	7 digits	4.5 ... 35 V DC 3.100.900.383

PCB mount, upright / display front side
Type HK07.92



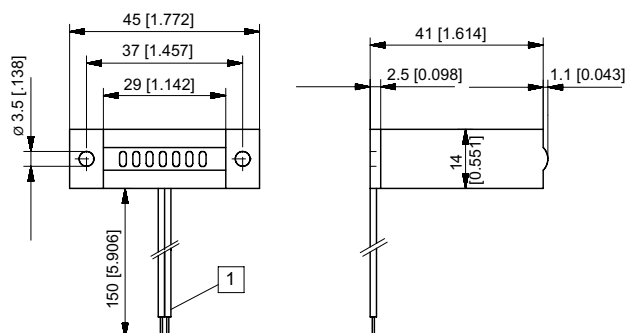
Punching diagram for PCB
(component side)



- 1 Electrical connection 0.4 x 1.2 [0.016 x 0.047] 2 PCB

Type	Display	Art. no.
HK07.92	7 digits	4.5 ... 35 V DC 3.100.920.383

Base mount, upright / display front side
Type AHK07.00



- 1 Flying leads (red+ / black-)

Type	Display	Art. no.
AHK07.00	7 digits	4.5 ... 35 V DC 3.100.000.383

Hour meters / timers, electromechanical

Dual function counters

Pulse + time / 2 x time (AC+DC)

HC77



The counter combinations HC77 and HC77.55 comprise an hour meter and a totalizer. They can be controlled both simultaneously and separately.

These panel mount counters have a reduced mounting depth. They can be used in many different fields of application.

Optionally with 2 hour meters on request.

Characteristics

- Hour meter and totalizer in one single device.
- Without reset.
- High shock resistance.
- Magnified large figures.
- Protection IP52 front side (optional IP65).
- Data retention in case of power failure.
- UL-approved.

Benefits

- Long service life.
- Optional: counters controlled separately.

Applications

General time measurement, maintenance intervals for measuring instruments (respiration units, oxygen, dialysis), small appliances, UV lamps, display panels in vehicles, lifts, heating burners.

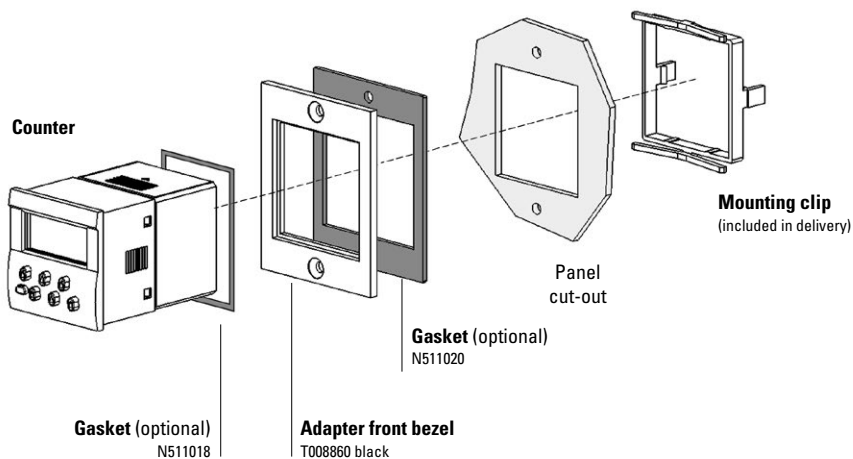
Type series

Description	Type	Options
Dual function counter 48 x 48 mm [1.89 x 1.89"]	HC77	• Housing color: grey Art. no. 3.55X.400.XXX • Flat pin 0.8 x 6.3 mm [0.031 x 0.25"] Art.-No.: 3.55X.40X.XXX.011
With adapter front bezel 55 x 55 mm [2.17 x 2.17"]	HC77.55	• Separate connections for running time meter and adding counter. This model is available for AC or DC (not mixed) - Adding counter max. 10 Hz - Electrical connection: 2 x cable 2 x 0.5 mm² [AWG20], NYFAZ, 0.5 m [1.64'] (hour meter cable red/black, adding counter grey cable) Art. no. 3.55X.40X.XXX.060 • Sealed window (IP65 front side) with: - Screw terminal Art. no. 3.55X.40X.XXX.419 - Flat pin 0.8 x 6.3 mm [0.031 x 0.25"] Art. no. 3.55X.40X.XXX.062 - Separated connections (cable) Art. no. 3.55X.40X.XXX.061 • Counter combination with 2 hour meters 10 ... 30 V DC - 2 x cable 2 x 0.5 mm² [AWG20] Art. no. 3.554.401.351.060 - Spring-type terminal on request
Order information:		
Art. no. (for special voltages etc. indicate exact model, voltage and frequency e.g. HC77, 120 V AC, 60 Hz)		

Hour meters / timers, electromechanical

Dual function counters	Pulse + time / 2 x time (AC+DC)	HC77
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Accessories / Mounting examples



		Type / size	Description		Order no.	suitable gasket
Adapter front bezel		55 x 55 mm [2.17 x 2.17]	for cut-out 50 x 50 mm [1.97 x 1.97"] or ø 50,5 mm [1.99"] to cut-out 45 x 45 mm [1.77 x 1.77"]	grey black	T008170 T008171	N511017
		55 x 55 mm [2.17 x 2.17]	for cut-out 50 x 50 mm [1.97 x 1.97"] to cut-out 45 x 45 mm [1.77 x 1.77"]	black	T008853	N511004
		60 x 75 mm [2.36 x 2.95]	for cut-out 50 x 50 mm [1.97 x 1.97"] to cut-out 45 x 45 mm [1.77 x 1.77"]	black	T008860	N511020
		72 x 72 mm [2.83 x 2.83]	for cut-out 68 x 68 mm [2.68 x 2.68"] to cut-out 45 x 45 mm [1.77 x 1.77"]	grey black Mating clip	T008176 T008177 T009420	N511016
		ø 72 mm [2.83]	for cut-out ø 60 mm [2.36"] to cut-out 45 x 45 mm [1.77 x 1.77"]	black	N510226	—
Gasket counter			48 x 48 mm (for installation in adapter front bezel)		N511018	

Hour meters / timers, electromechanical

Dual function counters	Pulse + time / 2 x time (AC+DC)	HC77
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Technical data

Electrical characteristics		
Electrical connection		screw terminal (tightening torque max. 0.8 Nm)
Power consumption	10 ... 30 V DC	approx. 1 W
	36 ... 80 V DC	approx. 1.65 W
	100 ... 130 V DC	approx. 1.75 W
	20 ... 30 V AC, 50 Hz	approx. 0.53 VA
	42 ... 48 V AC, 50 Hz	approx. 0.53 VA
	100 ... 130 V AC, 50 Hz	approx. 1.43 VA
Rated voltages	187 ... 264 V AC, 50 Hz	approx. 3.0 VA
	AC (50 or 60 Hz) DC	20 ... 30/42 ... 48/100 ... 130/187 ... 264 V 10 ... 30/36 ... 80/100 ... 130 V
On time		100 %
Count mode		adding
Accuracy	AC DC	supply frequency + 30 ms < 0.003 % (at 24 h)
Reset		no reset
Device safety	designed to	EN 61010 part 1
	protection class	2
	application area	pollution level 2

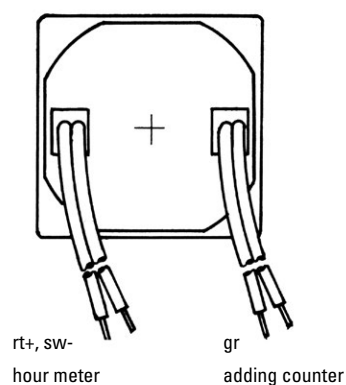
Mechanical characteristics		
Protection		IP52 (front side) when built in
Housing color		black (standard)
Weight	HC77	65 g [2.29 oz]
	plug in frame 55	8 g [0.28 oz]
	plug in frame 72	13 g [0.46 oz]

Approvals		
UL compliant in accordance with		File no. E128604
CE compliant in accordance with	EMC Directive	2014/30/EU
	RoHS Directive	2011/65/EU
	Low Voltage Directive	2014/35/EU

