

Position displays

LCD position displays	Phase discriminator (quadrature) x1 and x2 evaluation	Codix 133
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The Codix 133 is a simple battery-powered position display with a phase discriminator (quadrature) counting input. NPN and PNP pulses can be shown on the 8-digit LCD display that is also available with optional backlighting.



Battery powered	Type of input	Phase discriminator	Pulse voltage	Max. count frequency	Temperature range	High protection level	DIN front bezel	LCD display	Lockable reset

Powerful

- High quality 8-digit LCD display with 8 mm high figures with optional backlighting.
- Counting modes include phase discriminator (quadrature) counting (also with pulse doubling) for connection to incremental encoders.
- Battery life approx. 8 years.
- Count frequency max. 6 kHz.
- High protection level IP65.

Simple

- Screw terminals, RM 5 mm.
- Reset key can be enabled via "Reset Enable" input.
- For positive or negative counting edge, depending on version.

Order code

6.133 . 012 . 8XX
a b

a Backlighting

5 = without
6 = with

b Count input (input type: NPN/PNP²⁾)

Input type	INP A				INP B			
0 = Quad/Quad2 ¹⁾	0 ... 0.7 V DC	channel A	NPN	3 kHz	0 ... 0.7 V DC	channel B	NPN	3 kHz
1 = Quad/Quad2 ¹⁾	4 ... 30 V DC	channel A	PNP	6 kHz	4 ... 30 V DC	channel B	PNP	6 kHz

Delivery specification

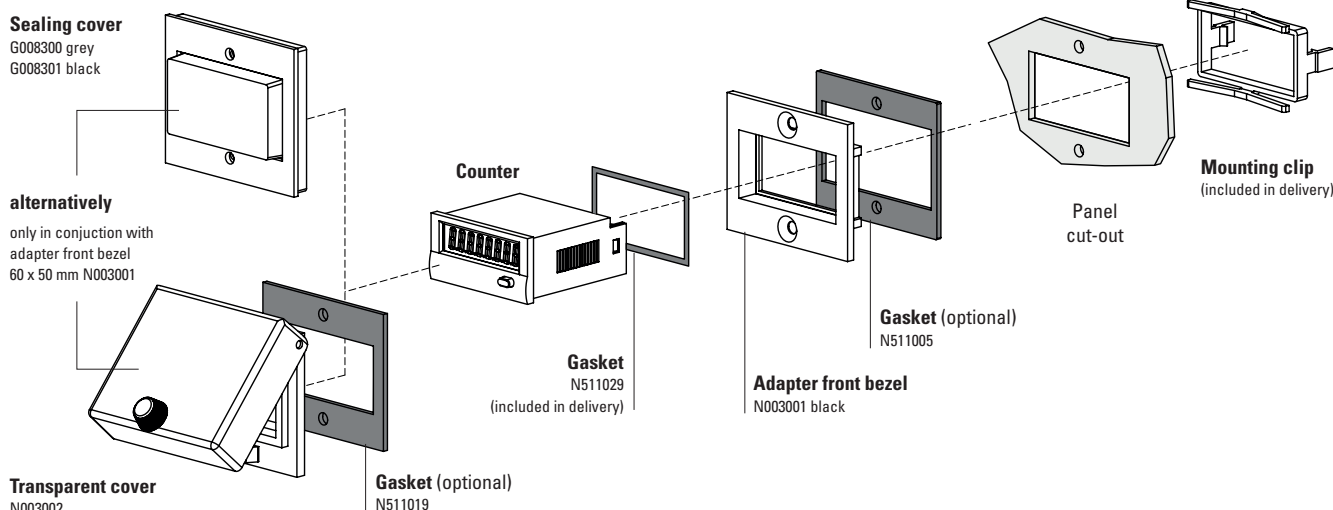
- Counter
- Mounting clip
- Front bezel for screw mounting (T008181) 56 x 40 mm [2.20 x 1.57"], panel cut-out 50 x 25 mm [1.97 x 0.98"]
- Front bezel for clip mounting (T008180) 53 x 28 mm [2.09 x 1.10"], panel cut-out 50 x 25 mm [1.97 x 0.98"]
- Gasket
- Instruction manual, multilingual

1) Phase discriminator for incremental encoders with x1 / x2 evaluation

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Accessories / Mounting examples



		Type / size	Description		Order no.	suitable gasket
Adapter front bezel		53 x 28 mm [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"]	black anthracite	T008165 T008180	N511015
		56 x 40 mm [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	T008161 T008181	N511045
		72 x 36 mm [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	162704Set	—
		60 x 50 mm [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	N003001	N511005
		48 x 48 mm [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	T008883	—
Sealing cover IP65		K1	only in conjunction with adapter front bezel 60 x 50 mm N003001	transparent / grey transparent / black	G008300 G008301	—
Transparent cover IP65		1 Dv (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	N003002	N511019
Gasket counter			48 x 24 mm (for installation in adapter front bezel) 49 x 25 mm		N511029 N511034	
Mounting frame		cut-out 50 x 25 mm [1.97 x 0.98"]	via adapter T008180 for snap-on mounting on 35 mm [1.38"] top-hat DIN rail	chromated	G300004	—
Enclosure blind		48 x 24 mm [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	G003836	—

incl. in delivery

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Technical data

General technical data	
Display	LCD, 8 digits, 8 mm [0.32"] high
Backlighting	external electrical source 24 V DC $\pm 20\%$, 50 mA
Modes	phase discriminator x1 or x2 evaluation selectable
Display range	-9999999 ... 99999999, with overflow display
Reset	manual and electrical
Working temperature	-10 °C ... +55 °C [+14 °F ... +131 °F] (non-condensing)
Operating temperature	-10 °C ... +60 °C [+14 °F ... +140 °F] (non-condensing)
Storage temperature	-20 °C ... +70 °C [-4 °F ... +158 °F]
Relative humidity	< 85 % (non-condensing)
Altitude	up to 2000 m [6562']

