

# Pulse counters, electronic

**LCD pulse counters**      **With count direction DC or difference counter AC+DC (battery)**      **Codix 131**



The Codix 131 is a simple battery powered pulse counter with difference or count direction input, 8-digit LCD display, optional backlighting, for NPN, PNP and high voltage applications.



Battery powered	Input type	Pulse voltage	Pulse voltage	Count with direction (DIR)	Differential count (up, dn)	Max. count frequency	Temperature range	High protection level	LCD display

### Powerful

- High quality LCD display with 8 mm high figures.
- Count direction, adding and subtracting via count direction or difference input.
- Battery life approx. 8 years.
- Optional display backlighting.
- Count frequency max. 12 kHz.
- High protection level IP65.

### Simple

- Screw terminals, RM 5 mm.
- Reset key can be enabled via "Reset Enable" input.
- For positive and negative counting edges, depending on version.
- High voltage version for 10 ... 260 V AC/DC voltage pulses.
- Large 8-digit LCD display with 8 mm high figures.

**Order code**      **6.131 . 012 . 8XX**

**a** Backlighting  
5 = without <sup>1)</sup>  
6 = with

**b** Input type: Cnt.Dir <sup>2)</sup> / UP.DN <sup>3)</sup> – count direction or differential counting

Input type	INP A			INP B				
0 <sup>1)</sup> = Cnt.Dir <sup>2)</sup> / UP.DN <sup>3)</sup>	0 ... 0.7 V DC	count	NPN	7 kHz	0 ... 0.7 V DC	count / direction	NPN	7 Hz
1 <sup>1)</sup> = Cnt.Dir <sup>2)</sup> / UP.DN <sup>3)</sup>	4 ... 30 V DC	count	PNP	12 kHz	4 ... 30 V DC	count / direction	PNP	12 Hz
3 = UP.DN <sup>3)</sup>	10 ... 260 V AC/DC	count	AC/DC	30 Hz	10 ... 260 V AC/DC	count	AC/DC	30 Hz

#### Delivery specification

- Pulse 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

1) Stock types.  
2) Counting input with counting direction input.  
3) One adding and one subtracting counting input (differential mode).

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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	<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]	<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], for screw mounting and gasket for counters 48 x 24 [1.89 x 0.94]	<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]	<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>	LCD, 8 digits, 8 mm [0.32"] high
<b>Backlighting</b>	external electrical source 24 V DC $\pm 20\%$ , 50 mA
<b>Modes</b>	counting direction (count and direction input) or differential counting
<b>Display range</b>	-9999999 ... 99999999, with overflow display
<b>Reset</b>	manual and electrical
<b>Working temperature</b>	-10°C ... +55°C [+14°F ... +131°F] (non-condensing)
<b>Operating temperature</b>	-10°C ... +60°C [+14°F ... +140°F] (non-condensing)
<b>Storage temperature</b>	-20°C ... +70°C [-4°F ... +158°F]
<b>Altitude</b>	up to 2000 m [6562']

Electrical characteristics	
<b>Power supply</b>	internal lithium battery approx. 8 years at 20°C [68°F]
<b>EMC standards</b>	EN 55011 class B, EN 61000-6-2, EN 61000-6-3
<b>Device safety</b>	designed to protection class application area EN 61010 part 1 2 pollution level 2
<b>UL approval</b>	file E128604

Mechanical characteristics	
<b>Housing</b>	dark grey RAL 7021
<b>Protection</b>	IP65 (front side)
<b>Weight</b>	approx. 50 g [1.76 oz]

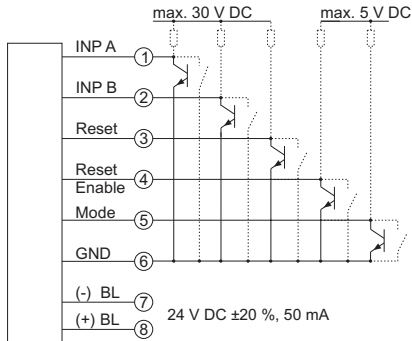
Counting inputs	
<b>Counting input of the DC-versions</b> (max. 30 V DC)	
fast counting input	max. 12 kHz (PNP), 7 kHz (NPN)
switching level NPN	LOW 0 ... 0.7 V DC HIGH 3 ... 30 V DC
switching level PNP	LOW 0 ... 0.7 V DC HIGH 4 ... 30 V DC
<b>Counting input of the high voltage versions</b> (10 ... 260 V DC/AC)	
A subtracting optocoupler input	max. 30 Hz
B adding min. pulse time	16 ms
switching level	LOW 0 ... 2 V AC/DC HIGH 10 ... 260 V AC/DC
<b>Counting direction switching</b> (only DC-version)	
mode	count direction / difference
contact input	open collector NPN (switching at 0 V DC)
switching level – NPN	LOW 0 ... 0.7 V DC HIGH 3 ... 5 V DC
<b>Reset input</b> (only DC and high voltage)	
minimum pulse time	DC 50 ms high voltage 16 ms
contact input DC – NPN	LOW 0 ... 0.7 V DC HIGH 3 ... 30 V DC
<b>Electrical reset key locking</b> (only DC and high voltage)	
contact input	open collector NPN (switching at 0 V DC)
switching level – NPN	LOW 0 ... 0.7 V DC HIGH 3 ... 5 V DC

