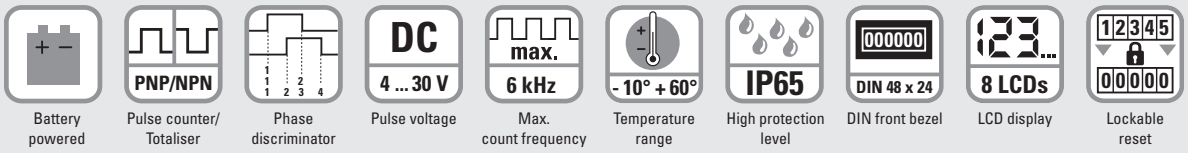
LCD position displays | Phase discriminator (quadrature) x1 and x2 evaluation | Codix 133



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 | Pulse counter/ Totaliser | 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 locked out via the Reset Enable input
- For positive or negative counting edge, depending on version

Order code

6.133 . 012 . 8 X X
(a) (b)

(a) *Backlighting*
5 = without [1]
6 = with

(b) *Count input (input type: NPN/PNP [2])*

	Input type	*INP A*				*INP B*			
0 =	Quad/Quad2 [2]	0 ... 0.7 V DC	channel A	NPN	3 kHz	0 ... 0.7 V DC	channel B	NPN	3 kHz
1[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) Stock types
2) Phase discriminator for incremental encoders with x1 / x2 evaluation

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LCD position displays | Phase discriminator (quadrature) x1 and x2 evaluation | Codix 133

Accessories	Dimensions in mm [inch]	Order-No.
Adapter front bezel, 72 x 36 [2.83 x 1.42]	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	**162704 Set**
Adapter front bezel, 48 x 48 [1.89 x 1.89]	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	**T008883**
Adapter front bezel, 60 x 50 [2.36 x 1.97]	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	**N003001**
Transparent cover, lockable, IP65	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]	**N003002**
Sealing cover type K1, IP65	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]	**G008301**
Mounting frame 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	**G300004**

Suitable gaskets as well as further accessories can be found in the accessories section or in the accessories area of our website at: www.kuebler.com/accessories.

Technical data

General technical data

Display	LCD, 8 digits, 8 mm [0.32"] high
Backlighting	external electrical source 24 V DC ±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]

Electrical characteristics

Power supply		internal lithium battery approx. 8 years at 20°C [68°F]
EMC	Emitted interference	EN 55011 class B
	Immunity to interference	EN 61000-6-2
Device safety	Designed to	EN 61010 part 1
	Protection class	2
	Application area	Pollution level 2
UL approval		File-No.: E128604

Mechanical characteristics

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

Counting inputs of the DC version (max. 30 V DC)

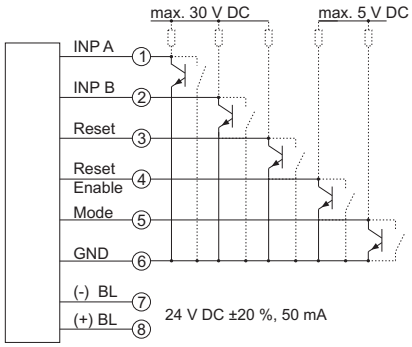
Fast counting input		max. 6 kHz (PNP), 3 kHz (NPN)
Switching level NPN	LOW	0 ... 0.7 V
	HIGH	3 ... 30 V DC
Switching level PNP	LOW	0 ... 0.7 V
	HIGH	4 ... 30 V DC
Switching		x1 or x2 evaluation can be set via the mode input
Contact input		Open Collector NPN (switching at 0 V DC)
Switching level NPN	LOW	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 (for DC and AC)		
Contact input		Open Collector NPN (switching at 0 V DC)
Switching level – NPN	LOW	0 ... 0.7 V
	HIGH	3 ... 5 V DC

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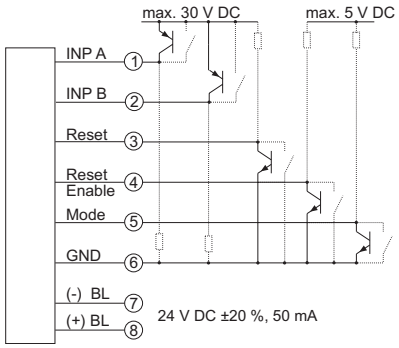
LCD position displays | **Phase discriminator (quadrature) x1 and x2 evaluation** | **Codix 133**

Terminal assignment

DC type: 6.133.012.8x0



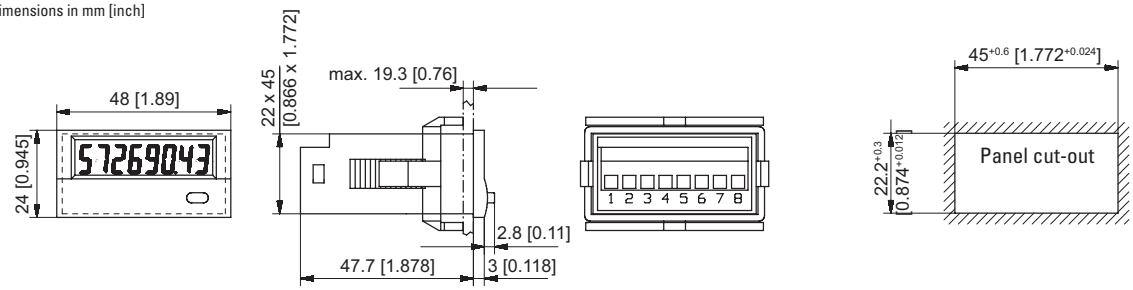
DC type: 6.133.012.8x1



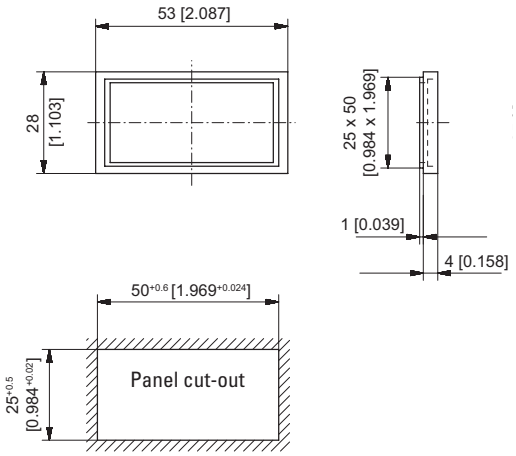
BL = backlighting

Dimensions

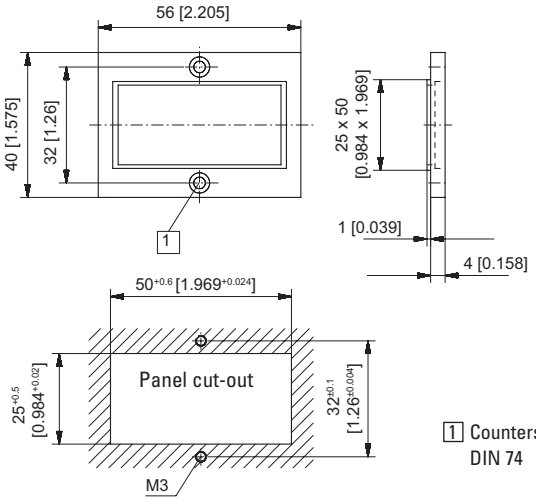
Dimensions in mm [inch]



Front bezel for clip mounting (included in delivery)



Front bezel for screw mounting (included in delivery)



1 Countersinking Af3, DIN 74

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