General technical data		
Operating indicator of the running time meter	AC	fast rotating wheel with red dashes: 99999.99 h
	DC	1/100 h display turns continuously by 1 digit in 36 s: 999999.99 h
Height of figures		4 x 1.7 mm [0.16 x 0.067"] optical
Color of figures	hour meter	hour: white on black decimal: red on black
	pulse counter	white on black
Operating temperature		-15 °C ... +50 °C [+5 °F ... +122 °F] (non-condensing)
Relative humidity at +30 °C [+86 °F]		≤ 80 % (non-condensing)
Altitude		up to 2000 m [6562']
Mounting position		any

Terminal assignment

Counter with separate connections (rear view)

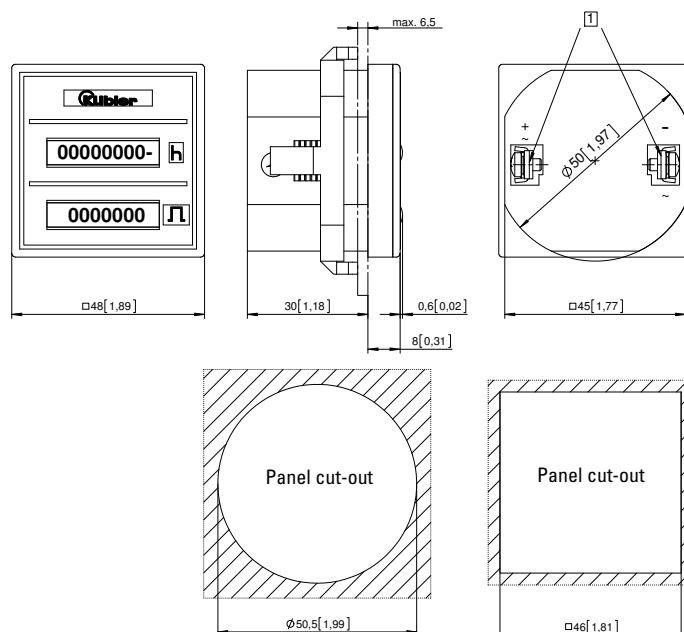


Hour meters / timers, electromechanical

Dual function counters	Pulse + time / 2 x time (AC+DC)	HC77
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Dual function counter 48 x 48 [1.89 x 1.89"]

Type HC77

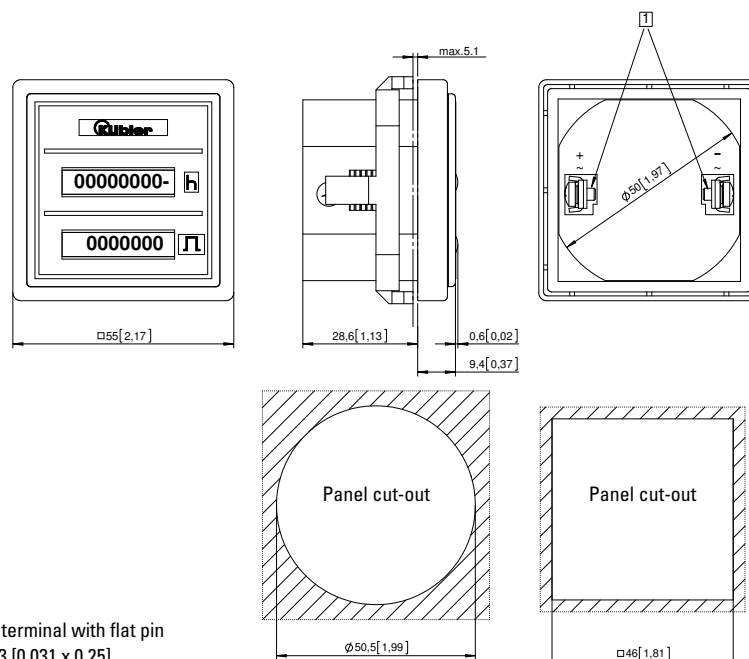


1 Screw terminal with flat pin
0.8 x 6.3 [0.031 x 0.25]

Type	Display	Voltage	Art. no. 10 ... 30 V	20 ... 30 V	36 ... 80 V	42 ... 48 V	100 ... 130 V	187 ... 264 V
HC77	7/8 digits	AC (50 Hz)		3.550.401.071		3.550.401.072	3.550.401.074	3.550.401.075 1)
	7/8 digits	AC (60 Hz)		3.550.401.081		3.550.401.082	3.550.401.084	3.550.401.085
	7/8 digits	DC	3.550.401.351 1)		3.550.401.353		3.550.401.381	
Color of housing grey:			Art. no. 3.550.400.XXX					

Dual function counter 48 x 48 [1.89 x 1.89"]
with adapter front bezel 55 x 55 [2.17 x 2.17"]

Type HC77.55



1 Screw terminal with flat pin
0.8 x 6.3 [0.031 x 0.25]

Type	Display	Voltage	Art. no. 10 ... 30 V	20 ... 30 V	36 ... 80 V	42 ... 48 V	100 ... 130 V	187 ... 264 V
HC77.55	7-8 digits	AC (50 Hz)		3.551.401.071		3.551.401.072	3.551.401.074	3.551.401.075
	7/8 digits	AC (60 Hz)		3.551.401.081		3.551.401.082	3.551.401.084	3.551.401.085
	7/8 digits	DC	3.551.401.351		on request		3.551.401.381	
Color of housing grey:			Art. no. 3.551.400.XXX					

Dimensions in mm [inch]

1) Stock types

Hour meters / timers, electromechanical

Standard timers	99999.99 h (AC) / 999999.9 h (DC) without reset	HB27
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The timers HB27 without reset measure time ranges up to max. 99999.99 h (AC) or 999999.9 h (DC).

These panel mount counters can be used in many different fields of application.



Characteristics

- 7-digit hour meter without reset.
- High shock and impact resistance.
- Magnified large figures; height 4.5 mm.
- Data retention in case of power failure.
- Long service life.
- Plug-in versions.
- Counter without front bezel for mounting in front bezel F1B and F2B and for combination in 50 x 25 mm size with socket box 945.2.

Benefits

- Can be combined with preset counters BVa and HVa, and with pulse counter B.
- Can be equipped with various sealing covers to protect the counter against dust, dirt and moisture.
- Tamper-proof.

Applications

General time measurement, maintenance intervals for measuring instruments (respiration units, oxygen, dialysis), small appliances, UV lamps, display panels in vehicles.

Type series

Description	Type	Options
Plug-in for socket box 945.2 and front bezel F1B	HB27.00.3	• Different voltages / extended temperature range on request • Flat pin 0.8 x 6.3 mm [0.031 x 0.25"] without flat push on connectors: Art. no. 3.208.X11.XXX • Flat pin 0.8 x 2.8 mm [0.031 x 0.11"] with flat push on connectors: Art. no. 3.207.X01.XXX • Round pins ø 1.5 mm (tinned) with push on connectors Art. no. 3.205.X01.XX
Screw mounting 56 x 40 mm [2.20 x 1.57"]	HB27.10	
Clip mounting 53 x 28 mm [2.09 x 1.10"]	HB27.20	

Hour meters / timers, electromechanical

Standard timers	99999.99 h (AC) / 999999.9 h (DC) without reset	HB27
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Accessories / Mounting examples

Sealing cover

G008300 grey
G008301 black

alternatively

only in conjunction with
front bezel
54 x 29 mm F1B

Transparent cover

N003002

Counter HB27.00.3

Front bezel + Socket box

G007501 beige
G007502 black

G008434

Gasket (optional)
N511005

Panel
cut-out

Gasket (optional)
N511019

		Type / size	Description		Order no.	suitable gasket
Front bezel		F1B	for 1x counter HB27.00.3 for cut-out 54 x 29 mm [2.13 x 1.14"] (only in conjunction with socket box G008434)	beige black	G007501 G007502	N511005
		F2B	for 2x counter HB27.00.3 for cut-out 54 x 54 mm [2.13 x 2.13"] (only in conjunction with 2 x socket box G008434)	beige black	G007503 G007504	N511003
Socket box		945.2	for plug-in connection in front bezel F1B	black	G008434	—
Sealing cover IP65		K1	for counter HB27.00.3 in conjunction with front bezel F1B	transp./grey transp./black	G008300 G008301	—
		K2	only in conjunction with front bezel F2B (for 2x counter HB27.00.3)	transp./grey transp./black	G008302 G008303	
Transparent cover IP65		1 Dv	cover lockable for counter HB27.00.3 in conjunction with front bezel F1B	transp./black	N003002	N511019
		2 Dv	cover lockable only in conjunction with front bezel F2B	transp./black	G008143	
		2 Dvs	cover key lockable only in conjunction with front bezel F2B	transp./black	G008153	
Gasket counter			56 x 40 mm [2.20 x 1.57"] 53 x 28 mm [2.09 x 1.10"] 58 x 33 mm [2.28 x 1.30"]	HB27.10 HB27.20 HB27.20	N511045 N511015	
Mounting frame		cut-out 50 x 25 mm [1.97 x 0.98"]	via adapter T008180 for snap-on mounting on 35 mm [1.38"] top-hat DIN rail	chromated	G300004	—
Enclosure blind		48 x 24 mm [1.89 x 0.94"]	for cut-out 50 x 25 mm [1.97 x 0.98"], for counter 53 x 28 mm [2.09 x 1.10"]	black	T005753	—
DIN rail mount		SR 1	for snap-on mounting on 35 mm [1.38"] top-hat DIN rail		G300000	
		SR 2	for 2x HB26		G300001	

