

Multifunction devices, electronic

LED dual function displays

6 count modes with tachometer (DC)

Codix 52P



The Codix 52P 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.



Powerful

- Fast count and frequency input – input frequency max. 30 kHz
- Robust housing – IP65 protected
- Very bright LED display, 8 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
- Inputs: as an alternative to the HTL inputs, devices are available with a 4 ... 30 V DC input level, for use as parallel displays to PLCs

Order code

6.52P . 012 . 3X0^a

^a Input switching level
0 = Standard (HTL) ¹⁾
A = 4 ... 30 V DC

Delivery specification

- Digital counter
- Mounting clip
- Gasket
- Instruction manual, multilingual
- 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"]

1) Stock types

Multifunction devices, electronic

| LED dual function displays | 6 count modes with tachometer (DC) | Codix 52P |
|----------------------------|------------------------------------|-----------|
|----------------------------|------------------------------------|-----------|

| 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 (non-condensing) | 10 ... 26 V DC -20°C ... +65°C [-4°F ... +149°F] > 26 ... 30 V DC -20°C ... +55°C [-4°F ... +131°F] |
| 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. 40 mA |
| EMC | Emitted interference EN 55011 class B Immunity to interference EN 61000-6-2 |

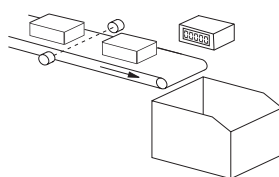
| Mechanical characteristics | |
|----------------------------|--|
| Housing | front panel mount 48x24 mm [1.89 x 0.94"] acc. to DIN 43700; RAL 7021, dark grey |
| Protection | IP65 (front side) |
| Weight | approx. 50 g [1.76 oz] |

| Inputs | |
|---|--|
| Polarity of inputs | programmable, NPN or PNP 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 (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 |
| Accuracy | < 0.1 % frequency meter, tachometer |

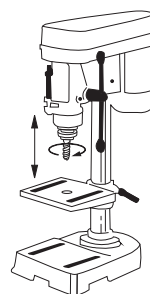
Applications for frequency and position display / totaliser

Position and rotary speed applications, e.g.

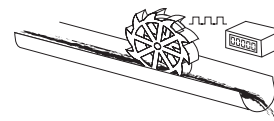
- OEM equipment or retrofitting to drilling machines
- OEM equipment on flow measuring plant, e.g. total flow and current flow
- Total piece count and pieces per minute, where the pulse counting occurs in the add/subtract mode, in order to deduct reject parts
- Production data acquisition: total piece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

¹⁾ Details see manual

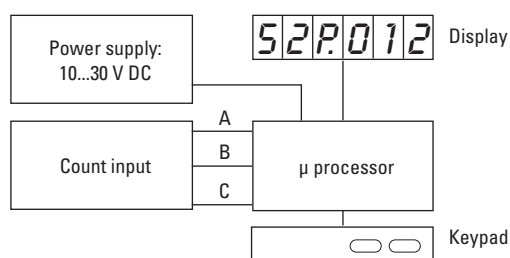
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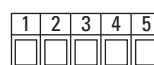
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Block diagram



Terminal assignment



| PIN | DC version |
|-----|-------------------|
| 1 | 10 ... 30 V DC |
| 2 | 0 V GND |
| 3 | INP A (count) |
| 4 | INP B (count) |
| 5 | INP C (frequency) |

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

INP A and INP B:

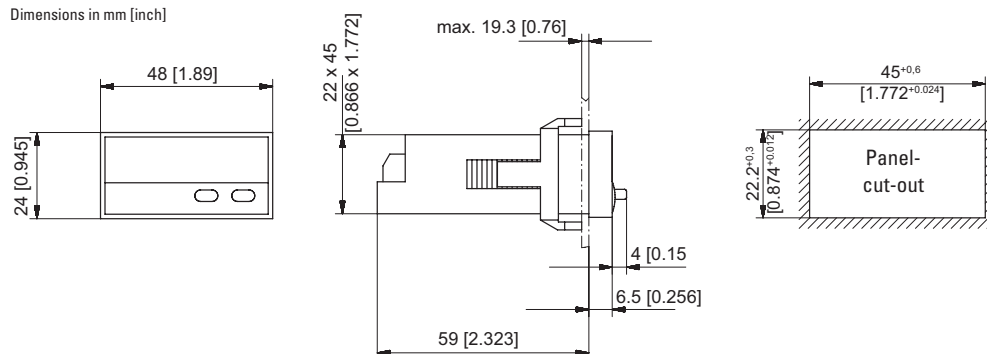
Two channel pulse input with 6 different count modes

INP C:

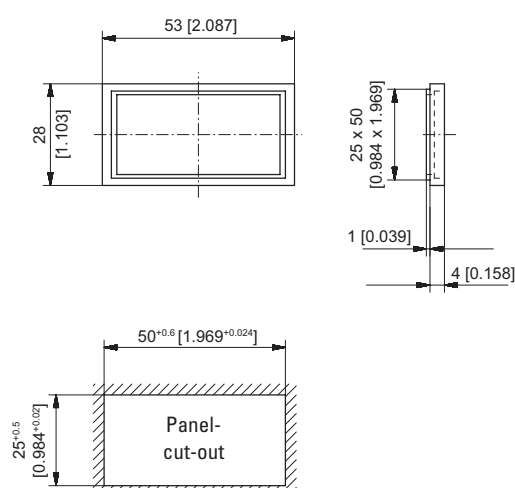
Frequency input, single channel

Dimensions

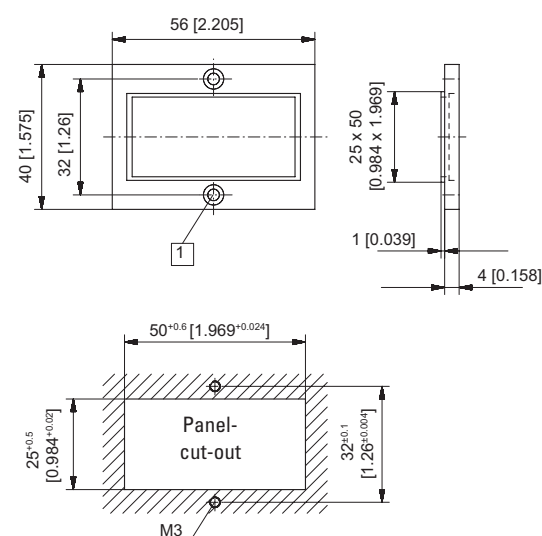
Dimensions in mm [inch]



Front bezel for clip mounting (included in delivery)



Front bezel for screw mounting (included in delivery)



1 Countersinking Af3, DIN 74