

# Pulse counters, electronic

**LED pulse counters**      **2 counters with separate inputs and separate scaling (DC)**      **Codix 52C**



The Codix 52C is a voltage powered dual pulse counter with separate inputs and separate scaling, for fast and slow count pulses, with 6-digit LED display for NPN, PNP input signals and display switching between A, B, A-B, A+B, A/B, (A-B)/A [%].



<b>DC</b> 10 ... 30V	<b>000000</b> DIN 48 x 24	<b>-20°... +65°C</b>	<b>IP65</b>	<b>PNP</b>	<b>max.</b> 25 kHz	<b>PNP/NPN</b>
Power supply	DIN front bezel	Temperature range	High protection level	Menu-driven programming	Pulse counter/ Totalizer	Input type

### Powerful

- Single channel dual totalizer with 2 separate inputs
  - programmable for positive (PNP) or 0V (NPN) switching input pulses
  - fast count inputs with an input frequency of max. 25 kHz. Can be damped to 30 Hz for mechanical contacts.
- Robust housing – IP65 protected.
- Very bright LED display, 8 mm high.
- 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 for inputs A and B multiplication and division factor (0.0001...99.9999), to display corresponding units in, for example, litres, length or packaging size.
- Simple display switching from A to B or A+B, A-B, A/B, (A-B)/A [%].
- DC power supply.
- As an alternative to the HTL units, models are also available with a fixed signal level threshold >4 ... 30 V DC for use with TTL signals.
- Reset manual or electrical, programmable separately for both counters (the reset can also be locked out).

**Order code**      **6.52C . 012 . 3X0**

**a** Input switching level  
 0 = Standard (HTL)  
 A = 4 ... 30 V DC  
     LOW 0 ... 2 V DC  
     HIGH 4 ... 30 V DC

**Delivery specification**

- Counter
- Mounting clip
- Front bezel for screw mounting (T008181) 56 x 40 mm [2.20 x 1.57"], panel cut-out 50 x 25 mm [1.97 x 0.98"]
- Front bezel for clip mounting (T008180) 53 x 28 mm [2.09 x 1.10"], panel cut-out 50 x 25 mm [1.97 x 0.98"]
- Gasket
- Instruction manual, multilingual

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Accessories	Dimensions in mm [inch]	Order no.
<b>Adapter front bezel, 72 x 36 [2.83 x 1.42]</b>	for cut-out 68 x 33 [2.68 x 1.30] to cut-out 45 x 22.2 [1.77 x 0.87], for counters 48 x 24 [1.89 x 0.94], as set      black and silver anodised	<b>162704 Set</b>
<b>Adapter front bezel, 48 x 48 [1.89 x 1.89]</b>	for cut-out 45 x 45 [1.77 x 1.77] to cut-out 45 x 22.2 [1.77 x 0.87], with clip mounting for counters 48 x 24 [1.89 x 0.94]      black	<b>T008883</b>
<b>Adapter front bezel, 60 x 50 [2.36 x 1.97]</b>	for cut-out 54 x 29 [2.13 x 1.14] to cut-out 45 x 22.2 [1.77 x 0.87], with screw mounting and gasket for counters 48 x 24 [1.89 x 0.94]      black	<b>N003001</b>
<b>Transparent cover, lockable, IP65</b>	for cut-out 54 x 29 [2.13 x 1.14], for screw mounting to front bezel F1B or adapter front bezel N003001, for counters with cut-out 50 x 25 [1.97 x 0.98] or 45 x 22.2 [1.77 x 0.87]	<b>N003002</b>
<b>Sealing cover type K1, IP65</b>	suitable for front bezel 60 x 50 [2.36 x 1.97], for screw mounting of electromech. counters and via adapter front bezel N003001 for counters 48 x 24 [1.89 x 0.94]	<b>G008301</b>
<b>Mounting frame</b> with cut-out 50 x 25 [2.36 x 1.97] via separate adapter also for 45 x 22.2 [1.77 x 0.87]	for snap-on mounting on 35 [1.38] top-hat DIN rail, for counters 53 x 28 [2.09 x 1.10] and via separate adapter (T008180) for counters 48 x 24 [1.89 x 0.94]      chromated	<b>G300004</b>

Suitable gaskets, other accessories and installation examples for optional accessories can be found in chapter accessories or in the accessories section under: [www.kuebler.com/accessories](http://www.kuebler.com/accessories).