Hour meters / timers, electromechanical

Standard timers	99999.99 h (AC) / 999999.9 h (DC) without reset	HB27
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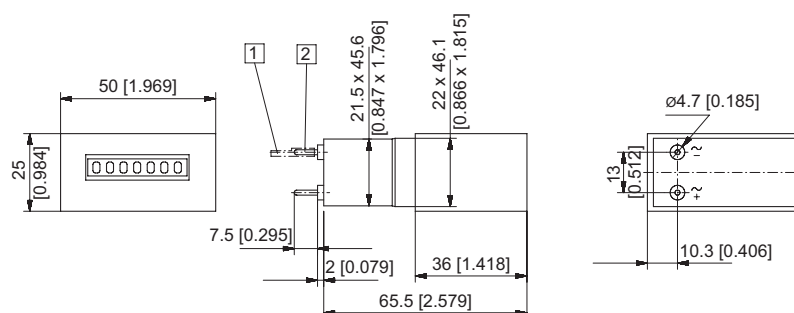
Technical data

Electrical characteristics			General technical data	
Electrical connection	cable	2 x 0.5 mm ² [AWG20], NYFAZ, 0.5 m [1.64'] long AC: grey/grey DC: red +, black –	Display	7 digits
	type HB27.00.3	round pins ø 1.6 mm [0.063"] (plugs into socket box type 945.2)		AC 99999.99 h DC 999999.9 h
Test voltage		2000 V AC, 50 Hz for AC counters	Height of figures	4.5 mm [0.17"]
Power consumption	10 ... 30 V DC	approx. 500 mW	Color of figures	white and red on black
	36 ... 80 V DC	approx. 900 mW	Operating temperature	-15 °C ... +50 °C [+5 °F ... +122 °F] (non-condensing)
	100 ... 130 V DC	approx. 750 mW	Relative humidity at +30 °C [+86 °F]	≤ 80 % (non-condensing)
	20 ... 30 V AC	approx. 0.3 VA	Altitude	up to 2000 m [6562']
	42 ... 48 V AC	approx. 0.25 VA	Mounting position	any
	100 ... 130 V AC	approx. 0.6 VA		
	187 ... 264 V AC	approx. 1.2 VA		
Rated voltages	AC (50 or 60 Hz)	20 ... 30 / 42 ... 48 / 100 ... 130 / 187 ... 264 / 360 ... 440 V AC		
	DC	10 ... 30 / 36 ... 80 / 100 ... 130 V DC		
Accuracy	AC	supply frequency + 30 ms		
	DC	< 0.003 % (at 24 h)		
Device safety	designed to protection class	EN 61010 part 1		
	application area	2 pollution level 2		

Mechanical characteristics	
Protection	up to IP51 (front side) with sealing cover K1 IP54 (front side) with transparent cover Dv, Dvs IP55 (front side)
Housing	plastic PC (Polycarbonate)
Weight	approx. 45 g [1.59 oz]

Plug-in for socket box 945.2 and front bezel F1B

Type HB27.00.3



1 Push on connector ø 1.5 [0.059] tinned 2 Round pin ø 1.6 [0.063] tinned

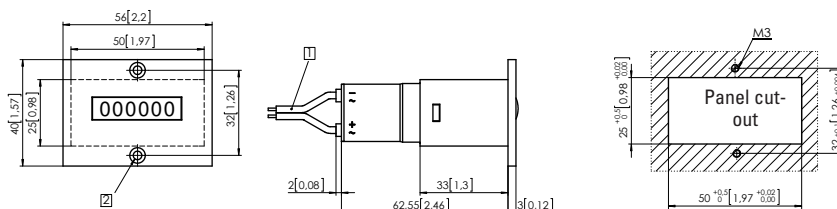
Type	Display	Voltage	Art. no.	10 ... 30 V	20 ... 30 V	36 ... 80 V	42 ... 48 V	100 ... 130 V	187 ... 264 V	360 ... 440 V
HB27.00.3	7 digits	AC (50 Hz)			3.205.001.071		3.205.001.072	3.205.001.074	3.205.001.075	3.205.001.079
	7 digits	AC (60 Hz)			3.205.001.081		3.205.001.082	3.205.001.084	3.205.001.085	3.205.001.089
	7 digits	DC	3.205.001.351			3.205.001.353		3.205.001.381		

Hour meters / timers, electromechanical

Standard timers	99999.99 h (AC) / 999999.9 h (DC) without reset	HB27
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Screw mounting 56 x 40 [2.20 x 1.57]

Type HB27.10

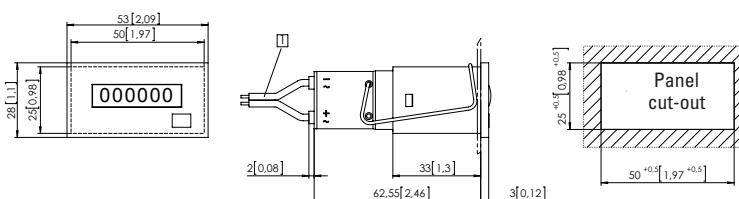


1 Connection cable, 2 x 0.5 mm² [AWG20], NYFAZ, 0.5 m [1.64'] long 2 Countersinking Af3, DIN 74

Type	Display	Voltage	Art. no.	10 ... 30 V	20 ... 30 V	36 ... 80 V	42 ... 48 V	100 ... 130 V	187 ... 264 V	360 ... 440 V
HB27.10	7 digits	AC (50 Hz)			3.200.101.071		3.200.101.072	3.200.101.074	3.200.101.075	3.200.101.079
	7 digits	AC (60 Hz)			3.200.101.081		3.200.101.082	3.200.101.084	3.200.101.085	3.200.101.089
	7 digits	DC		3.200.101.351		3.200.101.353		3.200.101.381		

Clip mounting 53 x 28 [2.09 x 1.10]

Type HB27.20



1 Connection cable, 2 x 0.5 mm² [AWG20], NYFAZ, 0.5 m [1.64'] long

Type	Display	Voltage	Art. no.	10 ... 30 V	20 ... 30 V	36 ... 80 V	42 ... 48 V	100 ... 130 V	187 ... 264 V	360 ... 440 V
HB27.20	7 digits	AC (50 Hz)			3.200.201.071		3.200.201.072	3.200.201.074	3.200.201.075	3.200.201.079
	7 digits	AC (60 Hz)			3.200.201.081		3.200.201.082	3.200.201.084	3.200.201.085	3.200.201.089
	7 digits	DC		3.200.201.351		3.200.201.353		3.200.201.381		
Further stock types:				187... 264 V AC, flat pin 0.8 x 2.8 mm [0.031 x 0.11"]				3.207.201.075		

Hour meters / timers, electromechanical

Standard timers	9999.99 h / 99999.9 h with reset (AC+DC)	HB26
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The timer HB26 with reset measure time ranges up to max. 99999.9 h or 9999.99 h.

These panel-mount counters can be used in many different fields of application.

Characteristics

- 6-digit hour meter without reset.
- High shock and impact resistance.
- Magnified large figures; height 4.5 mm.
- Data retention in case of power failure.
- Long service life.
- Plug-in versions.
- Counter without front bezel for mounting in front bezel F1B and F2B and for combination in 50 x 25 mm size with socket box 945.2.

Benefits

- Can be combined with preset counters BVa and HVa, and with pulse counter B.
- Can be equipped with various sealing covers to protect the counter against dust, dirt and moisture.
- Key-locking 0-reset.

Applications

General time measurement, maintenance intervals for measuring instruments (respiration units, oxygen, dialysis), small appliances, UV lamps, display panels in vehicles.

