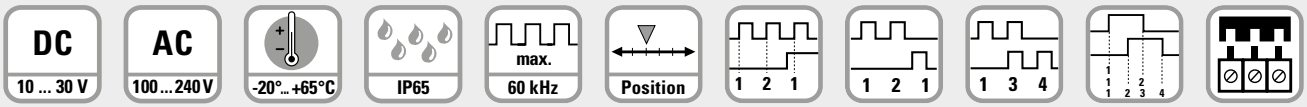
LED pulse counters | 6 count modes (AC+DC) | Codix 541



The Codix 541 is a voltage powered pulse counter / position display with 4 count input modes: count direction, difference, addition, quadrature (phase discriminator) x1, x2 and x4, for fast and slow count pulses, with 6-digit LED display for NPN, PNP input signals.



Supply voltage | Temperature range | High protection level | Pulse counter/ Totalizer | Position display | Count with direction (DIR) | Differential count (up.dn) | Add/Add count (up.up) | Phase discriminator | Plug-in screw terminal

Powerful

- Fast count input – input frequency max. 60 kHz.
- Robust housing – IP65 protected.
- Very bright LED display, 14 mm high.
- Position, difference, adding or count direction detection:
  - programmable for positive (PNP) or OV (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.
- Individually programmable scaling: Multiplication and division factor (0.0001...99.9999), to display corresponding engineering units, e.g. position in 1/10 mm or packaging units.
- 4 different count input modes: 2-channel count input for detecting count direction, difference or adding mode, quadrature with x1, x2 or x4 evaluation.
- Freely programmable setpoint.
- 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.
- Optional output - as zero signal.

Order code

6.541	.	01	X (a)	.	X (b)	X (c)	0

(a) *Output*
1 = Optocoupler output
2 = No output

(b) *Supply voltage*
0 = 100 ... 240 V AC, ±10 %
3 = 10 ... 30 V DC

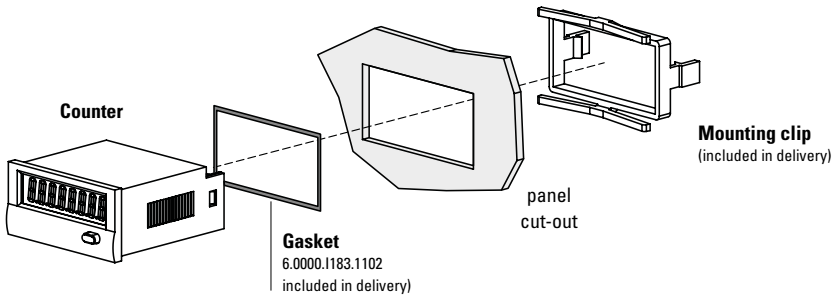
(c) *Input switching level*
0 = Standard level (HTL)
A = 4 ... 30 V DC

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

© Fritz Kübler GmbH, subject to errors and changes. 05/2026

LED pulse counters | 6 count modes (AC+DC) | Codix 541

Accessories / Mounting examples



		Type / size	Description		Order no.	
Gasket counter			96 x 49 mm [3.78 x 1.93“]		**6.0000.S050.0002**	
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	**6.0000.F100.0001**	
					incl. in delivery	

Technical data

General technical data

Display	6 digits; 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
EMC standards		EN 55011 class B EN 61000-6-2, EN 61000-6-3
Device safety	designed to protection class application area	EN 61010 part 1 2 pollution level 2
UL approval		file E128604

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
	at position display	max. 25 kHz
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

Supply voltage for sensors (AC version)	24 V DC ±15 %/100 mA
Output power optocouplers	max. 30 V DC, 10 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

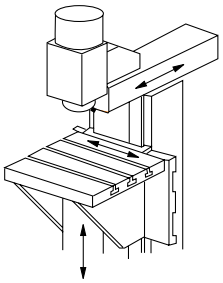
1) Please refer to the manual.

© Fritz Kübler GmbH, subject to errors and changes. 05/2026

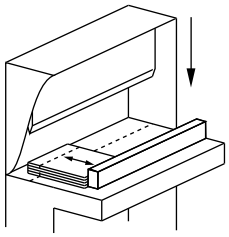
LED pulse counters | 6 count modes (AC+DC) | Codix 541

Applications for position displays and totalizers

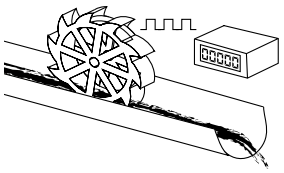
- Positioning tasks on processing machines, such as sawing machines, milling machines, bending and folding machines, etc.
- Production data acquisition by means of piece counting (using difference or adding)
- Totalizing flow, quantity and other scalable media
- Counting tasks such as quantity and piece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

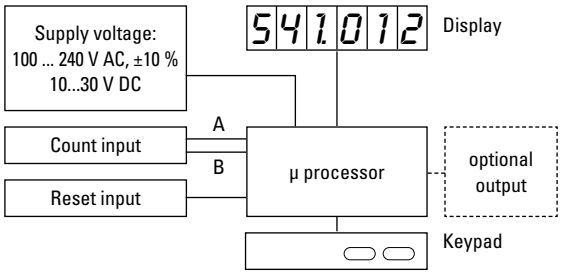


Position or quantity

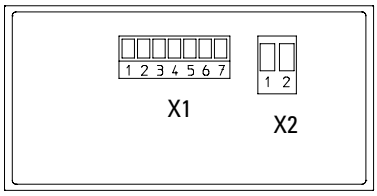


Flow rate

Block diagram



Terminal assignment



Connection X1

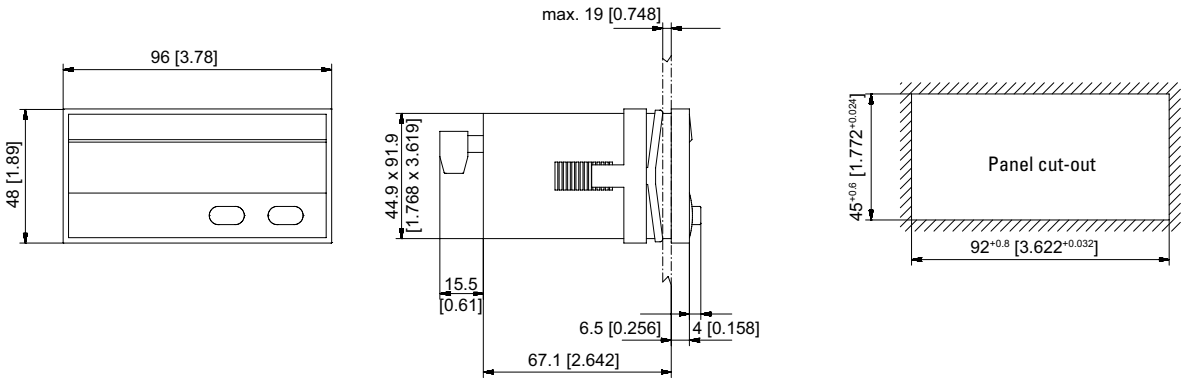
PIN	AC version	DC version
1	Optocoupler-output Emitter	
2	Optocoupler-output Collector	
3	Set	
4	INP B	
5	INP A	
6	GND out	n.c.
7	+24 V DC out	n.c.

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]



© Fritz Kübler GmbH, subject to errors and changes. 05/2026