### Technical data

General technical data	
<b>Display</b>	6 digits, red 7 segment LED display; 8 mm [0.32"] high
<b>Data backup</b>	EEPROM
<b>Operating temperature</b>	10 ... 26 V DC    -20°C ... +65°C [-4°F ... +149°F] > 26 ... 30 V DC    -20°C ... +55°C [-4°F ... +131°F] (non-condensing)
<b>Storage temperature</b>	-25°C ... +70°C [-13°F ... +158°F]

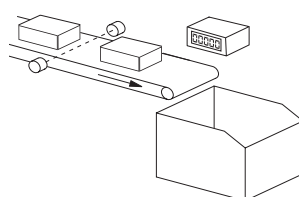
Electrical characteristics	
<b>Power supply</b>	10 ... 30 V DC, with reverse polarity protection
<b>Current consumption</b>	max. 40 mA
<b>EMC standards</b>	EN 55011 class B, EN 61000-6-2, EN 61000-6-3, EN 61326-1
<b>UL approval</b>	file E128604

Inputs	
<b>Polarity of inputs</b>	programmable, NPN or PNP for all inputs
<b>Input resistance</b>	approx. 5 kΩ
<b>Counting frequency</b>	max. 25 kHz, can be damped to 30 Hz
<b>Minimum pulse duration of the reset input</b>	5 ms
<b>Input switching level standard version (HTL)</b>	LOW    0 ... 0.2 x U <sub>B</sub> (V DC) HIGH    0.6 x U <sub>B</sub> ... 30 V DC
<b>Input switching level at 4 ... 30 V DC</b>	LOW    0 ... 2 V DC HIGH    4 ... 30 V DC

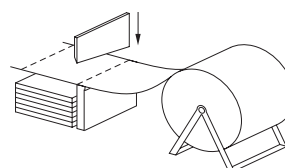
Mechanical characteristics	
<b>Housing</b>	front panel mount 48 x 24 mm [1.89 x 0.94"] acc. to DIN 43700; RAL 7021, dark grey
<b>Protection</b>	IP65 (front side)
<b>Weight</b>	approx. 50 g [1.76 oz]
<b>Vibration resistance acc. to EN 60068-2-6</b>	10 ... 55 Hz / 1 mm [0.04"] / 30 min
<b>Shock resistance acc. to EN 60068-2-27</b>	100 G: 2 ms 10 G: 6 ms

### Application examples for the dual totalizer with separate inputs

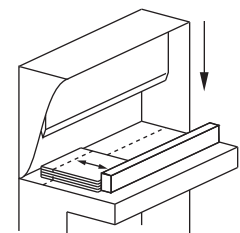
- Logging of piece count and overall total
- Totalizing of flow volumes, quantities and other scalable
- Counting tasks, such as quantities and piece counting
- Accessories, OEM or retrofit equipment for production machinery
- Piece counting on die-cutters, presses, extruders, wood-processing machines, drilling machines, pick-and-place machines, guillotines, special vehicles
- Measurement of two different values in just one device: e.g. with 2 inputs both the piece count and the number of packages can be counted
- Recording of the total results from 2 work-shifts