Type series

Description

Screw mounting, 56 x 40 mm [2.20 x 1.57"]

Clip mounting, 53 x 28 mm [2.09 x 1.10"]

Plug-in for socket box 945.2 and front bezel F1B

Type

HB26.11

HB26.21

HB26.01.3

Options

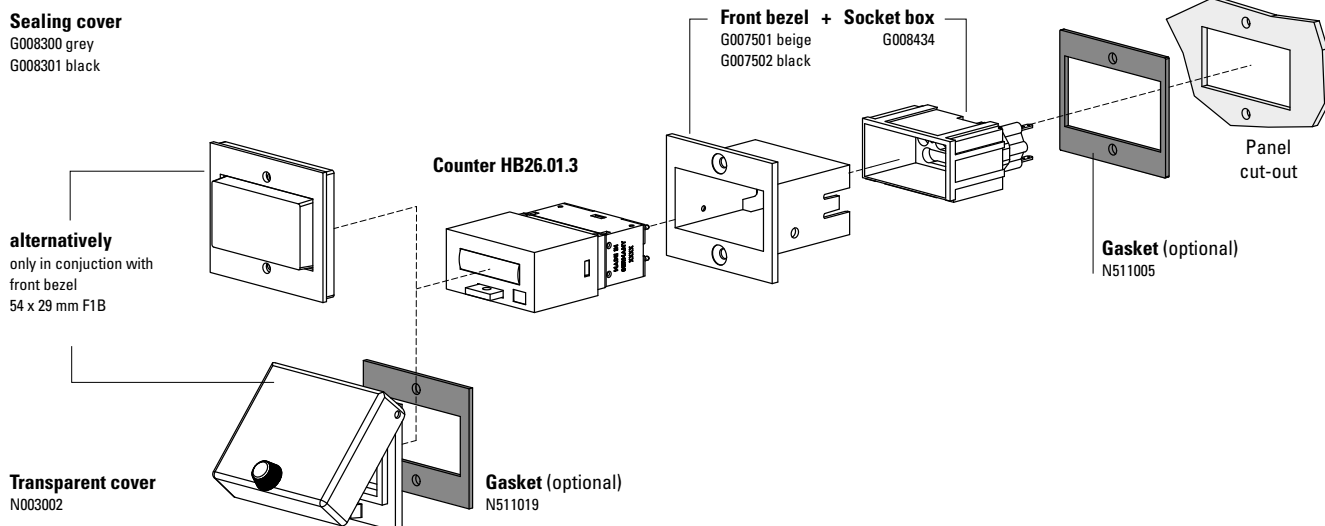
- Different voltages
- Extended temperature range on request
- Flat pin 0.8 x 6.3 mm [0.031 x 0.25"] without flat push on connectors: Art.-Nr. 3.168.X11.XXX
- Flat pin 0.8 x 2.8 mm [0.031 x 0.11"] with flat push on connectors: Art.-Nr. 3.167.X11.XXX
- Lockable 0-reset: Art.-Nr. 3.160.XX7.XXX
The button can be unlocked by means of the key



Hour meters / timers, electromechanical

Standard timers	9999.99 h / 99999.9 h with reset (AC+DC)	HB26
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Accessories / Mounting examples



		Type / size	Description		Order no.	suitable gasket
Front bezel		F1B	for 1x counter HB26.01.3 for cut-out 54 x 29 mm [2.13 x 1.14"] (only in conjunction with socket box G008434)	beige black	G007501 G007502	N511005
		F2B	for 2x counter HB26.01.3 for cut-out 54 x 54 mm [2.13 x 2.13"] (only in conjunction with 2 x socket box G008434)	beige black	G007503 G007504	N511003
Socket box		945.2	for plug-in connection in front bezel F1B	black	G008434	—
Sealing cover IP65		K1	for counter HB26.01.3 in conjunction with front bezel F1B	transp./grey transp./black	G008300 G008301	—
		K2	only in conjunction with front bezel F2B (for 2x counter HB26.01.3)	transp./grey transp./black	G008302 G008303	
Transparent cover IP65		1 Dv	cover lockable for counter HB26.01.3 in conjunction with front bezel F1B	transp./black	N003002	N511019
		2 Dv	cover lockable only in conjunction with front bezel F2B	transp./black	G008143	
		2 Dvs	cover key lockable only in conjunction with front bezel F2B	transp./black	G008153	
Gasket counter			56 x 40 mm [2.20 x 1.57"] 53 x 28 mm [2.09 x 1.10"]	HB26.11 HB26.21	N511045 N511015	
Mounting frame		cut-out 50 x 25 mm [1.97 x 0.98"]	via adapter T008180 for snap-on mounting on 35 mm [1.38"] top-hat DIN rail	chromated	G300004	—
Enclosure blind		48 x 24 mm [1.89 x 0.94"]	for cut-out 50 x 25 mm [1.97 x 0.98"], for counter 53 x 28 mm [2.09 x 1.10"]	black	T005753	—
DIN rail mount		SR 1	for snap-on mounting on 35 mm [1.38"] top-hat DIN rail		G300000	
		SR 2	for 2x HB26		G300001	

Hour meters / timers, electromechanical

Standard timers	9999.99 h / 99999.9 h with reset (AC+DC)	HB26
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Technical data

Electrical characteristics			Options	
Electrical connection	cable	2 x 0.5 mm ² [AWG20], NYFAZ, 0.5 m [1.64'] long AC: grey/grey, DC: red +, black –	Different voltages and extended temperature range on request	
	type HB26.01.3	round pins ø 1.6 mm [0.063"] (plugs into socket box type 945.2)	Flat pin 0.8 x 6.3 mm [0.031 x 0.25"] without flat push on connectors	Art. no. 3.168.X11.XXX
Power consumption	10 ... 30 V DC	approx. 500 mW	Flat pin 0.8 x 2.8 mm [0.031 x 0.11"] with flat push on connectors	
	36 ... 80 V DC	approx. 900 mW	Key-locking 0-reset	
	100 ... 130 V DC	approx. 750 mW	Art. no. 3.167.X11.XXX	
	20 ... 30 V AC	approx. 0.3 VA	Art. no. 3.160.XX7.XXX	
	42 ... 48 V AC	approx. 0.25 VA		
	100 ... 130 V AC	approx. 0.6 VA		
Rated voltages	187 ... 264 V AC	approx. 1.2 VA		
	360 ... 440 V AC	approx. 1.65 VA		
	AC (50 or 60 Hz)	20 ... 30 / 42 ... 48 / 100 ... 130 / 187 ... 264 / 360 ... 440 V AC		
Accuracy	DC	10 ... 30 / 36 ... 80 / 100 ... 130 V DC		
	AC	supply frequency + 30 ms		
Device safety	DC	< 0.003 % (at 24 h)		
	designed to protection class application area	EN 61010 part 1 2 pollution level 2		

General technical data			Approvals	
Display	number of digits	6, AC: 9999.99 h, DC: 99999.9 h	CE compliant in accordance with	
	height of figures	4.5 mm [0.17"]	EMC Directive 2014/30/EU	
	color of figures	white and red on black	RoHS Directive 2011/65/EU	
Operating temperature	-15 °C ... +50 °C [+5 °F ... +122 °F] (non-condensing)		Low Voltage Directive 2014/35/EU	
Relative humidity at +30 °C [+86 °F]	≤ 80 % (non-condensing)			
Altitude	up to 2000 m [6562']			
Mounting position	any			

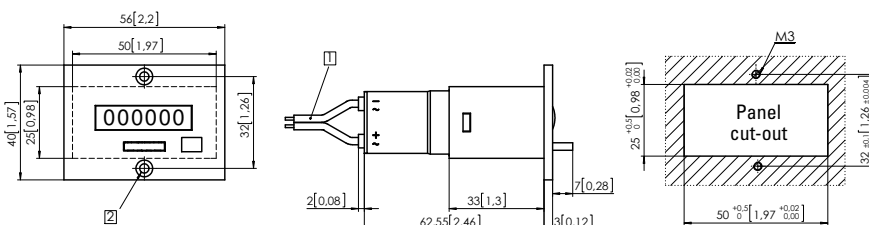
Mechanical characteristics		
Housing	plastic PC (Polycarbonate)	
Protection	IP41 (front side)	
	with flexible sealing cover K1 IP54 (front side)	
	with transparent cover Dv., Dvs IP55 (front side)	
Weight	approx. 45 g [1.59 oz]	

