

Hour meters / timers, electronic

LED timers	h, min, sec or hh.mm.ss (AC+DC)	Codix 543
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The Codix 543 is an externally powered timer, hour meter or short-time meter with 4 start input types and individually adjustable time base.

The 6-digit LED display shows the NPN, PNP input signals used for pulse width or time interval measurement.



DC 10 ... 30 V	AC 10 ... 240 V	000000 DIN 96x48	-20°...+65°C Temperature range	IP65 High protection level	Plug-in screw terminal	Menu-driven programming	Timer	≥ 1 ms Resolution
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Powerful

- High accuracy thanks to quartz time base.
- Robust housing – IP65 protection.
- Very bright LED display 14 mm high.
- Time base can be set individually
 - hours, minutes or seconds, the decimal point allows setting it even more accurately, up to max. 3 decimal places.
 - smallest achievable resolution: milliseconds.
 - time base hours (minutes and seconds as real-time display).
- Short start-up time – detects incoming pulses already 16 ms after having been switched on => no loss of pulses in case of a simultaneous motor start.
- Individually adjustable Start/Stop function
 - 2 Start/Stop inputs allow achieving 4 different measuring principles such as, for example, active or passive pulse width measurement, time interval measurement with one single input or with separate inputs.

User-friendly and universal

- Large keys – pressing either of the keys switches between displays (utilisable même avec des gants).
- Programming
 - Simple and unified programming and operation thanks to menu-driven programming.
 - possibility to enter the programming mode also during operation with an authentication query.
- Manual or electrical reset
 - Tamper-proof thanks to lockable reset function.
- Freely programmable setpoint
 - Start time at which time counting begins.
- AC or DC supply voltage with sensor supply voltage.
- As an alternative to the HTL inputs, devices with a 5 V DC input level are available, for use as parallel displays for PLCs.
- Optional output: 1 Hz clock pulse in case of active time measurement.

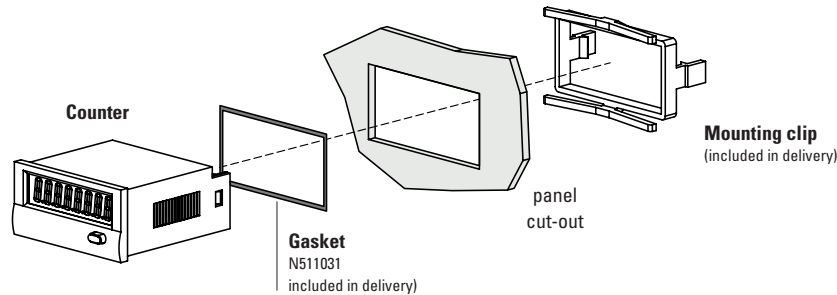
Order code	6.543 . 01 X . XX 0			
	<table border="1"> <tr> <td style="text-align: center;">a</td> <td style="text-align: center;">b</td> <td style="text-align: center;">c</td> </tr> </table>	a	b	c
a	b	c		
<p>a Output</p> <p>1 = Optocoupler</p> <p>2 = No output ¹⁾</p>	<p>c Input switch level</p> <p>0 = Standard (HTL) ¹⁾</p> <p>A = 4 ... 30 V DC</p>			
<p>b Supply voltage</p> <p>0 = 100 ... 240 V AC, ±10 % ¹⁾</p> <p>3 = 10 ... 30 V DC ¹⁾</p>				

1) Stock types

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Accessories / Mounting examples



		Type / size	Description		Order no.
Gasket counter			96 x 49 mm [3.78 x 1.93"]		N511031
Mounting frame		cut-out 92 x 45 mm [3.62 x 1.77"]	for snap-on mounting on 35 mm [1.38"] top-hat DIN rail	grey	G300005
Screw terminal (Replacement part)			1 ... 7, pitch 3.81 1 ... 2, pitch 5.08	7 pin 2 pin	N100387 N100133
incl. in delivery					

