

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).



DC 10 ... 30 V Supply voltage	000000 DIN 48x24 DIN front bezel	-20...+65°C Temperature range	IP65 High protection level	PROG Menu-driven programming	1/sec - 1/min Frequency display/ Tachometer	HRA Frequency display with HRA
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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 . 3 X 0

a Output
1 = optocoupler output
2 = no output

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

Stock types
6.522.012.300

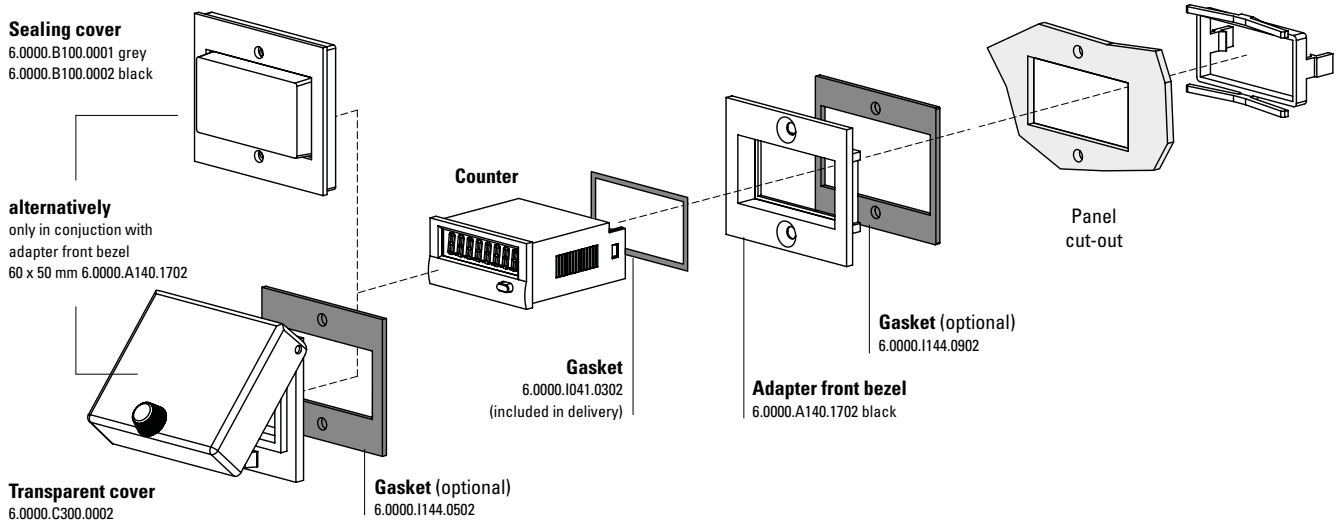
Delivery specification

- Pulse counter
- Mounting clip
- Front bezel for screw mounting (6.0000.A110.0503) 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 (6.0000.A080.0503) 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

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Accessories / Mounting examples



