Baumer
Passion for Sensors

Incremental encoders

ITD 4 B10 Y 4

Solid shaft ø11 mm with EURO flange

5…60 pulses per revolution

Overview

- Encoder with solid shaft ø11 mm
- Max. 60 pulses per revolution
- Optical sensing method
- Centering alignment ø85 mm, mounting screw hole circle ø100 mm
- Industrial standard with centering flange
- Dual bearing
- TTL or HTL output signals
- Flange connector radial or axial



Technical data

Technical data - electrical ratings	
Voltage supply	5 VDC ±5 % 8...30 VDC
Reverse polarity protection	Yes
Consumption w/o load	≤100 mA
Pulses per revolution	5 … 60
Reference signal	Zero pulse, width 90°
Sensing method	Optical
Output frequency	≤60 kHz
Output signals	A, B, N + inverted
Output stages	TTL linedriver (short-circuit proof) HTL push-pull (short-circuit proof)
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-3
Technical data - mechanical design	
Size (flange)	ø115 mm

Technical data - mechanical design	
Shaft type	ø11 mm solid shaft
Admitted shaft load	≤60 N axial ≤100 N radial
Flange	EURO flange B10
Protection DIN EN 60529	IP 65
Operating speed	≤8000 rpm
Starting torque	≤0,015 Nm (+20 °C)
Material	Housing: aluminium Shaft: stainless steel
Operating temperature	-20...+70 °C
Relative humidity	90 % non-condensing
Resistance	DIN EN 60068-2-6 Vibration 10 g, 55-2000 Hz DIN EN 60068-2-27 Shock 100 g, 11 ms
Connection	Connector M23 type 2, 12-pin
Weight approx.	950 g

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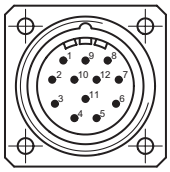
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Terminal assignment

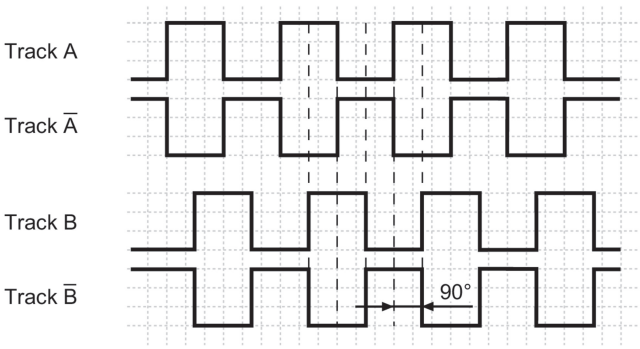
Connector	Assignment
Pin 5	Track A
Pin 6	Track A inv.
Pin 8	Track B
Pin 1	Track B inv.
Pin 3	Track N
Pin 4	Track N inv.
Pin 12	UB
Pin 10	GND
Pin 2	UB-Sense
Pin 11	GND-Sense
Pin 9	–
Pin 7	–



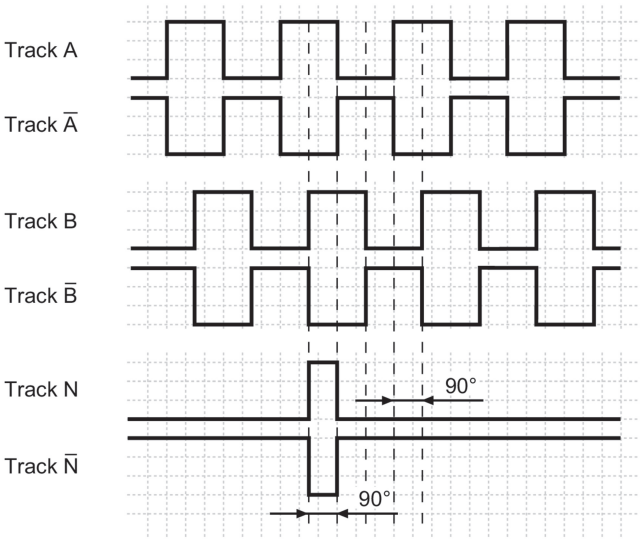
Output signals

Clockwise rotation when looking at the mounting side.

