

# Hour meters / timers, electromechanical

**Dual function counters** 

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

**HC 77** 



The counter combinations HC 77 and HC 77.55 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

Dual function counter 48 x 48 mm [1.89 x 1.89"]

With adapter front bezel 55 x 55 mm [2.17 x 2.17"]

Туре

HC 77

HC 77.55

Order information:

Art. no. (for special voltages etc. indicate exact model, voltage and frequency e.g. HC 77, 120 V AC, 60 Hz)

**Options** 

· Color of housing 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

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 mm<sup>2</sup> [AWG20]

Art. no. 3.554.401.351.060

- Spring-type terminal

on request

Accessories	Dimensions in mm [inch]		Order no.
Adapter front bezel, 55 x 55 [2.17 x 2.17"]	for cut-out 50 x 50 [1.97 x 1.97] to cut-out Ø 50.5 [1.99], with clip mounting for counters $48 \times 48$ [1.89 x 1.89]	black	T008171
Adapter front bezel, 60 x 75 [2.36 x 2.95"]	for cut-out 50 x 50 [1.97 x 1.97] to cut-out 45 x 45 [1.7 x 1.77], with screw mounting for counters 48 x 48 [1.89 x 1.89]	black	T008860
Adapter front bezel, 72 x 72 [2.83 x 2.83"]	for cut-out $68 \times 68$ [2.68 $\times$ 2.68] to cut-out $45 \times 45$ [1.7 $\times$ 1.77], (Mating clip T009420 must be ordered separately)	black	T008177
Adapter front bezel, ø 72 [2.83"]	for cut-out ø 60 [2.36] to 45 x 45 [1.77 x 1.77], with clip mounting for counters 48 x 48 [1.89 x 1.89]	black	N510226

Suitable gaskets as well as further accessories can be found in the accessories section or in the accessories area of our website at: www.kuebler.com/accessories



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# Technical data

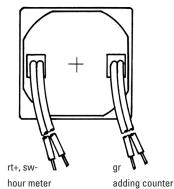
General technical data	1	
Operating indicator of the running time meter	AC DC	fast rotating wheel with red dashes: 99999.99 h 1/100 h display turns continuously
		by 1 digit in 36 s: 999999.99 h
Height of figures		4 x 1.7 mm [0.16 x 0.067"] optical
Color of figures	hour meter	hour: white on black decimal: red on black
р	ulse 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

Mechanical characteristics								
Protection		IP52 (front side) when built in						
Color of housing		black (standard)						
Weight	HC 77 plug in frame 55 plug in frame 72	65 g [2.29 oz] 8 g [0.28 oz] 13 g [0.46 oz]						

