

# 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
		4 ... 30 V	10 ... 260 V	1 2 1	1 2 1	12 kHz	-10°... +60°C	IP65	8 LCDs

### 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 b

**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 kHz
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 kHz
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

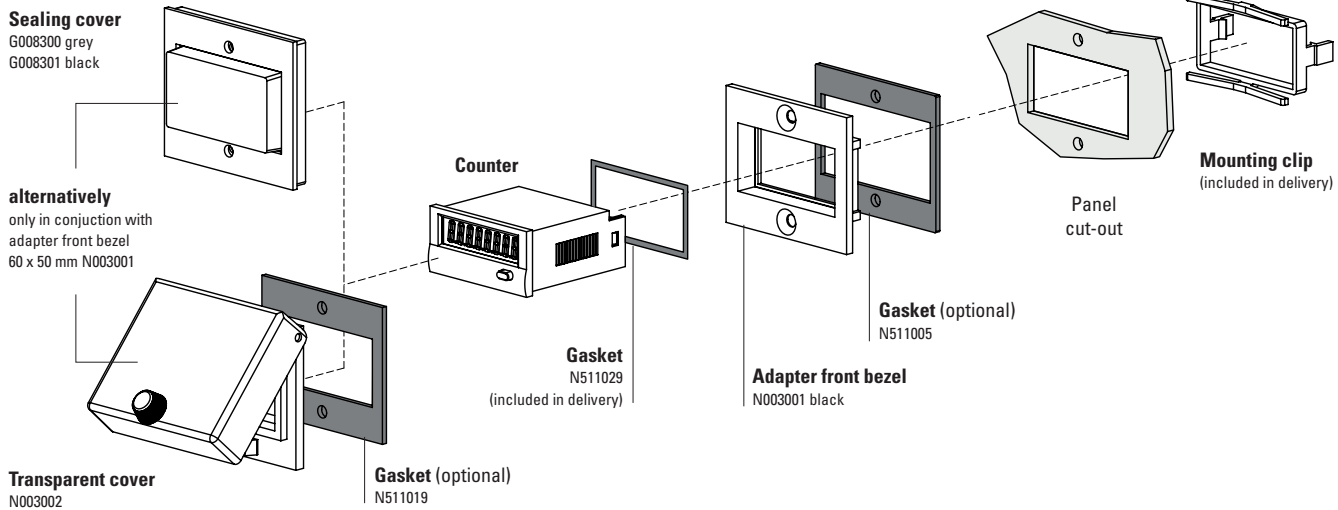
- Pulse counter
- Mounting clip
- Front bezel for screw mounting (T008181) 56 x 40 mm [2.20 x 1.57"], panel cut-out 50 x 25 mm [1.97 x 0.98"]
- Front bezel for clip mounting (T008180) 53 x 28 mm [2.09 x 1.10"], panel cut-out 50 x 25 mm [1.97 x 0.98"]
- Gasket
- Instruction manual, multilingual

