Pulse Counters, electronic

Kübler

LED Pulse Counters – Codix 541

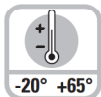**Position indicator or totaliser**

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

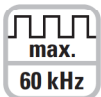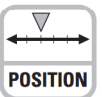| AC/DC 10 ... 260V	000000 DIN 48 x 96	+ − -20° +65°	IP 65	Plug-in screw terminal	ProG	(glove)	max. 60 kHz	POSITION
Power supply AC/DC	Front bezel dimensions	Wide temperature range	High IP protection rating	Plug-in screw terminal	Menu-driven programming	Operation with gloves	Pulse counter/ Totaliser	Position display

Powerful

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

- **Robust housing**
  IP 65 protection

- **LED display**
  Very bright, 14 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
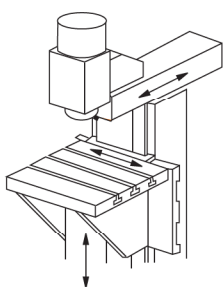
User-friendly

- **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
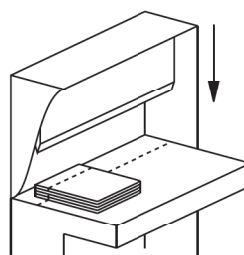
Universal

- **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**

- **AC or DC power supply**
  With sensor 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

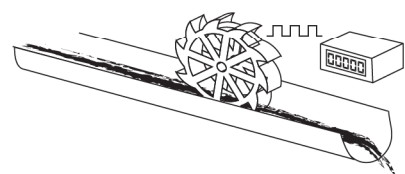## Applications for Position Displays and Totalisers

- 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
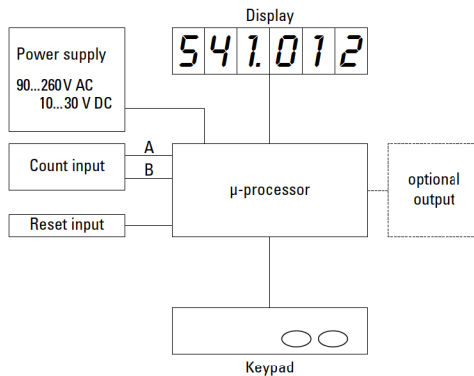
Position or quantity

Flow rate

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Technical data:

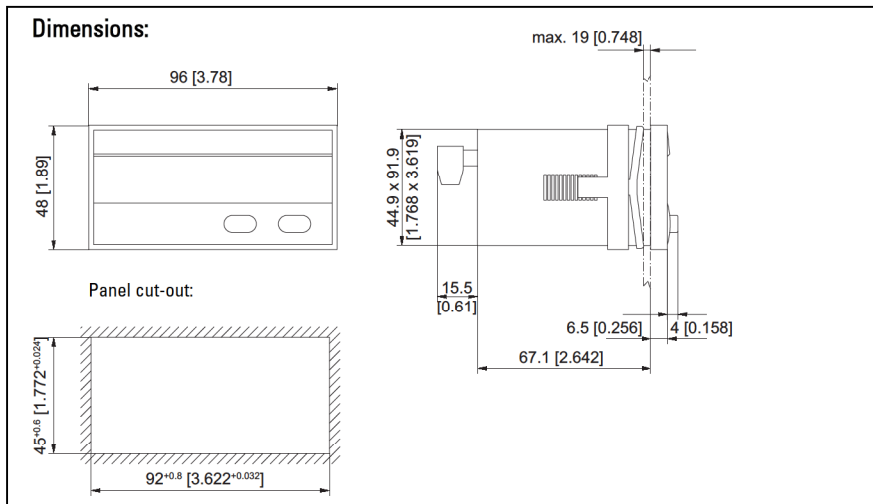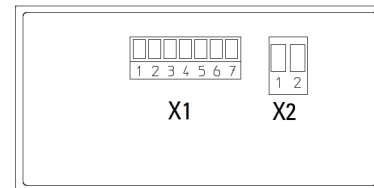|	
Supply voltage:	10 ... 30 V DC, with reverse polarity protection 90 ... 260 V AC
Current consumption:	max. 50 mA, 6 VA
Display:	6-digit 7-segment red LED display; 14 mm [0.551"] high
Data backup:	EEPROM
Housing:	dimension 96 x 48 mm [3.78 x 1.89"] according to DIN 43 700; RAL 7021, grey
Polarity of Inputs:	programmable, npn or pnp for all inputs
Input resistance:	approx. 5 kΩ
Counting frequency*:	max. 60 kHz, can be damped to 30 Hz, depending on operating mode at position display max. 25 kHz
Reset time:	5 ms
Ambient temperature:	–20 ... +65 °C [–4 .. 149 °F] non-condensing
Storage temperature:	–25 ... +70 °C [–13 ... 158 °F]
Altitude:	up to 200 m

Input switching level (standard version):	DC-version low: 0 ... 0.2 x U_B [V DC] high: 0.6 x U_B ... 30 V DC AC-version low 0 ... 4 V DC high 12 ... 30 V DC	
Input switching level 4 ... 30 V DC version:	low 0 ... 2 V DC high 4 ... 30 V DC	
Voltage supply for sensors:	24 V DC ±15 %/100 mA for AC version	
Max power consumption Optocouplers:	max. 30 V, 10 mA	
EMC:	Emitted interference EN55011 Class B Immunity to interference: EN61000-6-2	
Device safety:	design to: protection application area:	EN61010 Part 1 Class: 2 Soiling Level 2
Protection:	IP 65 front side	
Weight:	approx. 150 g [5.291 oz]	

*for further specifications please
refer to the manual

Block diagram:

Connections:

Dimensions:

Panel cut-out:

Connection: X2:

Pin	AC-version	DC-version
1	90 ... 260 V AC	0 V DC (GND)
2	90 ... 260 V AC	10 ... 30 V DC

Connection X1:

Pin	AC-version	DC-version
1	Optocoupler-output Emitter	
2	Optocoupler-output Collector	
3	Set	
4	INP B	
5	INP A	
6	GNDout	n.c.
7	+24 Vout	n.c.

Delivery specification:

Digital display
Mounting clip
Seal

Multilingual operating
instructions

Order code:

6.541.01X.XX0

Output	
1 =	Optocoupler output
2 =	No output

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

Voltage supply	
0 =	90 ... 260 V AC*
3 =	10 ... 30 V DC*

* standard stock
model

Replacement parts:

7-pin screw terminal	RM 3,81 1 ... 7:	N100387
2-pin screw terminal	RM 5,08 1 ... 2:	N100133