Total piece count as well as packing units



Individual and total quantities

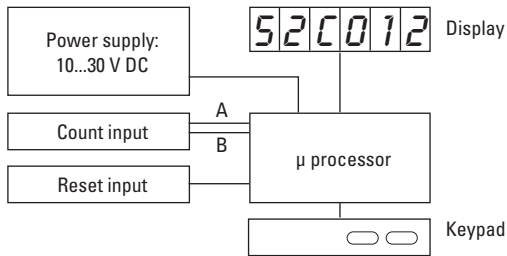


Individual and total quantity from 2 work-shifts

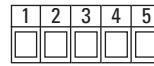
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### Block diagram



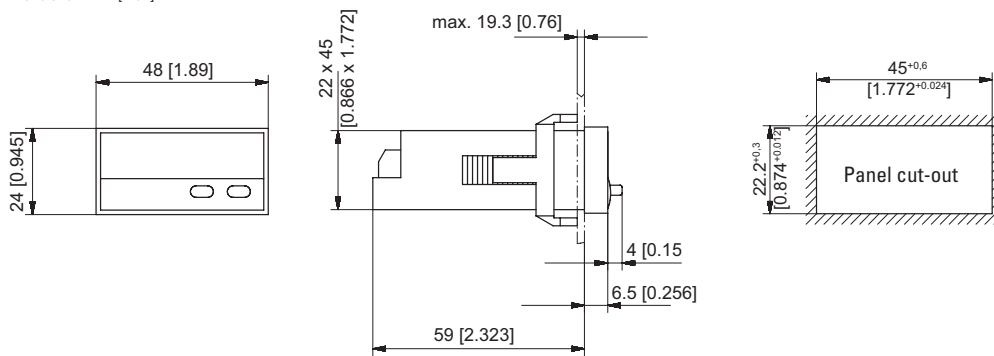
### Terminal assignment



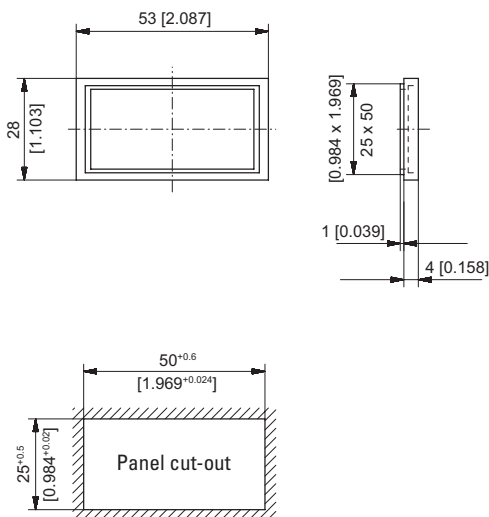
PIN	
1	10 ... 30 V DC
2	0 V GND
3	INP A
4	INP B
5	Reset

### Dimensions

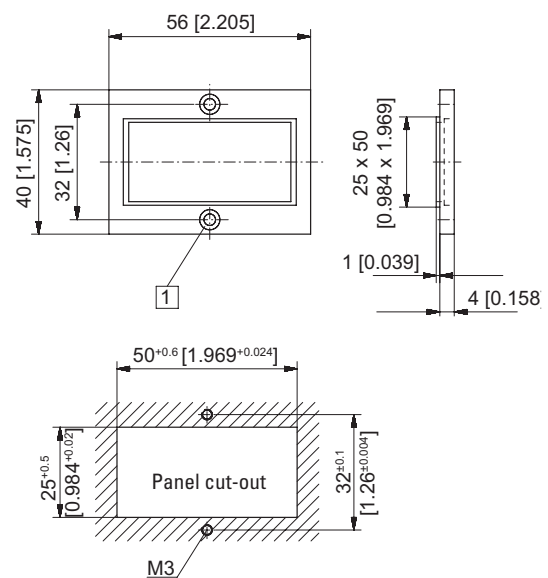
Dimensions in mm [inch]



### Front bezel for clip mounting (included in delivery)



### Front bezel for screw mounting (included in delivery)



1 Countersinking Af3, DIN 74