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 / Mounting examples



		Type / size	Description		Order no.	suitable gasket
<b>Adapter front bezel</b>		<b>53 x 28 mm</b> [2.09 x 1.10"]	for cut-out 50 x 25 mm [1.97 x 0.98"] to cut-out 45 x 22.2 mm [1.77 x 0.94"]	grey black anthracite	<b>T008164</b> <b>T008165</b> <b>T008180</b>	<b>N511015</b>
		<b>56 x 40 mm</b> [2.20 x 1.57"]	for cut-out 50 x 25 mm [1.97 x 0.98"] to cut-out 45 x 22.2 mm [1.77 x 0.94"] screw mounting	black anthracite	<b>T008161</b> <b>T008181</b>	<b>N511045</b>
		<b>72 x 36 mm</b> [2.83 x 1.42"]	for cut-out 68 x 33 mm [2.68 x 1.30"] to cut-out 45 x 22.2 mm [1.77 x 0.94"]	black and silver anodised as set	<b>162704Set</b>	–
		<b>60 x 50 mm</b> [2.36 x 1.97"]	for cut-out 54 x 29 mm [2.13 x 1.14"] to cut-out 45 x 22.2 mm [1.77 x 0.94"] screw mounting	black	<b>N003001</b>	<b>N511005</b>
		<b>48 x 48 mm</b> [1.89 x 1.89"]	for cut-out 45 x 45 mm [1.77 x 1.77"] to cut-out 45 x 22.2 mm [1.77 x 0.94"]	black	<b>T008883</b>	–
<b>Sealing cover IP65</b>		<b>K1</b>	only in conjunction with adapter front bezel 60 x 50 mm N003001	transparent / grey transparent / black	<b>G008300</b> <b>G008301</b>	–
<b>Transparent cover IP65</b>		<b>1 Dv</b> (mounted on bezel)	cover lockable, for cut-out 54 x 29 mm [2.13 x 1.14"], only in conjunction with adapter front bezel 60 x 50 mm N003001	transparent / black	<b>N003002</b>	<b>N511019</b>
<b>Gasket counter</b>			48 x 24 mm (for installation in adapter front bezel) 49 x 25 mm		<b>N511029</b> <b>N511034</b>	
<b>Mounting frame</b>		<b>cut-out</b> <b>50 x 25 mm</b> [1.97 x 0.98"]	via adapter T008180 for snap-on mounting on 35 mm [1.38"] top-hat DIN rail	chromated	<b>G300004</b>	–
<b>Enclosure blind</b>		<b>48 x 24 mm</b> [1.89 x 0.94"]	for cut-out 45 x 22.2 mm [1.77 x 0.94"] and cut-out 50 x 25 mm [1.97 x 0.98"]	anthracite	<b>G003836</b>	–

incl. in delivery

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### 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>Relative humidity</b>	< 85 % (non-condensing)
<b>Altitude</b>	up to 2000 m [6562']

Electrical characteristics	
<b>Supply voltage</b>	internal lithium battery approx. 8 years at 20 °C [68 °F]
<b>Device safety</b>	designed to protection class 2 application area pollution level 2

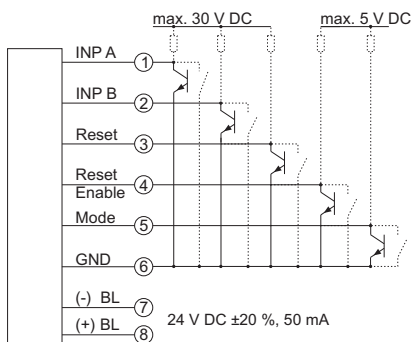
Mechanical characteristics	
<b>Housing</b>	dark grey RAL 7021
<b>Protection</b>	IP65 (front side)
<b>Weight</b>	approx. 50 g [1.76 oz]

Counting inputs	
<b>Counting input of the DC-versions (max. 30 V DC)</b>	
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 (10 ... 260 V DC/AC)</b>	
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 (only DC-version)</b>	
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 (only DC and high voltage)</b>	
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 (only DC and high voltage)</b>	
contact input	open collector NPN (switching at 0 V DC)
switching level – NPN	LOW 0 ... 0.7 V DC HIGH 3 ... 5 V DC

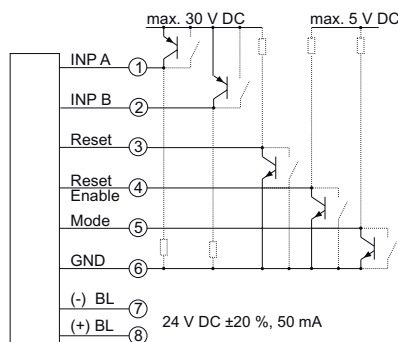
Approvals	
<b>UL compliant</b> in accordance with	File no. E128604
<b>CE compliant</b> in accordance with	
EMC Directive	2014/30/EU
RoHS Directive	2011/65/EU
Low Voltage Directive	2014/35/EU
<b>UKCA compliant</b> in accordance with	
EMC Regulations	S.I. 2016/1091
RoHS Regulations	S.I. 2012/3032
Low Voltage Regulations	S.I. 2016/1101

