Pulse counters, electronic

LED pulse counters	Adding (AC+DC)	Codix 540

The Codix 540 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 … 30 V	**AC** 100 … 240 V	**DIN 96x48**	-20°… +65°C	**IP65**		**ProG**		**max. 60 kHz**	**PNP/NPN**
Supply voltage		DIN front bezel	Temperature range	High protection level	Plug-in screw terminal	Menu-driven programming	Operation with gloves	Pulse counter/ Totalizer	Input type

Powerful

- Fast count input – input frequency max. 60 kHz
- Robust housing – IP65 protected
- Very bright LED display, 14 mm high
- Simple totalizing 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 and universal

- 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
- AC or DC supply voltage with sensor supply voltage
- 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

6.540	. 012	. X X 0
		a b

a *Supply voltage*
0 = 100 … 240 V AC, ±10 % [1]
3 = 10 … 30 V DC [1]

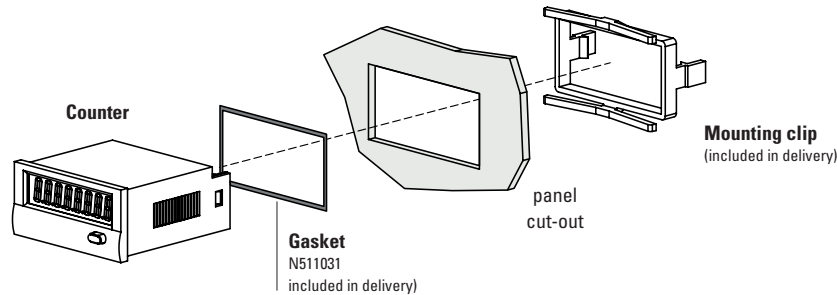**b** *Input switching level*
0 = Standard (HTL) [1]
A = 4 … 30 V DC

Delivery specification
- Digital display
- Mounting clip
- Gasket
- Instruction manual, multilingual
- 2 screw terminals

[1]   Stock types.

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Accessories / Mounting examples

Counter

Gasket
N511031
included in delivery)

panel cut-out

Mounting clip
(included in delivery)

		Type / size	Description		Order no.	
Gasket counter			96 x 49 mm [3.78 x 1.93"]		N511031	
Mounting frame		**cut-out 92 x 45 mm [3.62 x 1.77"]**	for snap-on mounting on 35 mm [1.38"] top-hat DIN rail	grey	G300005	–
Screw terminal (Replacement part)			1 ... 7, pitch 3.81	7 pin	N100387	
			1 ... 2, pitch 5.08	2 pin	N100133	

incl. in delivery

Technical data

General technical data

Display	6 digit, red 7 segment LED display; 14 mm [0.55"] high
Data backup	EEPROM
Operating temperature	-20 °C ... +65 °C [-4 °F ... +149 °F] (non-condensing)
Storage temperature	-25 °C ... +70 °C [-13 °F ... +158 °F]
Relative humidity at +30 °C [+86 °F]	< 85 % (non-condensing)
Altitude	up to 2000 m [6562']

Electrical characteristics

Supply voltage	10 ... 30 V DC, with reverse polarity protection 100 ... 240 V AC, ±10 %
Current consumption	max. 50 mA, 8 VA
Device safety	designed to EN 61010 part 1
protection class	2
application area	pollution level 2

Mechanical characteristics

Housing	front panel mount 96 x 48 mm [3.74 x 1.89"] acc. to DIN 43700; RAL 7021, dark grey
Protection	IP65 (front side)
Weight	approx. 150 g [5.29 oz]

Inputs

Polarity of inputs	programmable, NPN or PNP for all inputs
Input resistance	approx. 5 kΩ
Counting frequency [1]	max. 60 kHz, can be damped to 30 Hz
Minimum pulse duration of the reset input	5 ms

Input switching level standard version (HTL)

DC supply voltage	LOW	0 ... 0.2 x U_B (V DC)
	HIGH	0.6 x U_B ... 30 V DC
AC supply voltage	LOW	0 ... 4 V DC
	HIGH	12 ... 30 V DC

Input switching level at 4 ... 30 V DC

	LOW	0 ... 2 V DC
	HIGH	4 ... 30 V DC

Outputs

Voltage output for sensors (AC version)	24 V DC ±15 %/100 mA

Approvals

UL compliant in accordance with	File no. E128604

CE compliant in accordance with

EMC Directive	2014/30/EU
RoHS Directive	2011/65/EU
Low Voltage Directive	2014/35/EU

UKCA compliant in accordance with

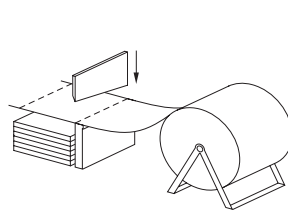|	
EMC Regulations	S.I. 2016/1091
RoHS Regulations	S.I. 2012/3032
Low Voltage Regulations	S.I. 2016/1101

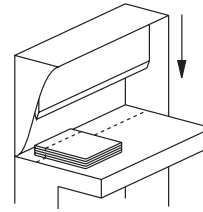1) For further specifications please refer to the manual.

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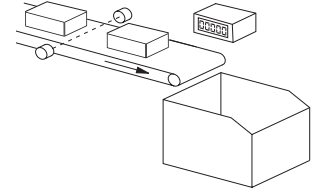## Applications for pulse counters / totalizers

- 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.
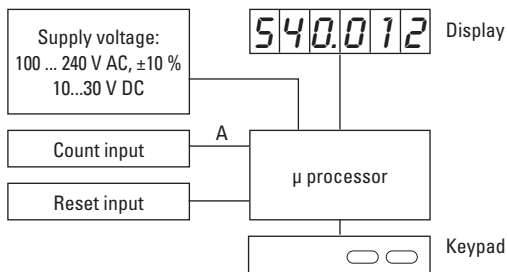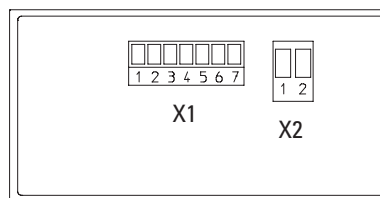
Piece-counting

Number of cuts

Piece-counting on conveyor

Block diagram

Supply voltage: 100 … 240 V AC, ±10 % 10…30 V DC

540.012 Display

Count input   A

Reset input

µ processor

Keypad

Terminal assignment

X1   1 2 3 4 5 6 7

X2   1 2

Connection X1

PIN	AC version	DC version
1	n.c	
2	n.c	
3	Reset	
4	n.c	
5	INP	
6	GND out	n.c.
7	+24 V DC out	n.c.

Connection X2

PIN	AC version	DC version
1	100 … 240 V AC, ±10 %	0 V DC (GND)
2	100 … 240 V AC, ±10 %	10…30 V DC

Dimensions

Dimensions in mm [inch]

96 [3.78]

48 [1.89]

max. 19 [0.748]

44.9 x 91.9 [1.768 x 3.619]

15.5 [0.61]

6.5 [0.256]   4 [0.158]

67.1 [2.642]

Panel cut-out

45$^{+0.6}$ [1.772$^{+0.024}$]

92$^{+0.8}$ [3.622$^{+0.032}$]