Hour meters / timers, electromechanical

Standard timers	9999.99 h / 99999.9 h with reset (AC+DC)	HB26
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Screw mounting, 56 x 40 [2.20 x 1.57]

Type HB26.11

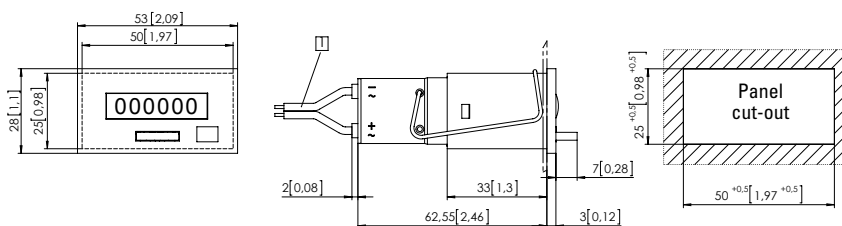


1 Connection cable, 2 x 0.5 mm² [AWG20], NYFAZ, 0.5 m [1.64'] long 2 Countersinking Af3, DIN 74

Type	Display	Voltage	Art. no.	10 ... 30 V	20 ... 30 V	36 ... 80 V	42 ... 48 V	100 ... 130 V	187 ... 264 V	360 ... 440 V
HB26.11	6 digits	AC (50 Hz)			3.160.111.071		3.160.111.072	3.160.111.074	3.160.111.075	3.160.111.079
	6 digits	AC (60 Hz)			3.160.111.081		3.160.111.082	3.160.111.084	3.160.111.085	3.160.111.089
	6 digits	DC		3.160.111.351		3.160.111.353		3.160.111.381		

Clip mounting, 53 x 28 [2.09 x 1.10]

Type HB26.21



1 Connection cable, 2 x 0.5 mm² [AWG20], NYFAZ, 0.5 m [1.64'] long

Type	Display	Voltage	Art. no.	10 ... 30 V	20 ... 30 V	36 ... 80 V	42 ... 48 V	100 ... 130 V	187 ... 264 V	360 ... 440 V
HB26.21	6 digits	AC (50 Hz)			3.160.211.071		3.160.211.072	3.160.211.074	3.160.211.075	3.160.211.079
	6 digits	AC (60 Hz)			3.160.211.081		3.160.211.082	3.160.211.084	3.160.211.085	3.160.211.089
	6 digits	DC		3.160.211.351		3.160.211.353		3.160.211.381		
Stock types:				187 ... 264 V AC, flat pin 0.8 x 2.8 mm [0.031 x 0.11"]				3.167.211.075		
				10 ... 30 V DC, flat pin 0.8 x 2.8 mm [0.031 x 0.11"]				3.167.211.351		

Hour meters / timers, electromechanical

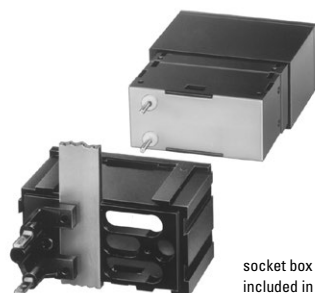
Standard timers

9999.99 h / 99999.9 h with reset (AC+DC)

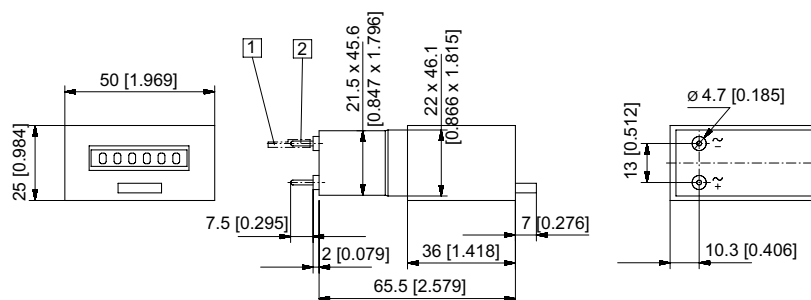
HB26

Plug-in for socket box 945.2 and
front bezel F1B

Type HB26.01.3



socket box 945.2 not
included in delivery



1 Push on connector $\varnothing$ 1.5 [0.059] tinned 2 Round pin $\varnothing$ 1.6 [0.063] tinned

Type	Display	Voltage	Art. no.						
			10 ... 30 V	20 ... 30 V	36 ... 80 V	42 ... 48 V	100 ... 130 V	187 ... 264 V	360 ... 440 V
HB26.01.3	6 digits	AC (50 Hz)		3.165.011.071		3.165.011.072	3.165.011.074	3.165.011.075	3.165.011.079
	6 digits	AC (60 Hz)		3.165.011.081		3.165.011.082	3.165.011.084	3.165.011.085	3.165.011.089
	6 digits	DC	3.165.011.351		3.165.011.353		3.165.011.381		

Hour meters / timers, electromechanical

Timers with DIN dimensions

DIN counter for panel mount / DIN rail housing, 48 x 48 mm

H57 / AH57



The hour meters H57, H57.55, H57.72 and AH57 feature a very high shock resistance.

These panel / DIN rail mount counters have a reduced mounting depth. They can be used in many different fields of application.

These non-resettable counters are extremely tamper-proof.



Characteristics

- 7 or 8-digit hour meter.
- High shock and impact resistance.
- Without reset, small mounting depth.
- Magnified large figures.
- Protection IP52 (optional IP65), suitable for any mounting position.
- UL-approved.
- Various front bezel sizes
 - H57 48 x 48 mm
 - H57.55 55 x 55 mm
 - H57.72 72 x 72 mm
 - AH57 48 x 48 mm for DIN rail

Benefits

- 5 years guarantee. ¹⁾
- High reliability: for a better sale of your final product.
- Data retention in case of power failure.
- Long service life.

Applications

General time measurement, maintenance intervals for measuring instruments (respiration units, oxygen, dialysis), small appliances, UV lamps, display panels in vehicles

Type series

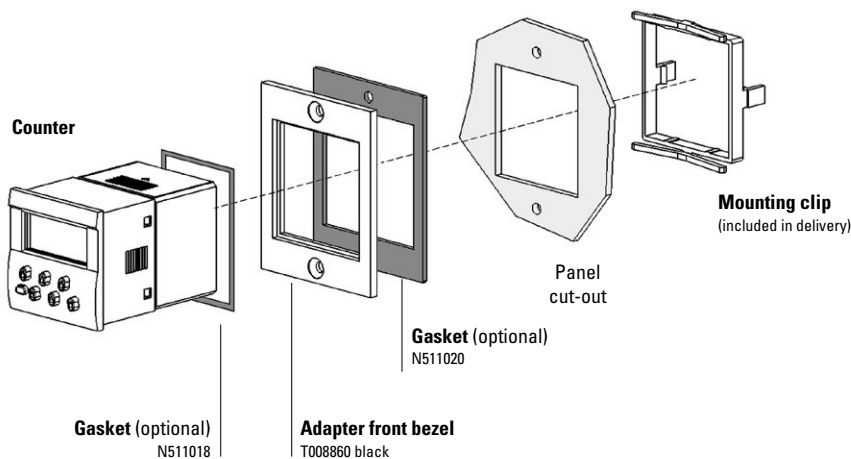
Description	Mounting	Front bezel	Type
Standard DIN timer	clip mounting, on rear	48 x 48 mm [1.89 x 1.89"]	H57
Standard DIN timer	clip mounting, on rear	55 x 55 mm [1.97 x 1.97"]	H57.55
Standard DIN timer	clip mounting, on rear	72 x 72 mm [2.83 x 2.83"]	H57.72
Base mount timer	DIN rail 35 mm [1.38"] acc. to DIN EN 50022		AH57

1) When used as specified in the technical data

Hour meters / timers, electromechanical

Timers with DIN dimensions	DIN counter for panel mount / DIN rail housing, 48 x 48 mm	H57 / AH57
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Accessories / Mounting examples



