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.

DC 10 ... 30V	000000 DIN 48 x 24	- 20° + 65°	IP65	ProG		PNP/NPN	max. 60 kHz
Power supply	DIN front bezel	Temperature range	High protection level	Menu-driven programming	Operation with gloves	Input type	Pulse counter/ Totaliser

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 0V (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 . 3 X 0

a *Input switching level*
0 = Standard (HTL) [1]
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.
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 $\quad$ -20°C ... +65°C [-4°F ... +149°F] > 26 ... 30 V DC $\quad$ -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. 45 mA
EMC	Emitted interference	EN 55011 class B
	Immunity to interference	EN 61000-6-2

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]

Inputs

Polarity of inputs		programmable, NPN or PNP for all inputs
Input resistance		approx. 5 kΩ
Counting frequency		max. 60 kHz, can be damped to 30 Hz
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

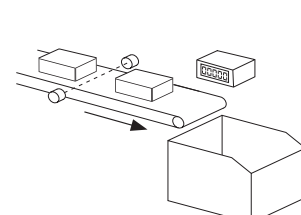### Applications for pulse counters / totalisers

- 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.
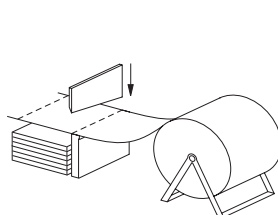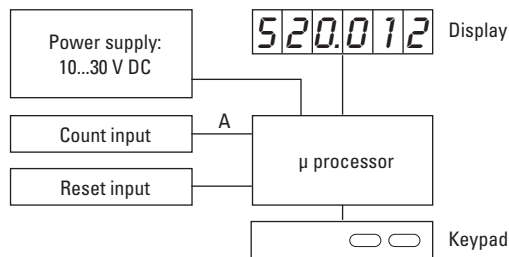
Piece-counting
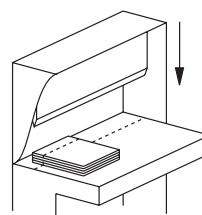
Number of cuts

Piece-counting on conveyor

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Block diagram

Power supply: 10...30 V DC

520.012 Display

Count input   A

μ processor

Reset input

Keypad

Terminal assignment

1	2	3	4	5

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

Dimensions

Dimensions in mm [inch]

48 [1.89]

24 [0.945]

22 x 45 [0.866 x 1.772]

max. 19.3 [0.76]

4 [0.15]

6.5 [0.256]

59 [2.323]

45⁺⁰·⁶ [1.772⁺⁰·⁰²⁴]

22.2⁺⁰·³ [0.874⁺⁰·⁰¹²]

Panel cut-out
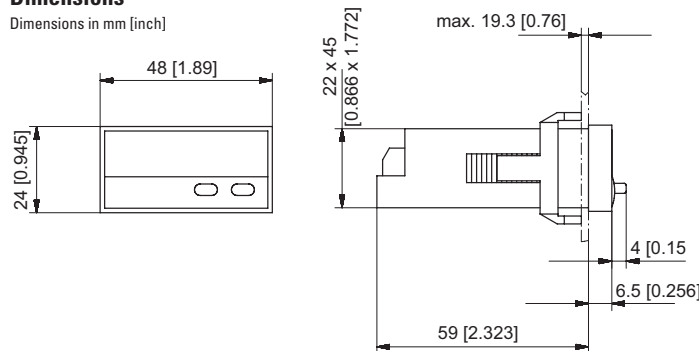
Front bezel for clip mounting (included in delivery)

53 [2.087]

28 [1.103]

25 x 50 [0.984 x 1.969]

1 [0.039]

4 [0.158]

50⁺⁰·⁶ [1.969⁺⁰·⁰²⁴]

25⁺⁰·⁵ [0.984⁺⁰·⁰²]

Panel cut-out
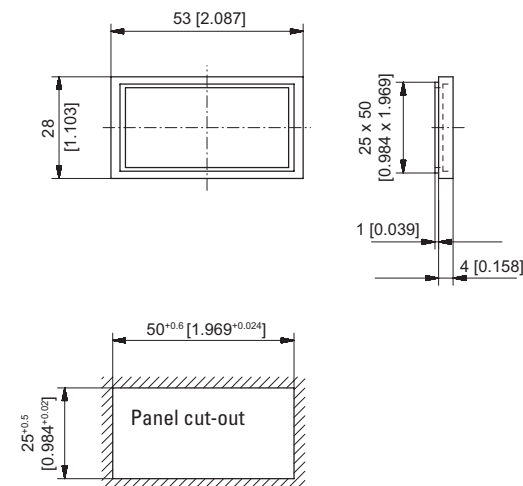
Front bezel for screw mounting (included in delivery)

56 [2.205]

40 [1.575]

32 [1.26]

25 x 50 [0.984 x 1.969]

1 [0.039]

4 [0.158]

1

50⁺⁰·⁶ [1.969⁺⁰·⁰²⁴]

25⁺⁰·⁵ [0.984⁺⁰·⁰²]

32⁺⁰·¹ [1.26⁺⁰·⁰⁰⁴]

Panel cut-out

M3
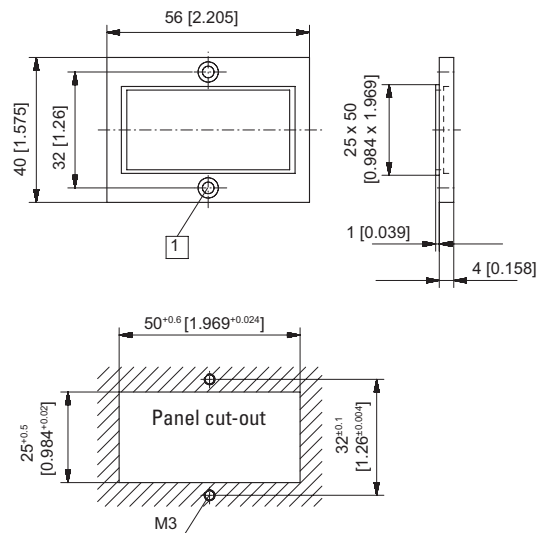
1 Countersinking Af3, DIN 74