### Terminal assignment

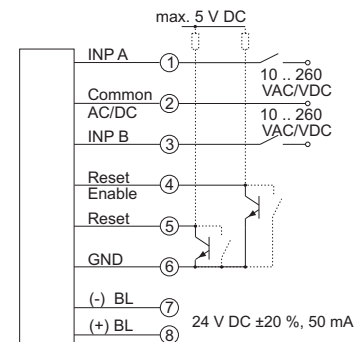
DC type: 6.131.012.8x0



DC type: 6.131.012.8x1



AC type: 6.131.012.8x3



BL = backlighting

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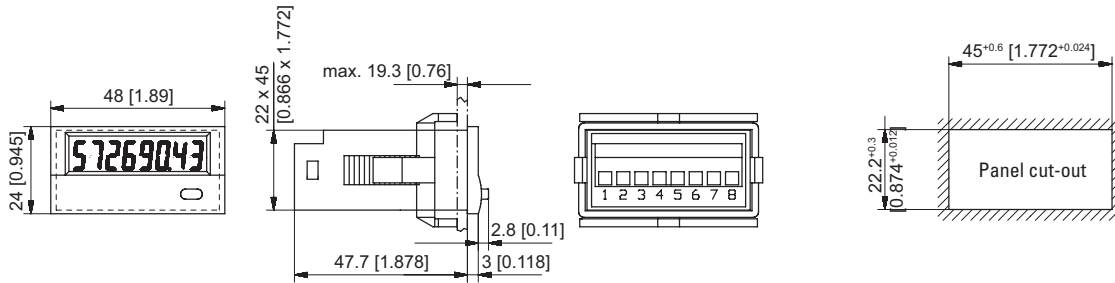
## LCD pulse counters

With count direction DC or difference counter AC+DC (battery)

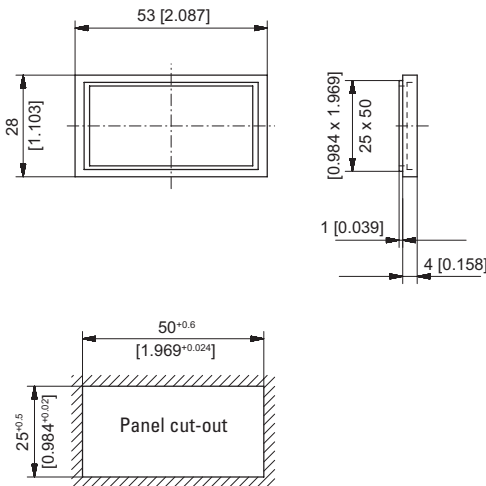
Codix 131

### Dimensions

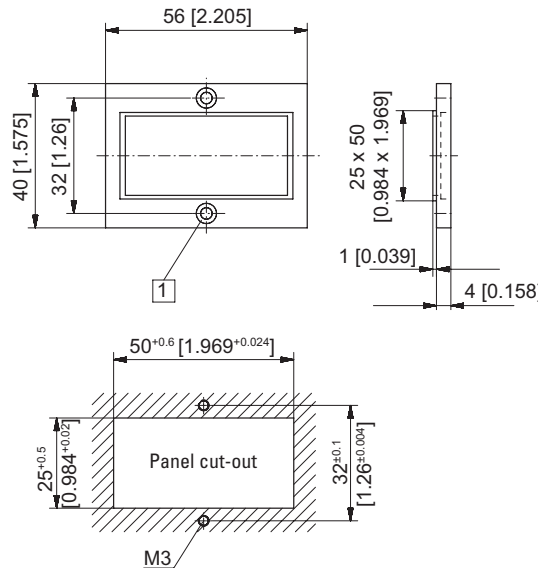
Dimensions in mm [inch]



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



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



1 Countersinking Af3, DIN 74