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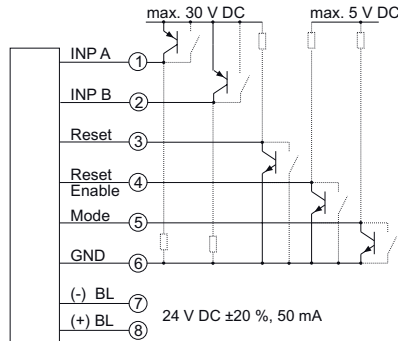
## LCD pulse counters With count direction DC or difference counter AC+DC (battery) Codix 131

### Terminal assignment

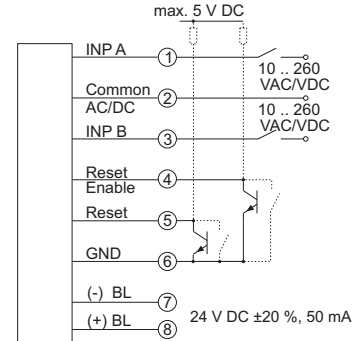
DC type: 6.131.012.8x0



DC type: 6.131.012.8x1



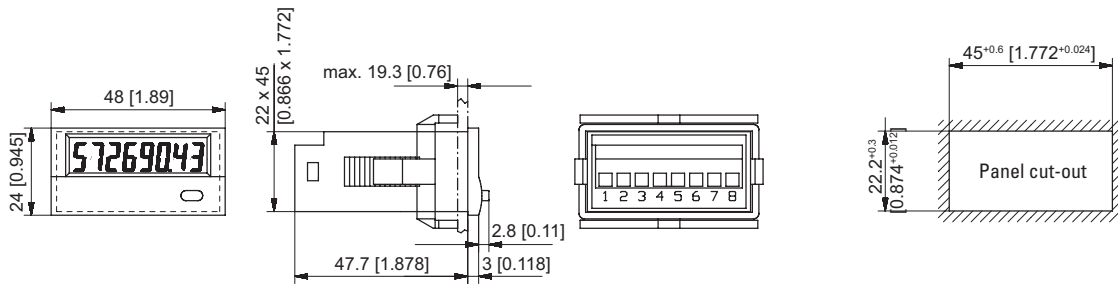
AC type: 6.131.012.8x3



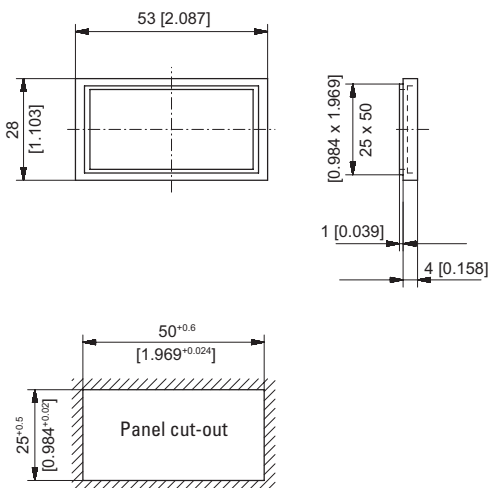
BL = backlighting

### Dimensions

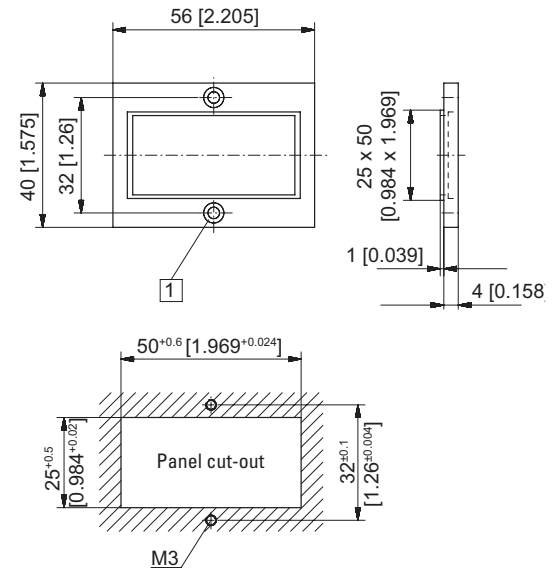
Dimensions in mm [inch]



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



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



1 Countersinking A13, DIN 74