

LED dual function displays **Universal with dual functions, 4 combinations (AC+DC)** **Codix 54U**



The Codix 54U is a voltage-powered dual function counter with 4 functions in one device:
Counter with 2 totalizing ranges, totalizer and timer, totalizer and frequency meter, timer with 2 time ranges.
For fast and slow count pulses, with 6-digit LED display for NPN, PNP input signals.

DC 10 ... 30 V	AC 10 ... 240 V	000000 DIN 96x48	-20°...+65°C Temperature range	IP65 High protection level	Plug-in screw terminal	max. 60 kHz Pulse counter/ Totalizer	1/sec - 1/min Frequency meter/ tachometer	Timer	t / Hz Frequency meter HRA
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Powerful

- Fast count and frequency input – input frequency max. 60 kHz (can be damped to 30 Hz for mechanical contacts).
- Robust housing – IP65 protected.
- Very bright LED display, 14 mm high, 6 digits.
- Very accurate precise frequency measurement principle (HRA-High Rate Accuracy System)
 Frequencies up to 38 Hz are calculated using time-interval (period duration) measurement. Frequencies > 38 Hz are calculated using a special time base (gate time) measurement. A very high accuracy of < 0.1 % is achieved, even with very short gate times. The resulting measurement is available after a max. of 50 ms.
- Short start-up time – detects input pulses just 16 msec after being switched on => no pulses are lost with a simultaneous motor start-up.

User-friendly and universal

- Large keys – can also be operated when wearing gloves.
- Programming:
 - Simple uniform menu-driven programming and operation.
 - Possible to enter the programming also during operation with a confirmation prompt.
 - Pressing the right key switches between displays.
- Individually programmable scaling: multiplication and division factor (0.0001 ... 99.9999), to display corresponding engineering units, e.g. position in 1/10 mm and speed in RPM.
- Separate factors for frequency- and pulse counting.
- AC or DC supply voltage.
- Inputs: as an alternative to the HTL inputs, devices with a 5 V DC input level are available, for use as parallel displays for PLCs.
- Timer specials: timer or hours-run meter with various Start/Stop measurements, time range settings in hours, minutes or seconds, with decimal point. Resolutions up to 1/1000 can be programmed.

Order code **6.54U . 01 2 . XX 0**

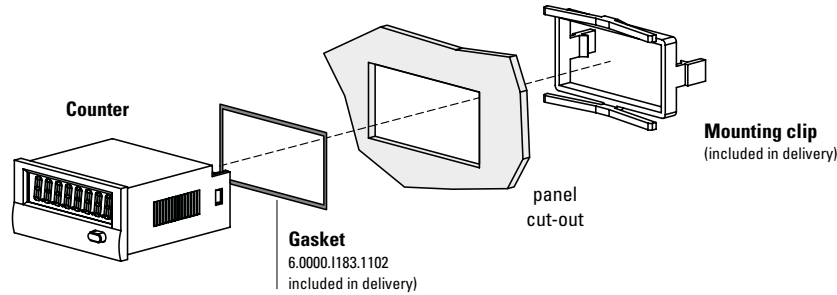
- a** Supply voltage
 0 = 100 ... 240 V AC, ±10 %
 3 = 10 ... 30 V DC
- b** Input switching level
 0 = Standard (HTL)
 A = 4 ... 30 V DC

- Delivery specification**
- Digital display
 - Mounting clip
 - Gasket
 - 2 plug-in screw terminals
 - Instruction manual, multilingual

Multifunction devices, electronic

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Accessories / Mounting examples



		Type / size	Description		Order no.
Gasket counter			96 x 49 mm [3.78 x 1.93"]		6.0000.S050.0002
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	6.0000.F100.0001

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	10 ... 26 V DC	-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 application area	EN 61010 part 1 2 pollution level 2

Mechanical characteristics

Housing		front panel mount 96x48 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
Counting frequency ¹⁾		max. 60 kHz, can be damped to 30 Hz
Display range	timer	0.001 s ... 999999 h
	frequency meter	1/min or 1/sec
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	frequency meter / tachometer	< 0.1 %
	timer	< 50 ppm

Outputs

Sensor supply voltage (AC version)	24 V DC ±15 %/100 mA
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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

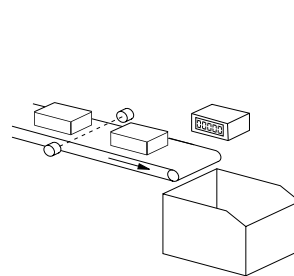
1) Details see manual

Multifunction devices, electronic

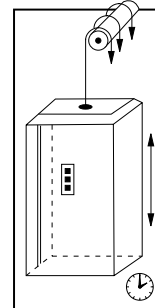
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Applications for dual functions

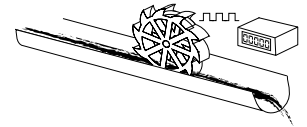
- Pulse and frequency (speed)
e.g. production data acquisition: total piece count and speed on OEM equipment, flow rate measuring systems – total flow and current flow
- 2 pulse counters
Measurement of batch and total piece count or of daily production count and total count values
- Pulse and time (maintenance counter)
Used in the lift industry as trip counters and hours-run meters and on production machines for piece and time counting, flow and time measurement, materials handling time and quantities
- 2 timers
Measurement of total time and orderspecific times, maintenance intervals and total time, time of day and total time



Piece count on conveyor and production speed

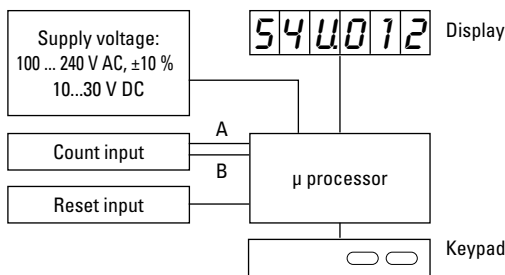


Trip counter and hours-run

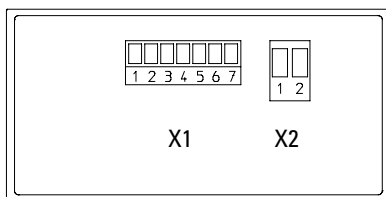


Flow rate and total volume

Block diagram



Terminal assignment



Connection X1

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

Function of the inputs INP A, INP B

Counter with 2 totalizing ranges:

INP A: Dynamic count input counter 1 and counter 2
INP B: Inactive

Totalizer and timer:

INP A: Dynamic count input for totalizer
INP B: Start/Stop or gate input for timer

Totalizer and frequency meter:

INP A: Dynamic count input/frequency input
INP B: Inactive

Timer with 2 time ranges:

INP A: Start input (depends on input type)
INP B: Start/Stop or gate input for timer (depends on input type)

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Dimensions

Dimensions in mm [inch]

