

# Hour meters / timers, electronic

<b>LCD hour meters</b>	<b>Max. time range 9999 h 59 min 59 sec or 9999999.9 sec</b>	<b>Codix 135</b>
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The Codix 135 is a simple battery-powered hour meter for PNP, NPN and high-voltage applications.

Its 8-digit LCD display with optional backlighting can display various time ranges.



Battery powered	Timer	Input type	Pulse voltage	Pulse voltage	Temperature range	High protection level	DIN front bezel	LCD display	Lockable reset

### Powerful

- High quality LCD display with 8 mm high figures - optional display backlighting.
- Time range up to 9999999.9 seconds or 9999h99m99s programmable via control input.
- Battery lifetime 8 years.
- High voltage versions for 10 ... 260 V AC/DC voltage pulses, thus to be connected directly via contactors, relays and motors.
- Very high accuracy: 100 ppm.

### Simple

- Screw terminals, RM 5 mm.
- Reset key lockable via the input 'Reset Enable'.
- According to version for PNP, NPN switching level or high voltage version for 10 ... 260 V AC/DC switching voltage.
- Accumulated time is always readable thanks to battery powering.
- High protection level IP65.

<b>Order code</b>	<b>6.135 . 012 . 8XX</b>		
	<table border="1"> <tr> <td>a</td> <td>b</td> </tr> </table>	a	b
a	b		

**a** Backlighting

- 5 = without <sup>1)</sup>
- 6 = with

**b** Input type: measurement of short times

Input type	INP A		INP B	
0 = adding <sup>1)</sup>	-		0 ... 0.7 V DC	NPN
1 = adding <sup>1)</sup>	-		4 ... 30 V DC	PNP
3 = adding <sup>1)</sup>	10 ... 260 V AC/DC	AC/DC	10 ... 260 V AC/DC	AC/DC

*Delivery specification*

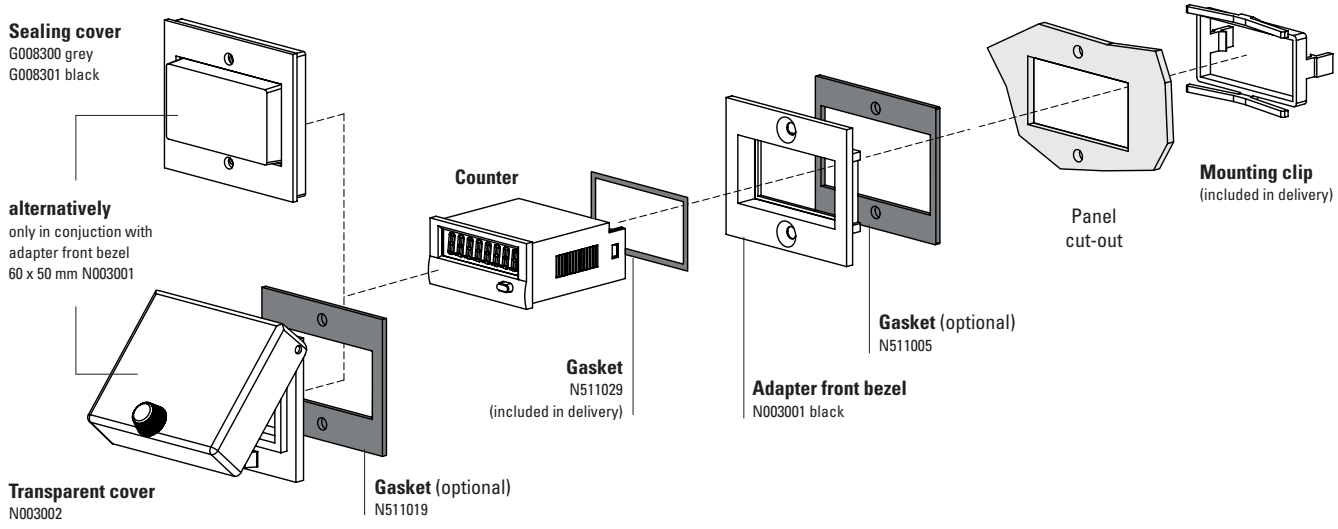
- Timer
- Mounting clip
- Front bezel for screw mounting (T008181) 56 x 40 mm [2.20 x 1.57"], panel cut-out 50 x 25 mm [1.97 x 0.98"]
- Front bezel for clip mounting (T008180) 53 x 28 mm [2.09 x 1.10"], panel cut-out 50 x 25 mm [1.97 x 0.98"]
- Gasket
- Instruction manual, multilingual

1) Stock types

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## Accessories / Mounting examples