BI-Output signals



NI-Output signals



Trigger level

Outputs	**Linedriver**
Output level High	≥2.4 V
Output level Low	≤0.5 V
Load	≤70 mA

Outputs	**Push-pull** short-circuit proof
Output level High	≥UB -3 V
Output level Low	≤1.5 V
Load	≤70 mA

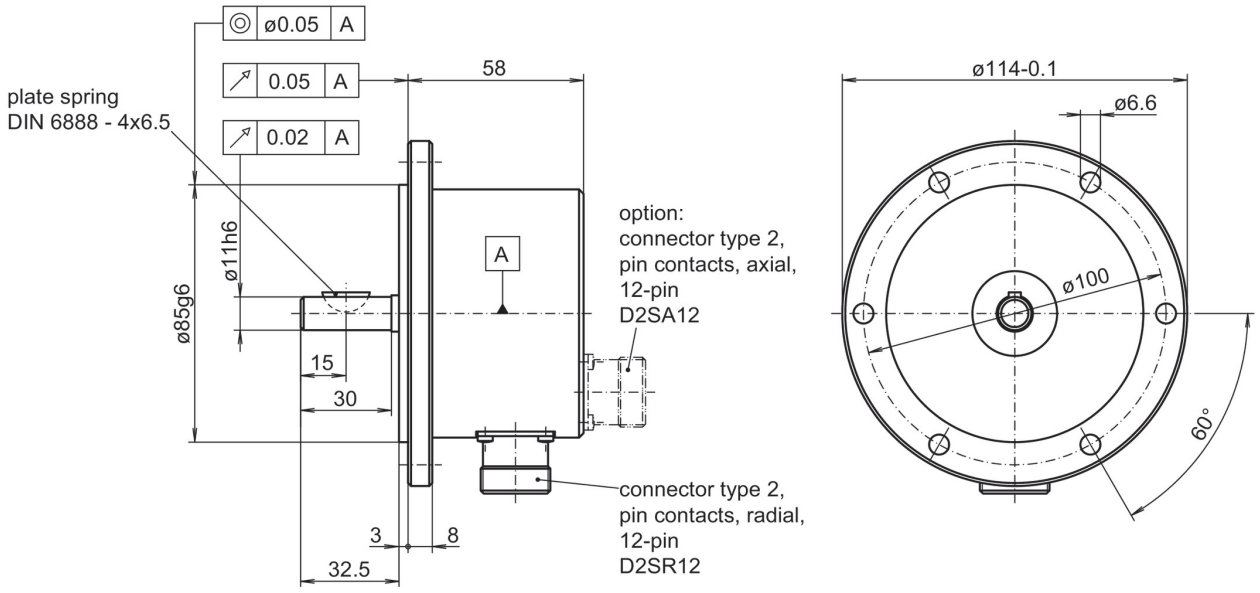
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Dimensions



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Ordering reference

	ITD 4 B10 Y 4	#####	#	####	######	S	11	IP65
Product								
	ITD 4 B10 Y 4							
Pulse number								
5		5						
16		16						
32		32						
60		60						
Voltage supply / signals								
5 VDC / TTL level, linedriver			T					
8...30 VDC / HTL level, push-pull			H					
8...30 VDC / TTL level, linedriver			R					
Output signals								
A, A inv, B, B inv				BI				
A, A inv, B, B inv, N, N inv				NI				
Connection								
Flange connector type 2, pin contacts, radial, 12-pin					D2SR12			
Flange connector type 2, pin contacts, axial, 12-pin					D2SA12			
Operating temperature								
-20...+70 °C						S		
Flange / Solid shaft								
EURO flange B10 / ø11 mm							11	
Protection								
IP 65								IP65

Accessories

Connectors and cables

11072792	Connector M23 - S2BG12, 1 m cable (incremental)

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