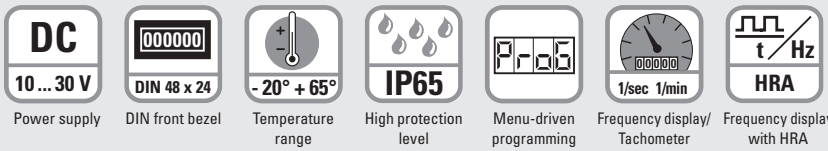
LED frequency displays | Measuring range 1/min or 1/sec HRA-measurement (DC) | Codix 522



The Codix 522 is a simple voltage powered frequency display / tachometer.

Display in 1/min or 1/sec, freely scalable, for fast and slow count pulses, with 6-digit LED display for NPN, PNP input signals, with fast HRA measurement system (High Rate Accuracy).



Powerful

- Very bright LED display, 8 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.
- 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 decimal point, can be set from 0.0 to 0.000 (this determines the resolution)
- Programmable delay until 0 is displayed
- Display in 1/min or 1/sec
- As an alternative to the HTL inputs, devices with a 4 ... 30 V DC input level are available
- Optional output for zero-speed monitoring

Order code

6.522	.	01	X (a)	.	3	X (b)	0

(a) *Output*
1 = optocoupler output
2 = no output [1)]

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

Delivery specification
– Digital display
– 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	Dimensions in mm [inch]	Order-No.
Adapter front bezel, 72 x 36 [2.83 x 1.42]	For cut-out 68 x 33 [2.68 x 1.30] to cut-out 45 x 22.2 [1.77 x 0.87], for counters 48 x 24 [1.89 x 0.94], as set black and silver anodised	**162704 Set**
Adapter front bezel, 48 x 48 [1.89 x 1.89]	For cut-out 45 x 45 [1.77 x 1.77] to cut-out 45 x 22.2 [1.77 x 0.87], with clip mounting for counters 48 x 24 [1.89 x 0.94] black	**T008883**
Adapter front bezel, 60 x 50 [2.36 x 1.97]	For cut-out 54 x 29 [2.13 x 1.14] to cut-out 45 x 22.2 [1.77 x 0.87], with screw mounting and gasket for counters 48 x 24 [1.89 x 0.94] black	**N003001**
Transparent cover, lockable, IP65	For cut-out 54 x 29 [2.13 x 1.14], for screw mounting to front bezel F1B or adapter front bezel N003001, for counters with cut-out 50 x 25 [1.97 x 0.98] or 45 x 22.2 [1.77 x 0.87]	**N003002**
Sealing cover type K1, IP65	Suitable for front bezel 60 x 50 [2.36 x 1.97], for screw mounting of electromech. counters and via adapter front bezel N003001 for counters 48 x 24 [1.89 x 0.94]	**G008301**
Mounting frame with cut-out 50 x 25 [2.36 x 1.97] via separate adapter also for 45 x 22.2 [1.77 x 0.87]	For snap-on mounting on 35 [1.38] top-hat DIN rail, for counters 53 x 28 [2.09 x 1.10] and via separate adapter (T008180) for counters 48 x 24 [1.89 x 0.94] chromated	**G300004**

Suitable gaskets as well as further accessories can be found in the accessories section or in the accessories area of our website at: www.kuebler.com/accessories.

Technical data

General technical data

Display		6 digits, red 7 segment LED display; 8 mm [0.32"] high
Data backup		EEPROM
Operating temperature	10 ... 26 V DC	-20°C ... +65°C [-4°F ... +149°F]
	> 26 ... 30 V DC	-20°C ... +55°C [-4°F ... +131°F] (non-condensing)
Storage temperature		-25°C ... +70°C [-13°F ... +158°F]

Electrical characteristics

Power supply		10 ... 30 V DC, with integrated reverse polarity protection
Current consumption		max. 50 mA
EMC	Emitted interference	EN 55011 class B
	Immunity to interference	EN 61000-6-2

Mechanical characteristics

Housing	front panel mount 8 x 24 mm [1.89 x 0.94"] acc. to DIN 43700; RAL 7021, dark grey
Protection	IP65 (front side)
Weight	approx. 50 g [1.76 oz]

Inputs

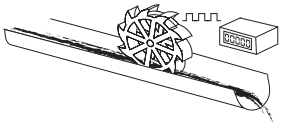
Polarity of inputs		programmable, NPN or PNP
Input resistance		approx. 5 kΩ
Counting frequency		max. 60 kHz, can be damped to 30 Hz
Measurement principle / Accuracy		Gate and/or time interval (period duration) measurement, with high accuracy <0.1% (HRA)
Input switching level (HTL)	LOW	0 ... 0.2 x U_B [V DC]
	HIGH	0.6 x U_B ... 30 V DC
Input switching level at 4 ... 30 V DC	LOW	0 ... 2 V DC
	HIGH	4 ... 30 V DC