		Type / size	Description		Order no.	suitable gasket
<b>Adapter front bezel</b>		<b>53 x 28 mm</b> [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"]	grey black anthracite	<b>T008164</b> <b>T008165</b> <b>T008180</b>	<b>N511015</b>
		<b>56 x 40 mm</b> [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	<b>T008161</b> <b>T008181</b>	<b>N511045</b>
		<b>72 x 36 mm</b> [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	<b>162704Set</b>	–
		<b>60 x 50 mm</b> [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	<b>N003001</b>	<b>N511005</b>
		<b>48 x 48 mm</b> [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	<b>T008883</b>	–
<b>Sealing cover IP65</b>		<b>K1</b>	only in conjunction with adapter front bezel 60 x 50 mm N003001	transparent / grey transparent / black	<b>G008300</b> <b>G008301</b>	–
<b>Transparent cover IP65</b>		<b>1 Dv</b> (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	<b>N003002</b>	<b>N511019</b>
<b>Gasket counter</b>			48 x 24 mm (for installation in adapter front bezel) 49 x 25 mm		<b>N511029</b> <b>N511034</b>	
<b>Mounting frame</b>		<b>cut-out</b> <b>50 x 25 mm</b> [1.97 x 0.98"]	via adapter T008180 for snap-on mounting on 35 mm [1.38"] top-hat DIN rail	chromated	<b>G300004</b>	–
<b>Enclosure blind</b>		<b>48 x 24 mm</b> [1.89 x 0.94"]	for cut-out 45 x 22.2 mm [1.77 x 0.94"] and cut-out 50 x 25 mm [1.97 x 0.98"]	anthracite	<b>G003836</b>	–

incl. in delivery

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## Technical data

General technical data	
<b>Display</b>	LCD, 8-digits, 8 mm [0.31"] high
<b>Backlighting</b>	external electrical source 24 V DC $\pm 20\%$ , 50 mA
<b>Counting direction</b>	adding
<b>Display range</b>	see next page
<b>Reset</b>	manual and electrical
<b>Working temperature</b>	-10 °C ... +55 °C [+14 °F ... +131 °F] (non-condensing)
<b>Operating temperature</b>	-10 °C ... +60 °C [+14 °F ... +140 °F] (non-condensing)
<b>Storage temperature</b>	-20 °C ... +70 °C [-4 °F ... +158 °F]
<b>Relative humidity</b>	< 85 % (non-condensing)
<b>Altitude</b>	up to 2000 m [6562']

Electrical characteristics							
<b>Supply voltage</b>	internal lithium battery approx. 8 years at 20 °C [68 °F]						
<b>Device safety</b>	<table border="0"> <tr> <td>Designed to</td> <td>EN 61010 part 1</td> </tr> <tr> <td>Protection class</td> <td>2</td> </tr> <tr> <td>Application area</td> <td>pollution level 2</td> </tr> </table>	Designed to	EN 61010 part 1	Protection class	2	Application area	pollution level 2
Designed to	EN 61010 part 1						
Protection class	2						
Application area	pollution level 2						

Mechanical characteristics	
<b>Housing</b>	dark grey RAL 7021
<b>Protection</b>	IP65 (front side)
<b>Weight</b>	approx. 50 g [1.76 oz]

Count input	
<b>A. Timer inputs DC versions</b> (max. 30 V DC) INP B	
Timer input	NPN or PNP depending on the type (see table)
Switching level	NPN LOW: 0 ... 0.7 V DC HIGH: 3 ... 30 V DC
	PNP LOW: 0 ... 0.7 V DC HIGH: 4 ... 30 V DC
Counting start	NPN for LOW signal at the timer input PNP for HIGH signal at the timer input
<b>B. Timer inputs high voltage versions</b> (10 ... 260 V DC/V AC) INP A	
Timer input	optocoupler input
Min. pulse time	16 ms
Switching level	LOW: 0 ... 2 V DC/V AC HIGH: 10 ... 260 V DC/V AC
Counting start	for HIGH signal at the timer input
<b>C. Time range change (Mode)</b>	
Contact input	open collector (switching at 0 V)
	NPN LOW 0 ... 0.7 V DC HIGH 3 ... 5 V DC
Time range	depending on the circuit (s. order inform.)
<b>D. Reset input for DC and high voltage</b>	
Min. pulse time	DC 50 ms High voltage 16 ms
Contact input DC	NPN LOW 0 ... 0.7 V DC HIGH 3 ... 30 V DC
High voltage input	10 ... 260 V AC/DC
<b>E. Reset locking input</b> (for DC and AC)	
Electrical reset key locking	
Input not active	reset key locked
Contact input	open collector NPN (switching at 0 V)
Switching level	NPN LOW 0 ... 0.7 V DC HIGH 3 ... 5 V DC