		Type / size	Description		Order no.	suitable gasket
Adapter front bezel		55 x 55 mm [2.17 x 2.17]	for cut-out 50 x 50 mm [1.97 x 1.97"] or ø 50,5 mm [1.99"] to cut-out 45 x 45 mm [1.77 x 1.77"]	grey black	T008170 T008171	N511017
		55 x 55 mm [2.17 x 2.17]	for cut-out 50 x 50 mm [1.97 x 1.97"] to cut-out 45 x 45 mm [1.77 x 1.77"]	black	T008853	N511004
		60 x 75 mm [2.36 x 2.95]	for cut-out 50 x 50 mm [1.97 x 1.97"] to cut-out 45 x 45 mm [1.77 x 1.77"]	black	T008860	N511020
		72 x 72 mm [2.83 x 2.83]	for cut-out 68 x 68 mm [2.68 x 2.68"] to cut-out 45 x 45 mm [1.77 x 1.77"]	grey black Mating clip	T008176 T008177 T009420	N511016
		ø 72 mm [2.83]	for cut-out ø 60 mm [2.36"] to cut-out 45 x 45 mm [1.77 x 1.77"]	black	N510226	—
Gasket counter			48 x 48 mm (for installation in adapter front bezel)		N511018	
Mounting frame		cut-out 50 x 50 mm [2.36 x 2.36]	for snap-on mounting on 35 mm [1.38"] top-hat DIN rail	chromated	G300003	
Base mount socket				black	G008040	

Hour meters / timers, electromechanical

Timers with DIN dimensions	DIN counter for panel mount / DIN rail housing, 48 x 48 mm	H57 / AH57
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Technical data		
Electrical connection		screw terminals (tightening torque max. 0.8 Nm) wire entry from behind, for $\varnothing$ 2.5 mm ² [AWG13]
Power consumption	10 ... 30 V DC	approx. 500 mW
	100 ... 130 V DC	approx. 750 mW
	20 ... 30 V AC, 50 Hz	approx. 0.3 VA
	42 ... 48 V AC, 50 Hz	approx. 0.25 VA
	100 ... 130 V AC, 50 Hz	approx. 0.6 VA
	187 ... 264 V AC, 50 Hz	approx. 1.2 VA
Rated voltages	AC (50 or 60 Hz)	20 ... 30 V, 42 ... 48 V, 100 ... 130 V, 187 ... 264 V, 360 ... 440 V
	DC	10 ... 30 V, 36 ... 80 V, 100 ... 130 V
On time		100 %
Number of digits	7 at AC	99999.99 h
	8 at DC	999999.99 h
Count mode		adding
Height of figures		4 mm [0.16"]
Color of figures		white and red on black
Operating temperature		-15 °C ... +50 °C [+5 °F ... +122 °F] (non-condensing)
Storage temperature		-40 °C ... +85 °C [-40 °F ... +185 °F]
Relative humidity at +30 °C [+86 °F]		≤ 80 % (non-condensing)
Altitude		up to 2000 m [6562']
Mounting position		any
Protection		IP52, DIN 40050 (front side)
Device safety	designed to	EN 61010 part 1
	protection class	2
Housing	application area	pollution level 2
		plastic PC (Polycarbonate)
Accuracy	AC	supply frequency + 30 ms
	DC	< 0.003 % (at 24 h)
Weight	H57	approx. 48 g [1.69 oz]
	base mount socket no. 48	36 g [1.27 oz]
	slip-on bezel 55	8 g [0.28 oz]
	slip-on bezel 72	13 g [0.46 oz]
Operating indicator of the running time meter	AC	fast rotating wheel with red dashes
	DC	1/100 h display turns continuously by 1 digit in 36 s
Test voltage		2000 V AC, 50 Hz for AC counters

Options		
Housing color	grey	Art. no. 3.22X.400.XXX
Timer H57.55 mounted with adapter front bezel 55 x 55 mm [2.17 x 2.17"] Art. no. 3.221.XXX.XXX		
Timer H57.72 mounted with adapter front bezel 72 x 72 mm [2.83 x 2.83"] Art. no. 3.222.XXX.XXX		
Electrical connection flat pin 0.8 x 6.3 mm [0.031 x 0.25"] Art.-No.: 3.228.401.XXX		
IP65 version, welded front cover		
	H57	Art. no. 3.220.XXX.XXX.422
	H57.55	Art. no. 3.221.XXX.XXX.423
	H57.72	Art. no. 3.222.XXX.XXX.424
Required gaskets between the counter and the bezel		
	H57	N511018
Gasket set	H57.55	N511018 + N511017
	H57.72	N511018 + N511016
(with the IP65 version, the gasket is included in the delivery)		
Further voltages on request		
Counter with cable inlet from underneath, screw fixing from rear Art. no. 3.220.401.XXX.044		

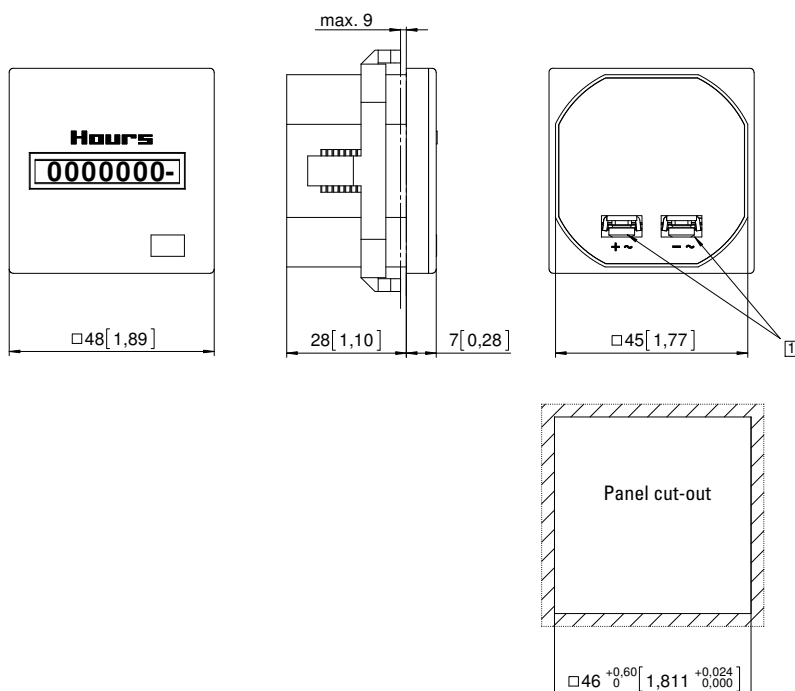
Approvals		
UL compliant in accordance with		File no. E128604 ¹⁾
CE compliant in accordance with		
	EMC Directive	2014/30/EU
	RoHS Directive	2011/65/EU
	Low Voltage Directive	2014/35/EU

1) The version 360 ... 440 V AC is not UL listed.

Hour meters / timers, electromechanical

Timers with DIN dimensions DIN counter for panel mount / DIN rail housing, 48 x 48 mm H57 / AH57

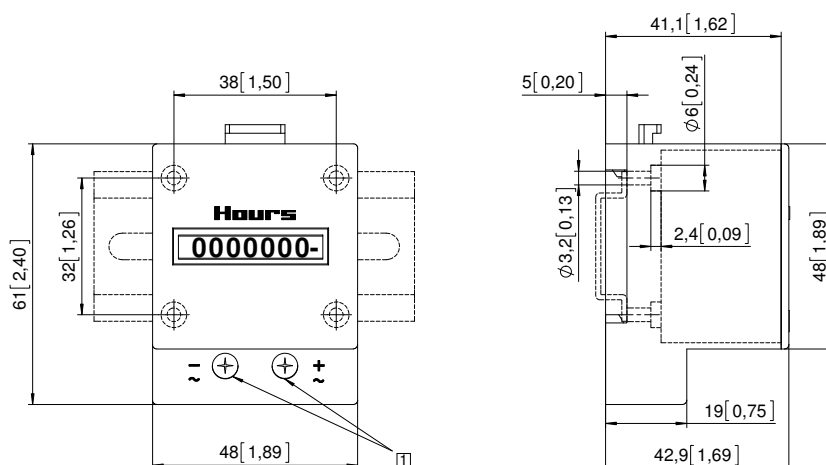
Standard DIN timer
clip mounting, on rear
Type H57



1 Screw terminal with flat pin x 6.3 [0.031 x 0.25]

Type	Display	Voltage	Art. no.	10 ... 30 V	20 ... 30 V	42 ... 48 V	100 ... 130 V	187 ... 264 V	360 ... 440 V
H57	7 digits	AC (50 Hz)			3.220.401.071 ¹⁾	3.220.401.072	3.220.401.074 ¹⁾	3.220.401.075 ¹⁾	3.220.401.079
	7 digits	AC (60 Hz)			3.220.401.081 ¹⁾	3.220.401.082	3.220.401.084 ¹⁾	3.220.401.085	3.220.401.089
	8 digits	DC		3.220.401.351 ¹⁾			3.220.401.381		
Further stock types:			3.220.401.075.422 ¹⁾ 3.220.401.085.422 ¹⁾ 3.220.401.351.422 ¹⁾ 3.220.400.075 ¹⁾						

Base mount timer
DIN rail mount 35 [1.38] acc. to DIN EN 50022
Type AH57



1 Screw terminals

Type	Display	Voltage	Art. no.	10 ... 30 V	20 ... 30 V	42 ... 48 V	100 ... 130 V	187 ... 264 V	360 ... 440 V
AH57	7 digits	AC (50 Hz)			3.223.401.071 ¹⁾	3.223.401.072	3.223.401.074 ¹⁾	3.223.401.075 ¹⁾	3.223.401.079
	7 digits	AC (60 Hz)			3.223.401.081	3.223.401.082	3.223.401.084	3.223.401.085	3.223.401.089
	8 digits	DC		3.223.401.351 ¹⁾			3.223.401.381		

Hour meters / timers, electromechanical

Timers with DIN dimensions

DIN counters for panel mount, 48 x 24 mm (AC+DC)

H37



The hour meters H37 feature a very high shock resistance.