Electrical characteristics	
Supply voltage	internal lithium battery approx. 8 years at 20 °C [68 °F]

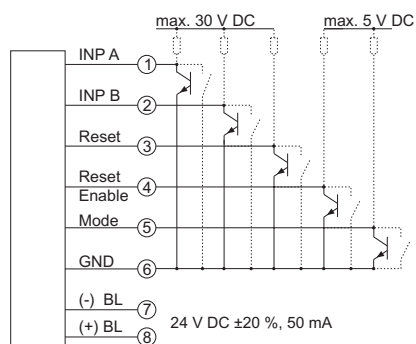
Mechanical characteristics	
Housing	dark grey RAL 7021
Protection	IP65 (front side)
Weight	approx. 50 g [1.76 oz]

Counting inputs	
Fast counting input	max. 6 kHz (PNP), 3 kHz (NPN)
Switching level NPN	LOW 0 ... 0.7 V HIGH 3 ... 30 V DC
Switching level PNP	LOW 0 ... 0.7 V HIGH 4 ... 30 V DC
Switching	x1 or x2 evaluation can be set via the mode input
Switching (mode)	Open Collector NPN (switching at 0 V DC)
Switching level NPN	LOW 0 ... 0.7 V HIGH 3 ... 5 V DC
Reset input	
Minimum pulse time	DC 50 ms high voltage 16 ms
Contact input DC – NPN	LOW 0 ... 0.7 V HIGH 3 ... 30 V DC
Electrical reset key locking	Open Collector NPN (switching at 0 V DC)
Contact input	
Switching level – NPN	LOW 0 ... 0.7 V HIGH 3 ... 5 V DC

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

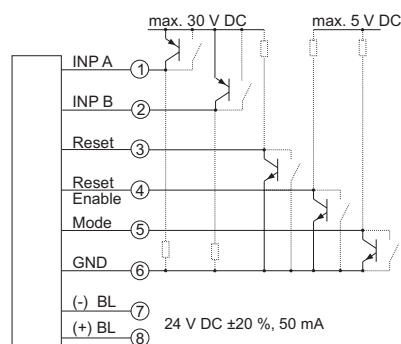
Terminal assignment

DC type: 6.133.012.8x0



BL = backlighting

DC type: 6.133.012.8x1



Position displays

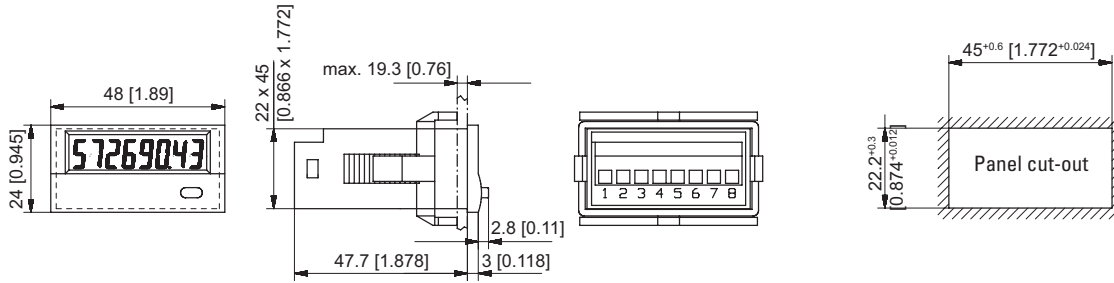
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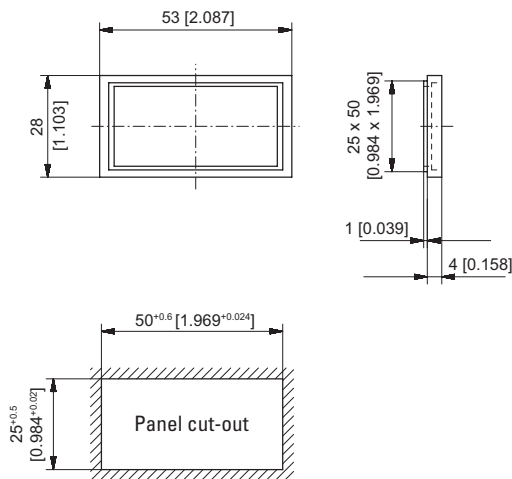
Codix 133

Dimensions

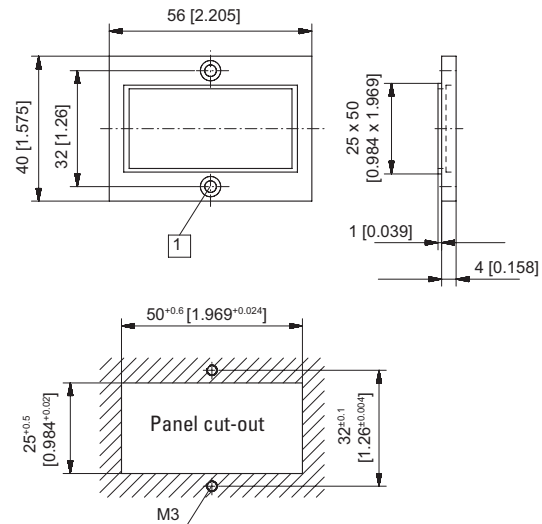
Dimensions in mm [inch]



Front bezel for clip mounting (included in delivery)



Front bezel for screw mounting (included in delivery)



1 Countersinking Af3, DIN 74