LED frequency displays | Measuring range 1/min or 1/sec HRA-measurement (AC+DC) | Codix 542

The Codix 542 is a voltage powered frequency display / tachometer, with 6-digit LED display for NPN, PNP input signals.

The display in 1/min or 1/sec is freely scalable for fast and slow count pulses – with fast HRA measurement system (High Rate Accuracy).

Supply voltage | Temperature range | High protection level | Plug-in screw terminal | Menu-driven programming | Operation with gloves | Frequency display/ Tachometer | Frequency display with HRA

Powerful

- Very bright LED display, 14 mm high.
- Fast count input – input frequency max. 60 kHz.
- Robust housing – IP65 protected.
- 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.

User-friendly and universal

- Large keys – can also be operated when wearing gloves.
- Simple uniform menu-driven programming and operation. Possible to enter the programming also during operation with a confirmation prompt.
- Programmable decimal point, can be set from 0.0 to 0.000 (this determines the resolution).
- As an alternative to the HTL inputs, devices with a 4 ... 30 V DC input level are available.
- Individually programmable scaling – multiplication and division factor (0.0001 to 99.9999), to display corresponding engineering units, e.g. frequency in Hz and speed in RPM.
- Programmable delay until 0 is displayed.
- Display in 1/min or 1/sec.
- AC or DC supply voltage with sensor supply voltage.
- Optional output for zero-speed monitoring.

Order code

6.542	.	01	X (a)	.	X (b)	X (c)	0

(a) *Output*
1 = Optocoupler output
2 = No output [1)]

(b) *Supply voltage*
0 = 100 ... 240 V AC, ±10 % [1)]
3 = 10 ... 30 V DC [1)]

(c) *Input switching level*
0 = Standard level (HTL) [1)]
A = 4 ... 30 V DC level

Delivery specification
- Digital display
- Mounting clip
- Gasket
- Instruction manual, multilingual

1) Stock types

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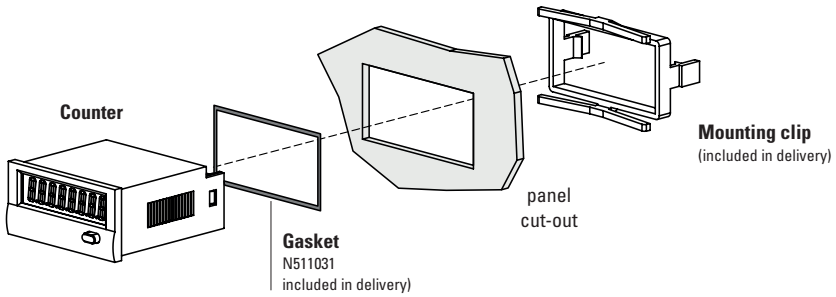
Accessories / Mounting examples



		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 V DC, 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. 60 kHz, can be damped to 30 Hz
Measurement principle / Accuracy		Gate and/or time interval (period duration) measurement, with high accuracy < 0.1 % (HRA)
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

Outputs

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

1) Please refer to the manual

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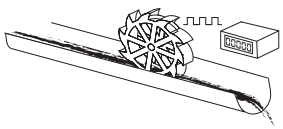
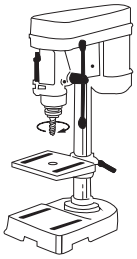
Applications for speed and frequency displays

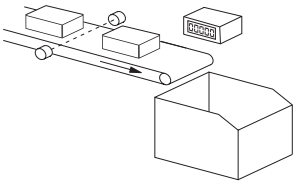
- Rotary speed applications, e.g. OEM equipment or retrofitting to drilling machines
- OEM equipment for flow rate measuring, e.g. current flow rate; production data such as volume/time
- Speed applications on motors, turbines, machines; feed-rate measurement
- Recording of production rates
- Frequency measurement



Mass flow rate

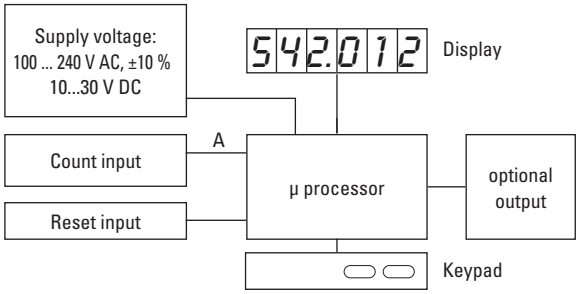


Drilling machine head, rotary speed

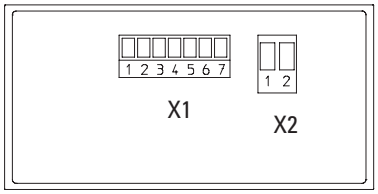


Production rate

Block diagram



Terminal assignment



Connection X1

PIN	AC version	DC version
1	Optocoupler-output	Collector
2	Optocoupler-output	Emitter
3	n.c.	
4	n.c.	
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

Dimensions

Dimensions in mm [inch]