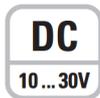# Pulse Counters, electronic

Kübler

LED Pulse Counters – Codix 521

4 count modes:
- Count with direction
- Count difference
- Count sum of 2 inputs
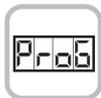- Phase discriminator (quadrature) x1, x2 and x4

DC 10 ... 30V — Power supply DC

DIN 24 x 48 — Front bezel dimensions

-20° +65° — Wide temperature range

IP 65 — High IP protection rating

ProG — Menu-driven programming

Operation with gloves

PNP/NPN — Input type
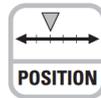
POSITION — Position display

Powerful

- **Fast count input**
  Input frequency max. 60 kHz

- **Robust housing**
  IP 65 protection

- **LED display**
  Very bright, 8 mm high

- **Position, difference, adding or detection of count direction**
  Programmable for positive (PNP) or negative (NPN) switching input pulses
  Fast count input with an input frequency of max. 60 kHz, can be damped to 30 Hz for mechanical contacts

- **Fast start-up time**
  Detects incoming pulses just 16 ms after being switched on –> so no pulses are lost with a simultaneous motor start-up

User-friendly

- **Big keys**
  Can also be operated when using gloves

- **Easy to programme**
  Easy menu-driven programming and operation
  Possibility to enter the programming mode during operation, with authentication query

Universal

- **Individually programmable scaling**
  Multiplication and division factor (0.0001 to 99.9999), to display corresponding engineering units, e.g. position in 1/10 mm and speed in RPM

- **4 different count input modes**
  2-channel input for detecting count direction, difference or adding mode, quadrature x1, x2 or x4

- **Programmable setpoint**

- **DC power supply**

- **Inputs**
  As an alternative to the HTL inputs, devices with a 4 ... 30 V DC input level are available, for use as parallel displays for PLCs.

- **Optional output**
  As zero signal

## Applications for Position Displays and Totalisers

- Positioning tasks on processing machines, such as sawing machines, milling machines, bending and folding machines, etc.

- Production data acquisition by means of piece counting (using difference or adding)

- Totalizing flow, quantity and other scalable media

- Counting 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.
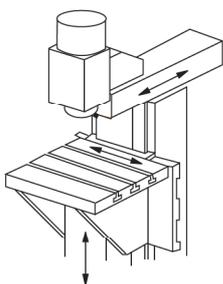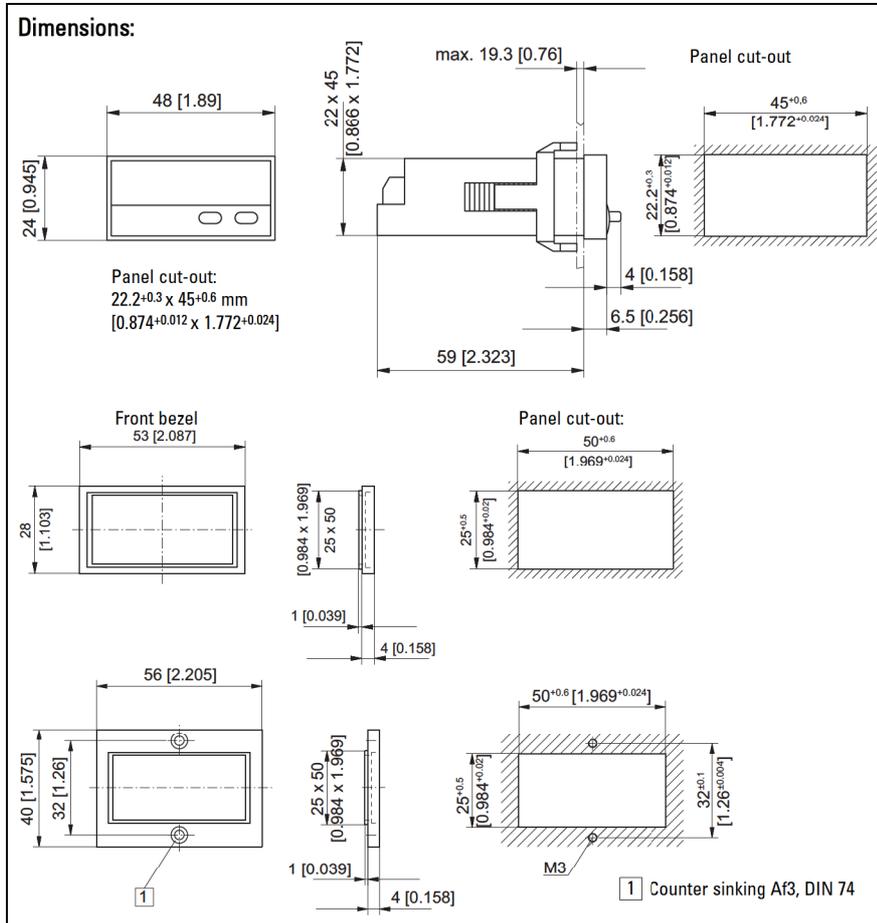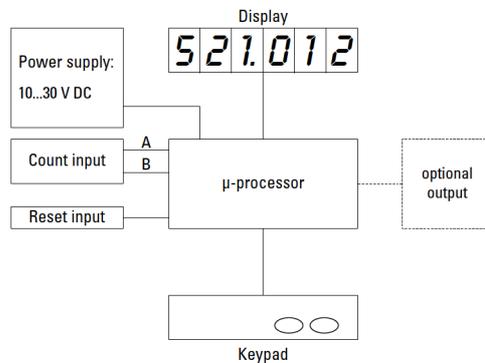
Position on milling machine
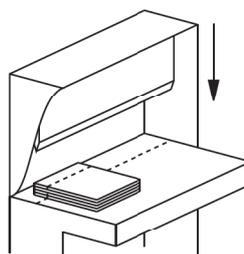
Position or quantity
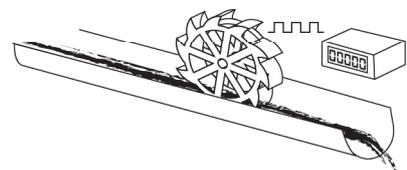
Flow rate