These panel mount counters with standard DIN dimensions can be used in many different fields of application.

These non-resettable counters are extremely tamper-proof.



Characteristics

- 7- or 8-digit hour meter.
- Without reset, high shock resistance.
- Small dimensions, magnified large figures.
- Protection IP65 on the front side.
- Panel mount counter with integrated spring clip (H37.4).
- UL-approved.

Benefits

- 5 years guarantee. ¹⁾
- High reliability: for a better sale of your final product.
- Data retention in case of power failure.
- Long service life.

Applications

General time measurement, maintenance intervals for measuring instruments (respiration units, oxygen, dialysis), small appliances, UV lamps, display panels in vehicles.

Type series

Description	Mounting	Panel cut-out	Type
Standard DIN counter for panel mount	mounting clip, on rear	45 x 22 [1.77 x 0.91"]	H37
Standard DIN counter for panel mount	2 mounting holes	50 x 25 [1.97 x 0.98"]	H37.1
Standard DIN counter for panel mount	mounting clip, on rear	50 x 25 [1.97 x 0.98"]	H37.2
Standard DIN counter for panel mount	mounting clip, on rear	45 x 22 [1.77 x 0.91"]	H37.5

Dual function timer
48 x 48 mm [1.89 x 1.89"] on request

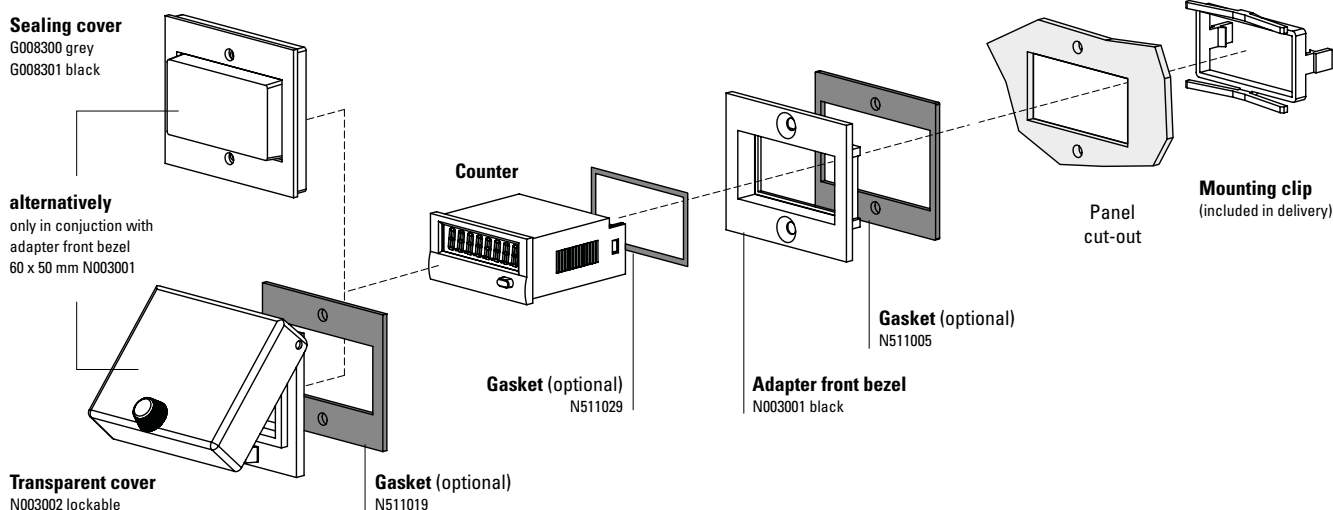


1) When used as specified in the technical data

Hour meters / timers, electromechanical

Timers with DIN dimensions	DIN counters for panel mount, 48 x 24 mm (AC+DC)	H37
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Accessories / Mounting examples



		Type / size	Description		Order no.	suitable gasket
Adapter front bezel (only for H37 + H37.5)		53 x 28 mm [2.09 x 1.10"]	for cut-out 50 x 25 mm [1.97 x 0.98"] to cut-out 45 x 22.2 mm [1.77 x 0.94"]	black anthracite	T008165 T008180	N511015
		56 x 40 mm [2.20 x 1.57"]	for cut-out 50 x 25 mm [1.97 x 0.98"] to cut-out 45 x 22.2 mm [1.77 x 0.94"] screw mounting	black anthracite	T008161 T008181	N511045
		72 x 36 mm [2.83 x 1.42"]	for cut-out 68 x 33 mm [2.68 x 1.30"] to cut-out 45 x 22.2 mm [1.77 x 0.94"]	black and silver anodised as set	162704Set	—
		60 x 50 mm [2.36 x 1.97"]	for cut-out 54 x 29 mm [2.13 x 1.14"] to cut-out 45 x 22.2 mm [1.77 x 0.94"] screw mounting	black	N003001	N511005
		48 x 48 mm [1.89 x 1.89"]	for cut-out 45 x 45 mm [1.77 x 1.77"] to cut-out 45 x 22.2 mm [1.77 x 0.94"]	black	T008883	—
Sealing cover IP65 (only for H37 + H37.5)		K1	only in conjunction with adapter front bezel 60 x 50 mm N003001	transparent / grey transparent / black	G008300 G008301	—
Transparent cover IP65 (only for H37 + H37.5)		1 Dv (mounted on bezel)	cover lockable, for cut-out 54 x 29 mm [2.13 x 1.14"], only in conjunction with adapter front bezel 60 x 50 mm N003001	transparent / black	N003002	N511019
Gasket counter			48 x 24 mm (for installation in adapter front bezel) 49 x 25 mm 53 x 28 mm	H37 + H37.5 H37 + H37.5 H37.2	N511029 N511034 N511015	
Mounting frame (only for H37 + H37.5)		cut-out 50 x 25 mm [1.97 x 0.98"]	via adapter T008180 for snap-on mounting on 35 mm [1.38"] top-hat DIN rail	chromated	G300004	—
Terminal cover		KA 37	2-pcs. per counter required	transparent	T051687	—

Hour meters / timers, electromechanical

Timers with DIN dimensions	DIN counters for panel mount, 48 x 24 mm (AC+DC)	H37
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Technical data		
Electrical connection		screw terminals (tightening torque max. 0.8 Nm)
Power consumption	10 ... 30 V DC 36 ... 80 V DC 100 ... 130 V DC 20 ... 30 V AC, 50 Hz 42 ... 48 V AC, 50 Hz 100 ... 130 V AC, 50 Hz 187 ... 264 V AC, 50 Hz	approx. 500 mW approx. 900 mW approx. 750 mW approx. 0.3 VA approx. 0.25 VA approx. 0.6 VA approx. 1.2 VA
Rated voltages	AC (50 or 60 Hz) DC	20 ... 30 V, 42 ... 48 V, 100 ... 130 V, 187 ... 264 V 10 ... 30 V, 36 ... 80 V, 100 ... 130 V
On time		100 %
Number of digits	AC DC	7 – 99999.99 h 8 – 999999.99 h
Resolution		0.01 h equals 36 s
Height of figures		4 mm [0.16"]
Color of figures		white and red on black
Reset		no reset
Operating temperature		-15 °C ... +50 °C [+5 °F ... +122 °F] (non-condensing)
Storage temperature		-40 °C ... +85 °C [-40 °F ... +185 °F]
Relative humidity at +30 °C [+86 °F]		≤ 80 % (non-condensing)
Altitude		up to 2000 m [6562']
Mounting position		any
Protection		IP65 (front side) built in with gasket, (order gasket separately)
Device safety	designed to protection class application area	EN 61010 part 1 2 pollution level 2
Housing		plastic PC (Polycarbonate) types with IP65 protection are sealed (potted)
Accuracy	AC DC	supply frequency + 30 ms < 0.003 % (at 24 h)
Weight	H37 slip on bezel 37.1 slip on bezel 37.2	approx. 50 g [1.76 oz] 6 g [0.21 oz] 2 g [0.07 oz]