Outputs (optional)

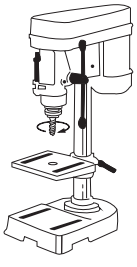
Optocoupler output	max. 30 V DC, 10 mA

Applications for speed and frequency displays

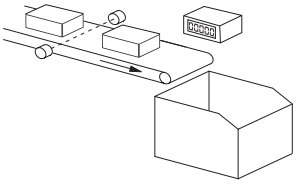
- Rotary speed applications, e.g. OEM equipment or retrofitting to drilling machines
- OEM equipment for flow rate measuring, e.g. current flow rate; production data such as volume/time
- Speed applications on motors, turbines, machines; feed-rate measurement
- Recording of production rates
- Frequency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



Mass flow rate



Drilling machine head, rotary speed

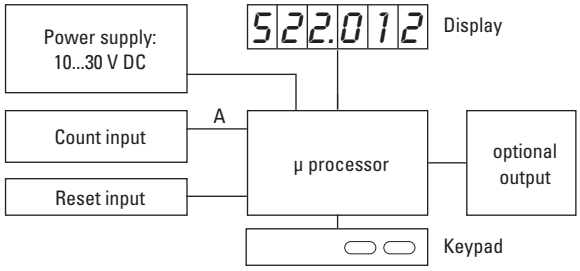


Production rate

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Block diagram



Terminal assignment



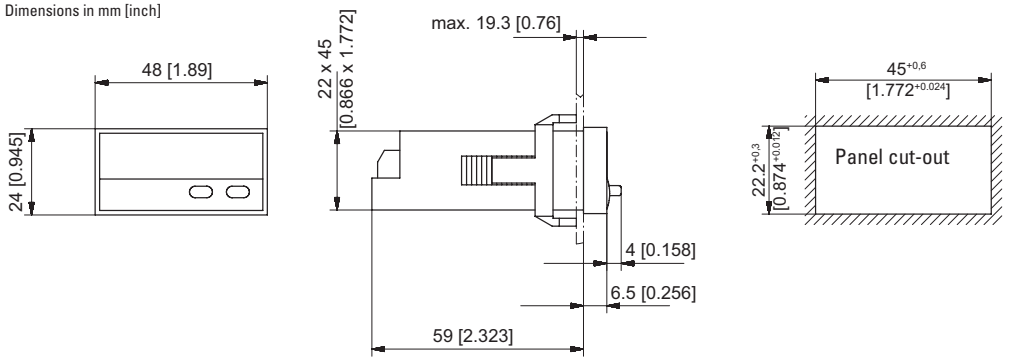
PIN	without optocoupler
1	10 ... 30 V DC
2	0 V GND
3	INP
4	–
5	–



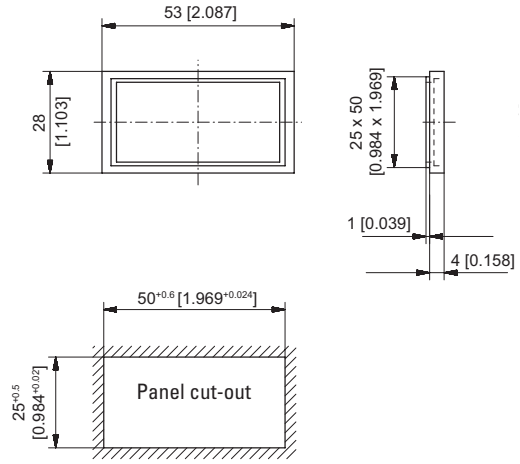
PIN	with optocoupler (NPN)
1	10 ... 30 V DC
2	0 V GND
3	INP
4	–
5	–
6	Emitter
7	Collector

Dimensions

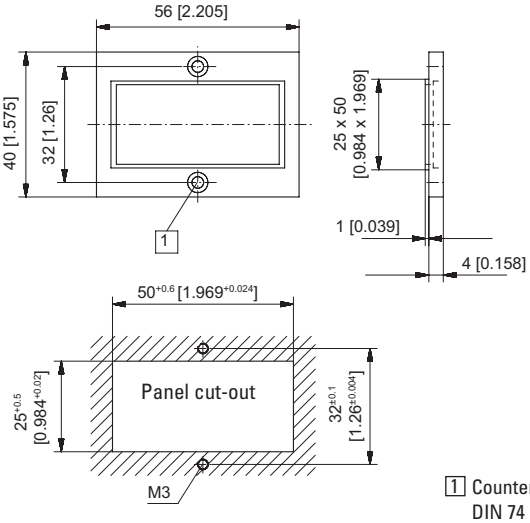
Dimensions in mm [inch]



Front bezel for clip mounting (included in delivery)



Front bezel for screw mounting (included in delivery)



1 Countersinking Af3, DIN 74

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