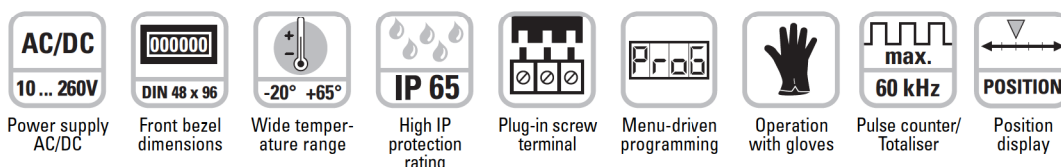


LED Pulse Counters – Codix 541

Position indicator or totaliser

4 count modes:

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



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

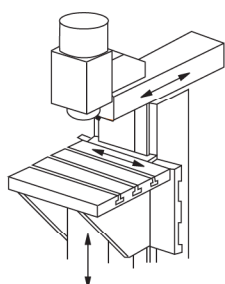
- **Big keys**
Can also be operated when using gloves
- **Easy to programme**
Easy menu-driven programming and operation
Possibility to enter the programming mode during operation, with authentication query

Universal

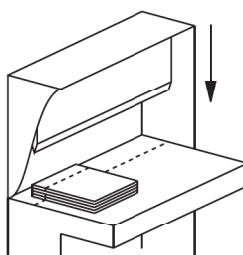
- **Individually programmable scaling**
Multiplication and division factor (0.0001 to 99.9999), to display corresponding engineering units, e.g. position in 1/10 mm and speed in RPM.
- **4 different count input modes**
2-channel input for detecting count direction, difference or adding mode, quadrature 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

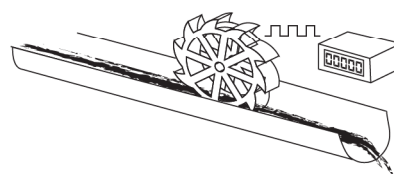
- Positioning tasks on processing machines, such as sawing machines, milling machines, bending and folding machines, etc.
- Production data acquisition by means of piece counting (using difference or adding)
- Totalizing flow, quantity and other scalable media
- Counting tasks such as quantity and piece 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

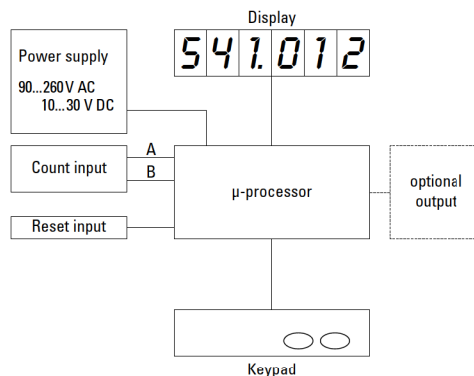
LED Pulse Counters – Codix 541

Technical data:

| | |
|----------------------|--|
| Supply voltage: | 10 ... 30 V DC, with reverse polarity protection |
| 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 |

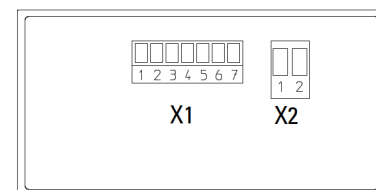
| | |
|--|---|
| Input switching level (standard version): | DC-version low: 0 ... 0.2 x U _B [V DC] high: 0.6 x U _B ... 30 V DC AC-version low 0 ... 4 V DC high 12 ... 30 V DC |
| Input switching level 4 ... 30 V DC version: | low 0 ... 2 V DC high 4 ... 30 V DC |
| Voltage supply for sensors: | 24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

Block diagram:

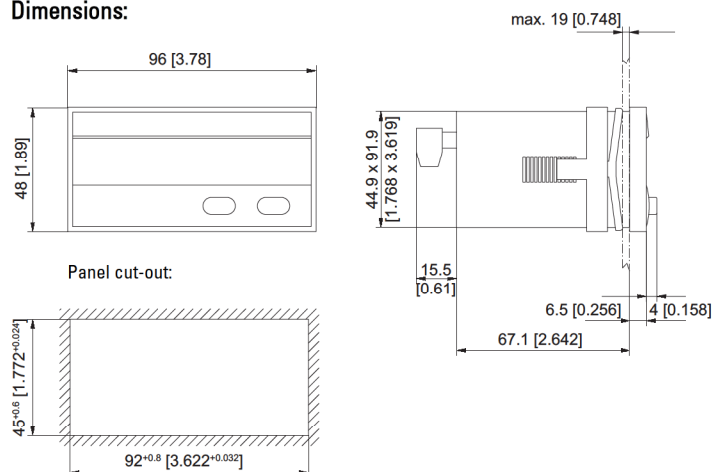


*for further specifications please refer to the manual

Connections:



Dimensions:



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 | Multilingual operating instructions |
| Mounting clip | |
| Seal | |

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
2-pin screw terminal

RM 3,81 1 ... 7: N100387
RM 5,08 1 ... 2: N100133