Screw terminal (tightening torque max. 0.8 Nm)								
Power consumption	Electrical characteristics							
Power consumption	Electrical connection	ı	screw terminal					
36 80 V DC 100 130 V DC 20 30 V AC, 50 Hz 42 48 V AC, 50 Hz 187 264 V AC, 50 Hz DC 20 30/42 48/100 130/187 264 V 20 30/36 80/100 130 V AC 8ated voltages  AC (50 or 60 Hz) DC 10 30/36 80/100 130 V  On time 100 % Count mode Accuracy AC DC ACCURACY ACC			(tightening torque max. 0.8 Nm)					
100 130 V DC   20 30 V AC, 50 Hz   42 48 V AC, 50 Hz   100 130 V AC, 50 Hz   120 130 V AC	Power consumption	10 30 V DC	approx. 1 W					
20 30 V AC, 50 Hz 42 48 V AC, 50 Hz 100 130 V AC, 50 Hz 187 264 V AC, 50 Hz 20 30/42 48/100 130/187 264 V 20 30/42 48/100 130/187 264 V 20 30/42 48/100 130/187 264 V 20 30/36 80/100 130 V  On time 100 % Count mode Accuracy AC supply frequency + 30 ms C 0.003 % (at 24 h) Reset EMC standards EN 55011 class B EN 61000-6-2, EN 61000-6-3  Device safety designed to protection class application area application area pollution level 2		36 80 V DC	approx. 1.65 W					
42 48 V AC, 50 Hz   approx. 0.53 VA   approx. 1.43 VA   approx. 3.0		100 130 V DC	• •					
100 130 V AC, 50 Hz   approx. 1.43 VA   approx. 3.0 VA	2	20 30 V AC, 50 Hz	approx. 0.53 VA					
Rated voltages	4	12 48 V AC, 50 Hz	approx. 0.53 VA					
Rated voltages		· · · · · · · · · · · · · · · · · · ·	• •					
AC (50 or 60 Hz) DC 10 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  EMC standards EN 55011 class B EN 61000-6-2, EN 61000-6-3  Device safety designed to protection class application area pollution level 2	187	7 264 V AC, 50 Hz	approx. 3.0 VA					
DC   10 30/36 80/100 130 V	Rated voltages							
On time         100 %           Count mode         adding           Accuracy         AC DC		AC (50 or 60 Hz)	20 30/42 48/100 130/187 264 V					
Count mode		DC	10 30/36 80/100 130 V					
Accuracy	On time		100 %					
DC   < 0.003 % (at 24 h)	Count mode		adding					
Reset no reset  EMC standards EN 55011 class B EN 61000-6-2, EN 61000-6-3  Device safety designed to protection class application area pollution level 2	Accuracy	AC	supply frequency + 30 ms					
EMC standards  EN 55011 class B EN 61000-6-2, EN 61000-6-3  Device safety  designed to protection class application area pollution level 2		DC	< 0.003 % (at 24 h)					
Device safety  designed to protection class application area  EN 61000-6-2, EN 61000-6-3  EN 61010 part 1  2  pollution level 2	Reset		no reset					
Device safety designed to protection class application area pollution level 2	EMC standards		EN 55011 class B					
protection class 2 application area pollution level 2			EN 61000-6-2, EN 61000-6-3					
application area pollution level 2	Device safety	designed to	EN 61010 part 1					
- '	•	•	•					
UL approval file E128604		application area	pollution level 2					
	UL approval		file E128604					
	••							

## **Terminal assignment**

Counter with separate connections (rear view)





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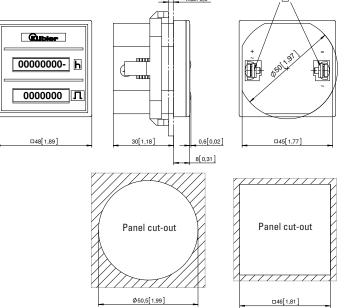
## **Dual function counters**

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

**HC 77** 

Dual function counter 48 x 48 [1.89 x 1.89"] Type HC 77



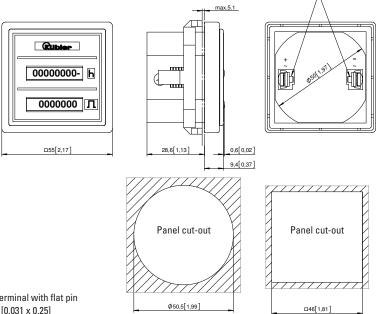


1 Screw terminal with flat pin 0.8 x 6.3 [0.031 x 0.25]

			Art. no.						
Туре	Display	Voltage	10 30 V	20 30 V	36 80 V	42 48 V	100 130 V	187 264 V	
HC 77	7/8 digits	AC (50 Hz)		3.550.401.071		3.550.401.072	3.550.401.074 <sup>1)</sup>	3.550.401.075 <sup>1)</sup>	
	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 <sup>1)</sup>		3.550.401.353		3.550.401.381		
Color of hou	sing 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 HC 77.55





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

			Art. no.						
Туре	Display	Voltage	10 30 V	20 30 V	36 80 V	42 48 V	100 130 V	187 264 V	
HC 77.55	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