Technical data

General technical data	
Display	6 digit, red 7 segment LED display; 14 mm [0.55"] high
Data backup	EEPROM
Operating temperature	-20 °C ... +65 °C [-4 °F ... +149 °F] (non-condensing)
Storage temperature	-25 °C ... +70 °C [-13 °F ... +158 °F]
Relative humidity	< 85 % (non-condensing)
Altitude	up to 2000 m [6562']

Electrical characteristics	
Supply voltage	10 ... 30 VDC, with reverse polarity protection 100 ... 240 V AC, ±10 %
Current consumption	max. 50 mA, 8 VA
Device safety	designed to protection class 2 application area pollution level 2

Mechanical characteristics	
Housing	front panel mount 96 x 48 mm [3.74 x 1.89"] acc. to DIN 43700; RAL 7021, dark grey
Protection	IP65 (front side)
Weight	approx. 150 g [5.29 oz]

Inputs	
Polarity of inputs	programmable, NPN or PNP for all inputs
Input resistance	approx. 5 kΩ
Resolution	up to 0.001 s
Minimum pulse duration of the reset input	5 ms
Input switching level standard version (HTL)	
DC supply voltage	LOW 0 ... 0.2 x U _B [V DC] HIGH 0.6 x U _B ... 30 V DC
AC supply voltage	LOW 0 ... 4 V DC HIGH 12 ... 30 V DC
Input switching level at 4 ... 30 V DC	LOW 0 ... 2 V DC HIGH 4 ... 30 V DC
Accuracy	< 50 ppm

Outputs	
Sensors power supply (AC version)	24 V DC ±15 %/100 mA
Output power optocoupler	max. 30 V DC, 10 mA

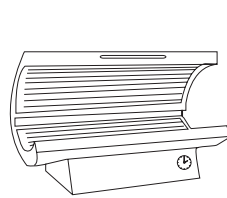
Approvals	
UL compliant in accordance with	File no. E128604
CE compliant in accordance with	
EMC Directive	2014/30/EU
RoHS Directive	2011/65/EU
Low Voltage Directive	2014/35/EU
UKCA compliant in accordance with	
EMC Regulations	S.I. 2016/1091
RoHS Regulations	S.I. 2012/3032
Low Voltage Regulations	S.I.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

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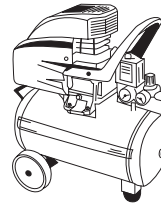
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Applications for time and hour meters, short-time meters

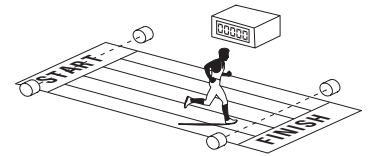
- Time measurements such as hours run recording on all machines and plant, e.g. compressors, solariums, special lights and lamps
- Accessories, OEM equipment or retrofitting to production machine
- Measurement of short times on processes and procedures, time recording (stopwatch function) at sporting events
- Hours run recording for motor vehicles and time monitoring for rally vehicles



Hours run of UV lamps

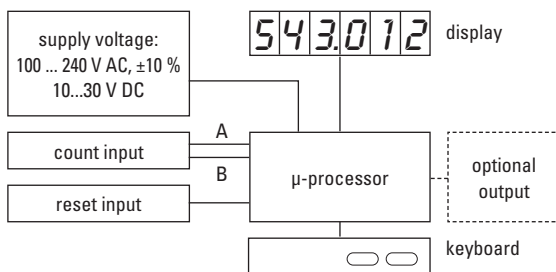


Operating hours

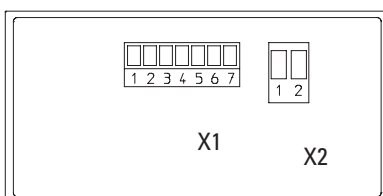


Short time measurement > 1 ms

Block diagram



Terminal assignment



Connection X1

PIN	AC version	DC version
1	Optocoupler output	emitter
2	Optocoupler output	collector
3	Reset	
4	INP B	
5	INP A	
6	GND out	n.c.
7	+24 V out	n.c.

Connection X2

PIN	AC version	DC version
1	100 ... 240 V AC, ±10 %	0V DC (GND)
2	100 ... 240 V AC, ±10 %	10...30 V DC

Dimensions

Dimensions in mm [inch]