LED Pulse Counters – Codix 521

Technical data:

Supply voltage:	10 ... 30 V DC, with reverse polarity protection
Current consumption:	max. 55 mA
Display:	6 digit red 7-segment LED; 8 mm [0.315"] high
Data backup:	EEPROM
Housing:	dimension 48 x 24 mm [1.89 x 0.945"] according to DIN 43 700; RAL 7021, grey
Polarity of inputs:	programmable, npn or pnp for all inputs
Input resistance:	approx. 5 kΩ
Counting frequency:	60 kHz, can be damped to 30 Hz
Reset time:	5 ms

Level of inputs:	low:	0 ... 0.2 x U_B [V DC]
	high:	0.6 x U_B ... 30 V DC
Level of inputs: 4 ... 30 V DC version	low:	0 ... 2 V DC
	high:	4 ... 30 V DC
Optocoupler output:		max. 30 V, 10 mA
EMC:		Emitted interference EN55011 Class B Immunity to interference: EN61000-6-2
Ambient temperature:		-20 ... +65 °C [4 ... 149 °F] at Ub = 10 ...26 V DC -20 ... +55 °C [4 ... 131 °F] at Ub = >26 ... 30 V DC non-condensing
Storage temperature:		-25 ... +70 °C [–13 ... 158 °F]
Protection:		IP65 front side
Weight:		approx. 50 g [1.764 oz]

Pulse Counters

Block diagram:

Dimensions:

Panel cut-out: 22.2+0.3 x 45+0.6 mm [0.874+0.012 x 1.772+0.024"]

Front bezel

Panel cut-out:

Counter sinking Af3, DIN 74

Connections:
without optocoupler
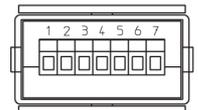1 10 ... 30 V DC
2 0 V GND
3 INP A
4 INP B
5 Reset

Connections:
with optocoupler
1 10 ... 30 V DC
2 0 V GND
3 INP A
4 INP B
5 RESET
6 Emitter
7 Collector

Delivery specifications:
1 Digital display
1 Panel mounting clip
1 Bezel for screw mounting, panel cut out 50 x 25 mm [1.969 x 0.984"]
1 Bezel for clip mounting, panel cut out 50 x 25 mm [1.969 x 0.984"]
1 Seal
1 Multilingual operating instruction

Order code:
6.521.01X.3X0

Input switch level
0 = Standard*
A = 4 ... 30 V DC level

Output
1 = Optocoupler
2 = No output*

* standard stock model