		Type / size	Description		Order no.	suitable gasket
Adapter front bezel		53 x 28 mm [2.09 x 1.10"]	for cut-out 50 x 25 mm [1.97 x 0.98"] to cut-out 45 x 22.2 mm [1.77 x 0.94"]	black anthracite	6.0000.A080.0502 6.0000.A080.0503	6.0000.1082.0502
		56 x 40 mm [2.20 x 1.57"]	for cut-out 50 x 25 mm [1.97 x 0.98"] to cut-out 45 x 22.2 mm [1.77 x 0.94"] screw mounting	black anthracite	6.0000.A110.0502 6.0000.A110.0503	6.0000.1113.0502
		72 x 36 mm [2.83 x 1.42"]	for cut-out 68 x 33 mm [2.68 x 1.30"] to cut-out 45 x 22.2 mm [1.77 x 0.94"]	black and silver anodised as set	6.0000.A210.1802	–
		60 x 50 mm [2.36 x 1.97"]	for cut-out 54 x 29 mm [2.13 x 1.14"] to cut-out 45 x 22.2 mm [1.77 x 0.94"] screw mounting	black	6.0000.A140.1702	6.0000.1144.0902
		48 x 48 mm [1.89 x 1.89"]	for cut-out 45 x 45 mm [1.77 x 1.77"] to cut-out 45 x 22.2 mm [1.77 x 0.94"]	black	6.0000.A040.0402	–
Sealing cover IP65		K1	only in conjunction with adapter front bezel 60 x 50 mm 6.0000.A140.1702	transparent / grey transparent / black	6.0000.B100.0001 6.0000.B100.0002	–
Transparent cover IP65		1 Dv (mounted on bezel)	cover lockable, for cut-out 54 x 29 mm [2.13 x 1.14"], only in conjunction with adapter front bezel 60 x 50 mm 6.0000.A140.1702	transparent / black	6.0000.C300.0002	6.0000.1144.0502
Gasket counter			48 x 24 mm (for installation in adapter front bezel) 49 x 25 mm		6.0000.1041.0302 6.0000.1063.0302	
Mounting frame		cut-out 50 x 25 mm [1.97 x 0.98"]	via adapter 6.0000.A080.0503 for snap-on mounting on 35 mm [1.38"] top-hat DIN rail	chromated	6.0000.F300.0006	–
Enclosure blind		48 x 24 mm [1.89 x 0.94"]	for cut-out 45 x 22.2 mm [1.77 x 0.94"] and cut-out 50 x 25 mm [1.97 x 0.98"]	anthracite	6.0000.H100.0003	–

incl. in delivery

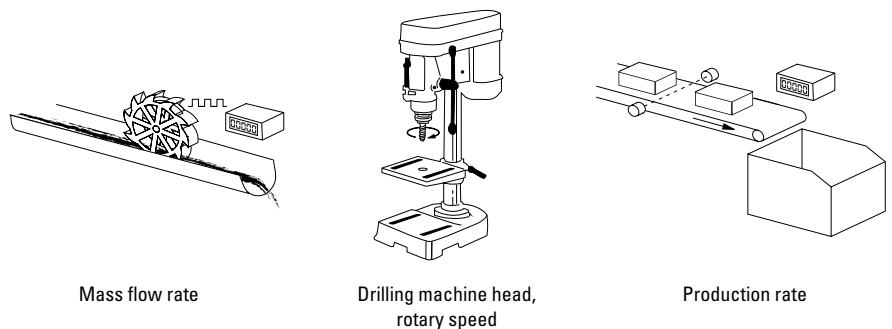
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Technical data	
General technical data	
Display	6 digits, red 7 segment LED display; 8 mm [0.32"] high
Data backup	EEPROM
Operating temperature	10 ... 26 V DC -20 °C ... +65 °C [-4 °F ... +149 °F] > 26 ... 30 V DC -20 °C ... +55 °C [-4 °F ... +131 °F] (non-condensing)
Storage temperature	-25 °C ... +70 °C [-13 °F ... +158 °F]
Electrical characteristics	
Supply voltage	10 ... 30 VDC, with integrated reverse polarity protection
Current consumption	max. 50 mA
Mechanical characteristics	
Housing	front panel mount 48 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]
Vibration resistance acc. to EN 60068-2-6	10 ... 55 Hz / 1 mm [0.04"] / 30 min
Shock resistance acc. to EN 60068-2-27	10 G: 2 ms 10 G: 6 ms
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
Approvals	
UL compliant in accordance with	File no. E128604
CE compliant in accordance with	EMC Directive 2014/30/EU RoHS Directive 2011/65/EU