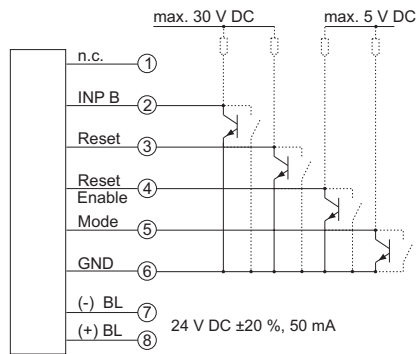
Approvals	
<b>UL compliant</b> in accordance with	File no. E128604
<b>CE compliant</b> in accordance with	
EMC Directive	2014/30/EU
RoHS Directive	2011/65/EU
Low Voltage Directive	2014/35/EU
<b>UKCA compliant</b> in accordance with	
EMC Regulations	S.I. 2016/1091
RoHS Regulations	S.I. 2012/3032
Low Voltage Regulations	S.I. 2016/1101

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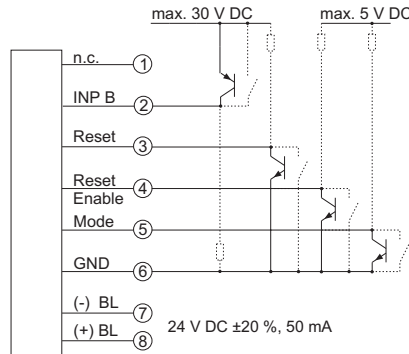
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## Terminal assignment

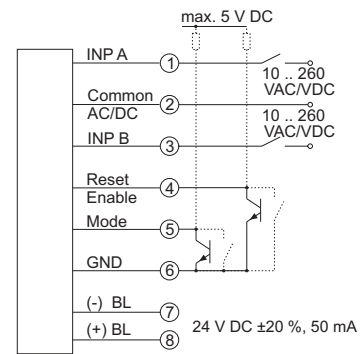
DC type: 6.135.012.8x0



DC type: 6.135.012.8x1



AC type: 6.135.012.8x3



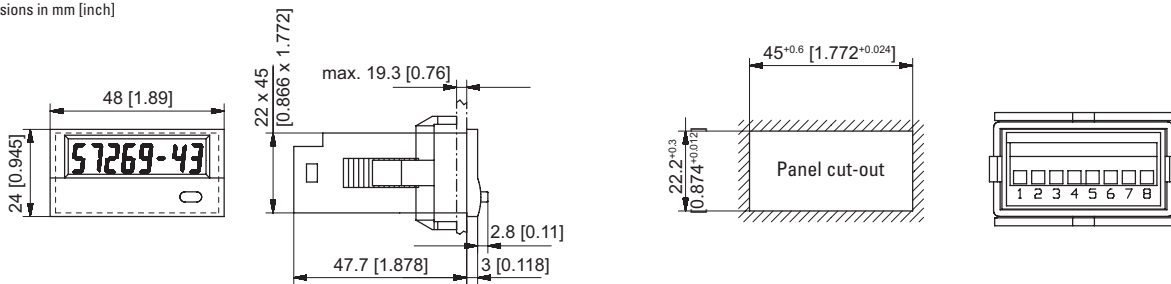
BL = backlighting

## Display and time ranges

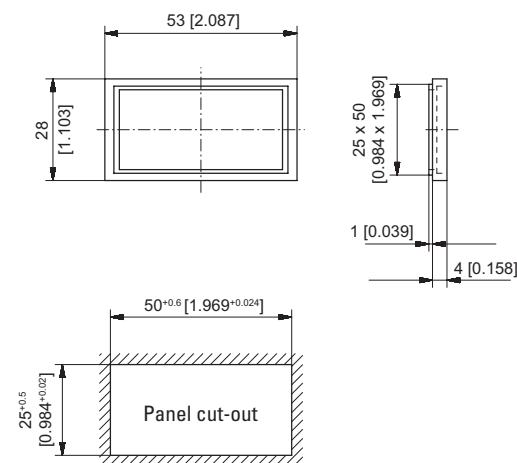
time range	display
9999h 59m 59s	<b>9999.59.59</b>
9999999.9 s	<b>9999999.9</b>

## Dimensions

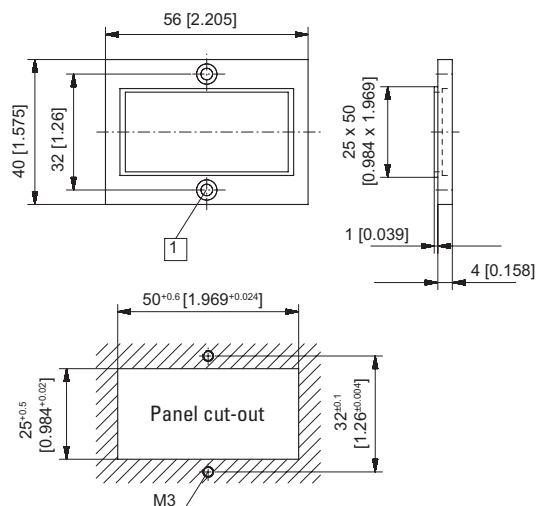
Dimensions in mm [inch]



### Front bezel for clip mounting (included in delivery)



### Front bezel for screw mounting (included in delivery)



1 Countersinking Af3, DIN 74