

# Pulse counters, electronic

LED pulse counters

Adding (DC)

Codix 520



The Codix 520 is a simple voltage powered pulse counter for fast and slow count pulses, with 6-digit LED display, for NPN / PNP input signals.



<b>DC</b> 10 ... 30V	<b>000000</b> DIN 48 x 24	<b>-20° + 65°</b> Temperature range	<b>IP65</b> High protection level	<b>Prog</b> Menu-driven programming	<b>Hand</b> Operation with gloves	<b>PNP/NPN</b> Input type	<b>max. 60 kHz</b> Pulse counter/Totaliser
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## Powerful

- Fast count input – input frequency max. 60 kHz
- Robust housing – IP65 protected
- Very bright LED display, 8 mm high
- Simple totalising and quantity counter
  - single channel count input and reset input
  - programmable for positive (PNP) or OV (NPN) switching input pulses
  - fast count input with an input frequency of max. 60 kHz, can be damped to 30 Hz for mechanical contacts
- 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

- 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
- Manual or electrical reset – tamper-proof due to lockable reset function
- 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

6.520 . 012 . 3X0<sup>a</sup>

<sup>a</sup> Input switching level  
0 = Standard (HTL) <sup>1)</sup>  
A = 4 ... 30 V DC

### Delivery specification

- 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

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Accessories	Dimensions in mm [inch]	Order-No.
<b>Adapter front bezel, 72 x 36 [2.83 x 1.42]</b>	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	<b>162704 Set</b>
<b>Adapter front bezel, 48 x 48 [1.89 x 1.89]</b>	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	<b>T008883</b>
<b>Adapter front bezel, 60 x 50 [2.36 x 1.97]</b>	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	<b>N003001</b>
<b>Transparent cover, lockable, IP65</b>	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]	<b>N003002</b>
<b>Sealing cover type K1, IP65</b>	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]	<b>G008301</b>
<b>Mounting frame</b> 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	<b>G300004</b>

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](http://www.kuebler.com/accessories).

### Technical data

General technical data	
<b>Display</b>	6 digits, red 7 segment LED display; 8 mm [0.32"] high
<b>Data backup</b>	EEPROM
<b>Operating temperature</b>	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)
<b>Storage temperature</b>	-25°C ... +70°C [-13°F ... +158°F]

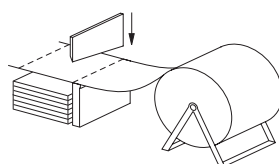
Electrical characteristics	
<b>Power supply</b>	10 ... 30 V DC, with integrated reverse polarity protection
<b>Current consumption</b>	max. 45 mA
<b>EMC</b>	Emitted interference EN 55011 class B Immunity to interference EN 61000-6-2

Mechanical characteristics	
<b>Housing</b>	front panel mount 48x24mm [1.89 x 0.94"] acc. to DIN 43700; RAL 7021, dark grey
<b>Protection</b>	IP65 (front side)
<b>Weight</b>	approx. 50 g [1.76 oz]

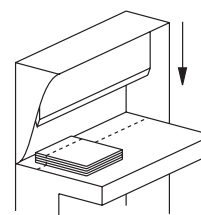
Inputs	
<b>Polarity of inputs</b>	programmable, NPN or PNP for all inputs
<b>Input resistance</b>	approx. 5 kΩ
<b>Counting frequency</b>	max. 60 kHz, can be damped to 30 Hz
<b>Minimum pulse duration of the reset input</b>	5 ms
<b>Input switching level (HTL)</b>	LOW 0 ... 0.2 x U <sub>B</sub> (V DC) HIGH 0.6 x U <sub>B</sub> ... 30 V DC
<b>Input switching level at 4 ... 30 V DC</b>	LOW 0 ... 2 V DC HIGH 4 ... 30 V DC

### Applications for pulse counters / totalisers

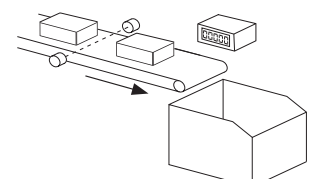
- Simple count tasks such as quantity and piece counting
- Accessories, OEM equipment or retrofitting to production machines
- Piece counting on die cutters, presses, extruders, woodworking machines, drilling machines, pick-and-place machines, guillotines, special-purpose vehicles etc.