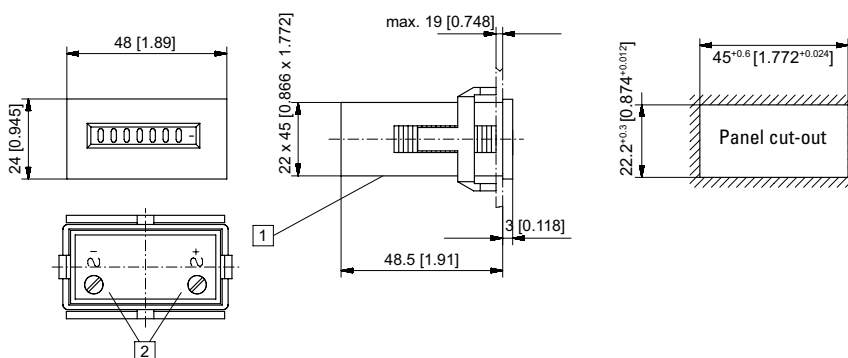
Options		
Housing color	grey	Art. no. 3.130.X50.XXX
Electrical connection		
	flat pin 0.8 x 6.3 mm [0.031 x 0.25"]	Art.-No.: 3.24X.20X.XXX.011
	screw terminal with terminal cover	Art.-No.: 3.24X.20X.XXX.456
	spring-type terminal	on request
360 - 440 V AC		on request

Approvals		
UL compliant in accordance with		File no. E128604
CE compliant in accordance with		
	EMC Directive	2014/30/EU
	RoHS Directive	2011/65/EU
	Low Voltage Directive	2014/35/EU

Hour meters / timers, electromechanical

Timers with DIN dimensions DIN counters for panel mount, 48 x 24 mm (AC+DC) H37

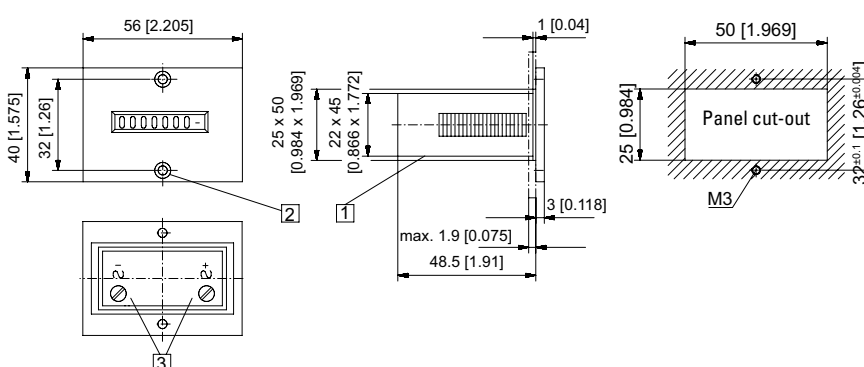
Mounting clip, on rear,
panel mount dimensions 45 x 22 [1.77 x 0.91]
Type H37



1 Wire entry 2 Screw terminal with flat pin 0.8 x 6.3 [0.031 x 0.25]

Type	Display	Voltage	Art. no.	10 ... 30 V	20 ... 30 V	36 ... 80 V	42 ... 48 V	100 ... 130 V	187 ... 264 V
H37	7 digits	AC (50 Hz)			3.240.201.071		3.240.201.072	3.240.201.074	3.240.201.075 ¹⁾
	7 digits	AC (60 Hz)			3.240.201.081		3.240.201.082	3.240.201.084	3.240.201.085
	8 digits	DC		3.240.201.351 ¹⁾		3.240.201.353		3.240.201.381	

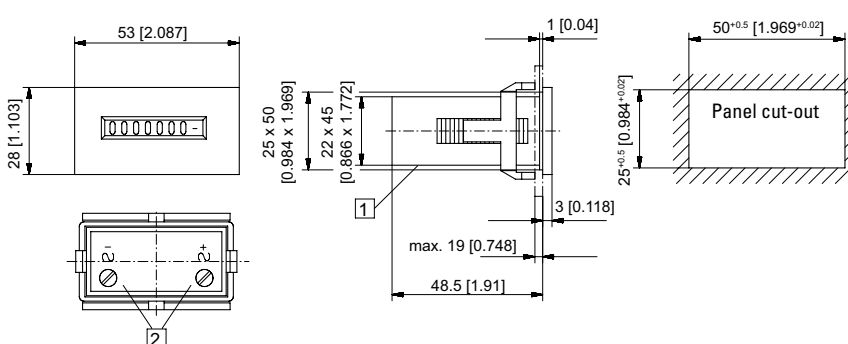
2 mounting holes,
panel mount dimensions 50 x 25 [1.97 x 0.98"]
Type H37.1



1 Wire entry 2 Countersinking Af3, DIN 74 3 Screw terminal with flat pin 0.8 x 6.3 [0.031 x 0.25]

Type	Display	Voltage	Art. no.	10 ... 30 V	20 ... 30 V	36 ... 80 V	42 ... 48 V	100 ... 130 V	187 ... 264 V
H37.1	7 digits	AC (50 Hz)			3.241.201.071		3.241.201.072	3.241.201.074	3.241.201.075
	7 digits	AC (60 Hz)			3.241.201.081		3.241.201.082	3.241.201.084	3.241.201.085
	8 digits	DC		3.241.201.351 ¹⁾		3.241.201.353		3.241.201.381	

Mounting clip, on rear,
panel mount dimensions 50 x 25 [1.97 x 0.98"]
Type H37.2



1 Wire entry 2 Screw terminal with flat pin 0.8 x 6.3 [0.031 x 0.25]

Type	Display	Voltage	Art. no.	10 ... 30 V	20 ... 30 V	36 ... 80 V	42 ... 48 V	100 ... 130 V	187 ... 264 V
H37.2	7 digits	AC (50 Hz)			3.242.201.071		3.242.201.072	3.242.201.074	3.242.201.075 ¹⁾
	7 digits	AC (60 Hz)			3.242.201.081		3.242.201.082	3.242.201.084	3.242.201.085
	8 digits	DC		3.242.201.351 ¹⁾		3.242.201.353		3.242.201.381	

Hour meters / timers, electromechanical

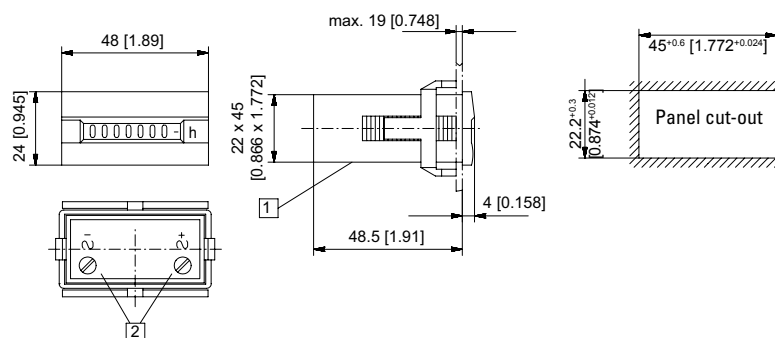
Timers with DIN dimensions

DIN counters for panel mount, 48 x 24 mm (AC+DC)

H37

DIN counter for panel mount
mounting clip, on rear,
panel mount dimensions 45 x 22 [1.77 x 0.91]

Type H37.5



1 Wire entry 2 Screw terminal with flat pin 0.8 x 6.3 [0.031 x 0.25]

Type	Display	Voltage	Art. no.	10 ... 30 V	20 ... 30 V	36 ... 80 V	42 ... 48 V	100 ... 130 V	187 ... 264 V
H37.5	7 digits	AC (50 Hz)			3.245.201.071		3.245.201.072	3.245.201.074	3.245.201.075 ¹⁾
	7 digits	AC (60 Hz)			3.245.201.081		3.245.201.082	3.245.201.084	3.245.201.085
	8 digits	DC	3.245.201.351 ¹⁾			3.245.201.353		3.245.201.381	



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