

Multifunction devices, electronic

LED dual function displays **6 count modes with tachometer (AC+DC)** **Codix 54P**



The Codix 54P is a voltage-powered pulse counter/ position display with 4 different count input modes and separate tachometer.

With separate inputs, 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. 30 kHz Pulse counter/ Totalizer	1/sec - 1/min Frequency meter/ tachometer	Position Position display	HRA Frequency meter HRA
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Powerful

- Fast count and frequency input – input frequency max. 30 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.
- 4 different count input modes for the position display: 2-channel input for detecting count direction, difference or adding mode, quadrature x1, x2 or x4. 1 separate input for rotary speed and speed, display in 1/min or 1/sec.
- AC or DC supply with sensor 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.

Order code

6.54P . 012 . XX0
a b

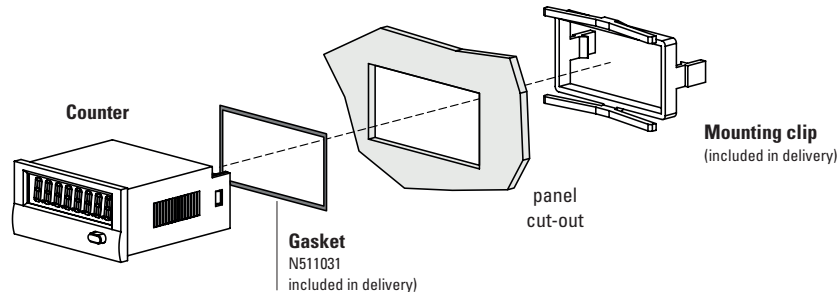
- a** Supply voltage
 0 = 100 ... 240 V AC, ±10 %
 3 = 10 ... 30 V DC
- b** Input switching level
 0 = Standard (HTL)
 A = 4 ... 30 V DC

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

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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 N100387 2 pin 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
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
UL approval	file E128604

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
Counting frequency ¹⁾	max. 30 kHz, can be damped to 30 Hz
Display range	tachometer 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 %

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

1) Details see manual

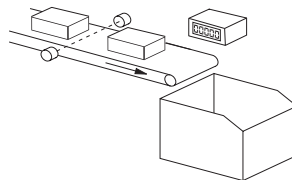
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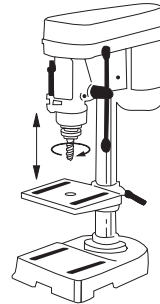
Applications for frequency and position display / totalizer

Position and rotary speed applications, e.g.

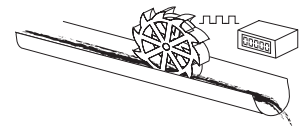
- OEM equipment or retrofitting to drilling machines
- OEM equipment on flow measuring plant, e.g. total flow and current flow
- Total piece count and pieces per minute, where the pulse counting occurs in the add/subtract mode, in order to deduct reject parts
- Production data acquisition: total piece count and production speed, or absolute distance traversed and current speed



Piece count on conveyor and production speed

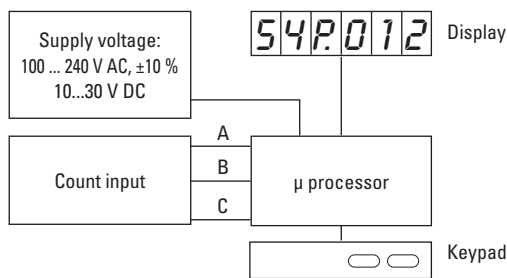


Rotary speed and drilling depth

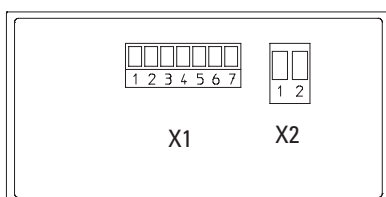


Flow rate and total volume

Block diagram



Terminal assignment



Connection X1

PIN	AC version	DC version
1	n.c.	
2	n.c.	
3	INP C (frequency)	
4	INP B (frequency)	
5	INP A (Count)	
6	GND out	n.c.
7	+24 V out	n.c.

Function of the inputs INP A, INP B, INP C

INP A and INP B:

Two channel pulse input with 6 different count modes

INP C:

Frequency input, single channel

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

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Dimensions

Dimensions in mm [inch]