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

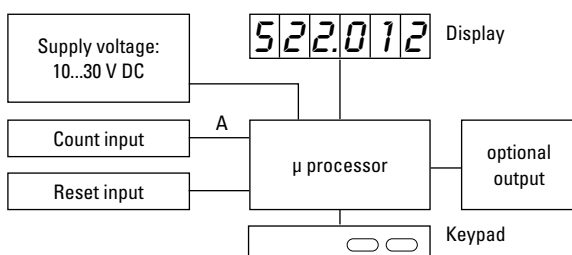


Mass flow rate

Drilling machine head, rotary speed

Production rate

Block diagram



Terminal assignment

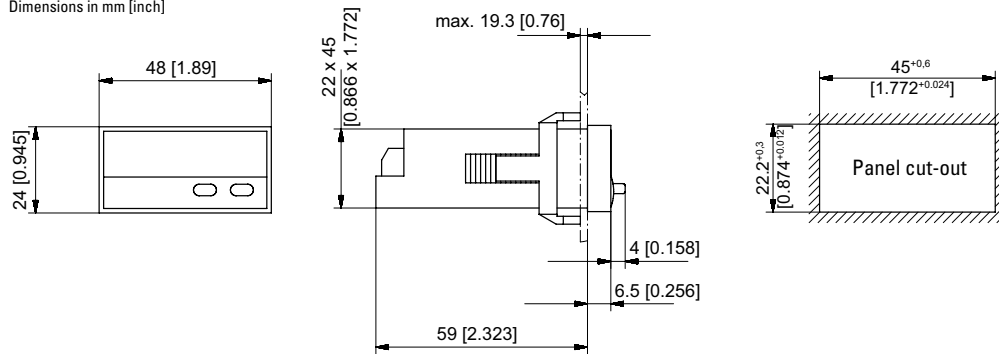
without optocoupler		with optocoupler (NPN)	
PIN		PIN	
1	10 ... 30 V DC	1	10 ... 30 V DC
2	0 V GND	2	0 V GND
3	INP	3	INP
4	–	4	–
5	–	5	–
		6	Emitter
		7	Collector

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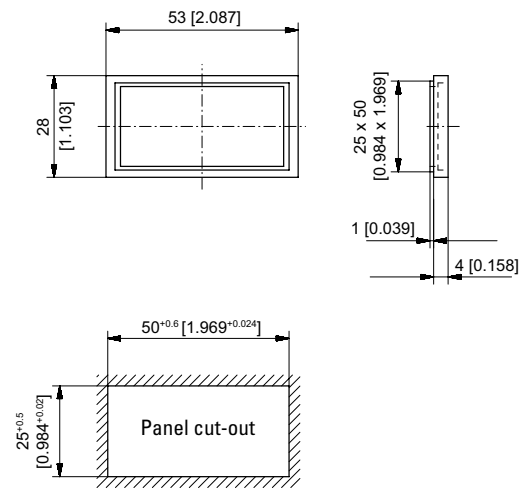
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Dimensions

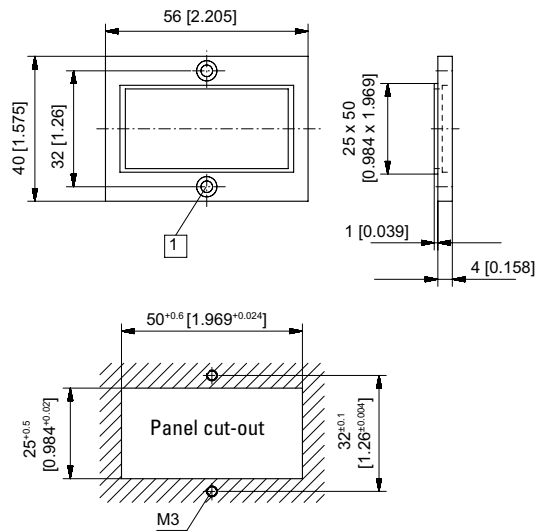
Dimensions in mm [inch]



Front bezel for clip mounting (included in delivery)



Front bezel for screw mounting (included in delivery)



□ Countersinking Af3, DIN 74