Piece-counting



Number of cuts



Piece-counting on conveyor

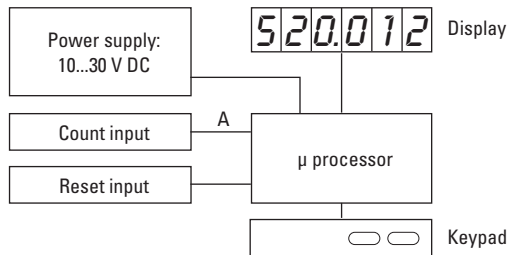
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## Block diagram



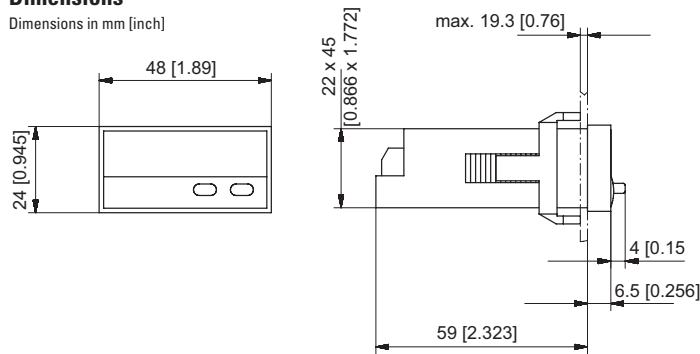
## Terminal assignment



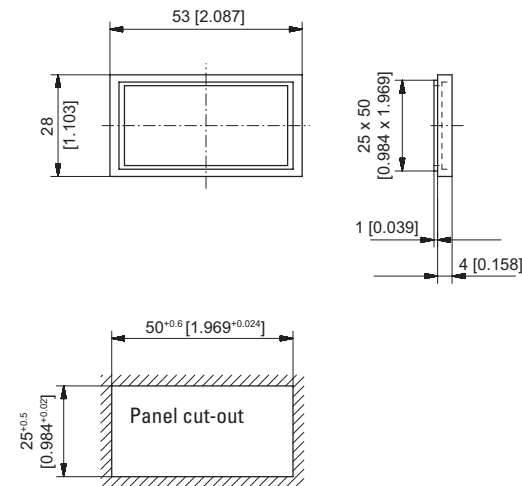
PIN	without optocoupler
1	10 ... 30 V DC
2	0 V GND
3	INP
4	–
5	Reset

## Dimensions

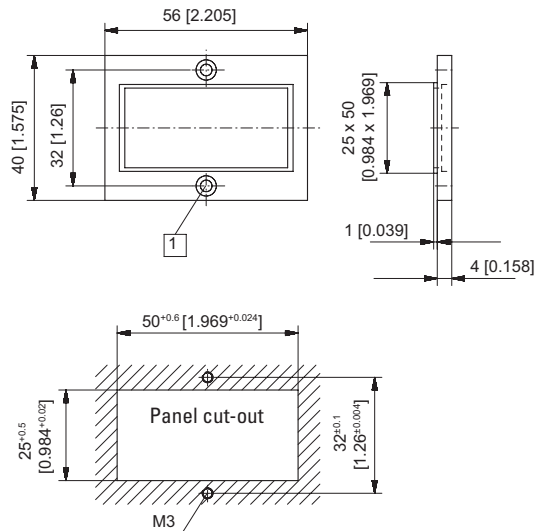
Dimensions in mm [inch]



## Front bezel for clip mounting (included in delivery)



## Front bezel for screw mounting (included in delivery)



1 Countersinking Af3, DIN 74