Baumer
Passion for Sensors

Incremental encoders

ITD 20 A 4 Y130

Blind hollow shaft ø12 mm

50…1024 pulses per revolution

Overview

- Encoder with electric isolated blind hollow shaft ø12 mm
- Max. 1024 pulses per revolution
- Optical sensing method
- Mounting by electrically isolated torque support
- TTL or HTL output signals
- Flange connector radial
- High protection
- Protection against inductive shaft current



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	50 … 1024
Reference signal	Zero pulse, width 90°
Sensing method	Optical
Output frequency	≤120 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)	ø58 mm
Shaft type	ø12 mm (blind hollow shaft)

Technical data - mechanical design	
Mounting kit	044
Protection DIN EN 60529	IP 65
Operating speed	≤8000 rpm ≤5000 rpm IP 65 (>70 °C)
Starting torque	≤0,01 Nm (+20 °C)
Material	Housing: aluminium, black, powder-coated Shaft: stainless steel
Operating temperature	-20...+70 °C -20...+100 °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.	280 g

2020-02-07 The product features and technical data specified do not express or imply any warranty. Technical modifications subject to change.

Incremental encoders

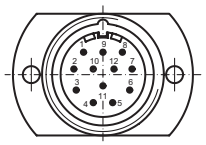
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Terminal assignment

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	–



Trigger level

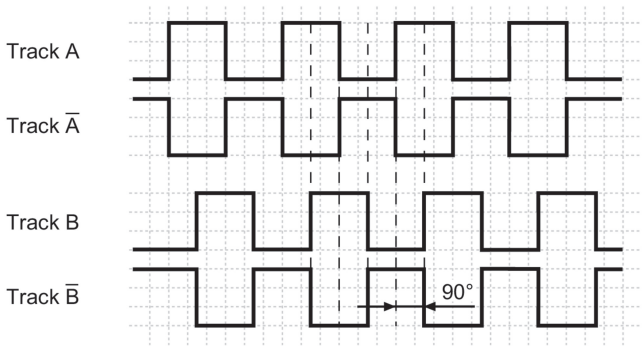
Outputs	**Linedriver**
Output level High	≥2.4 V
Output level Low	≤0.5 V
Load	≤70 mA

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

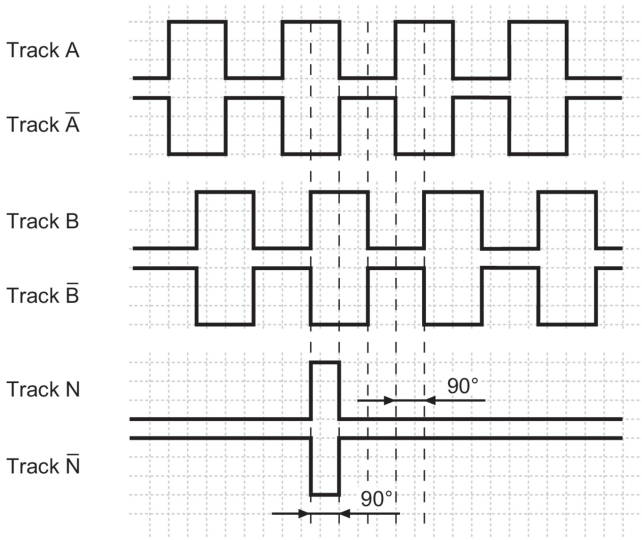
Output signals

Clockwise rotation when looking at the mounting side.

BI-Output signals



NI-Output signals



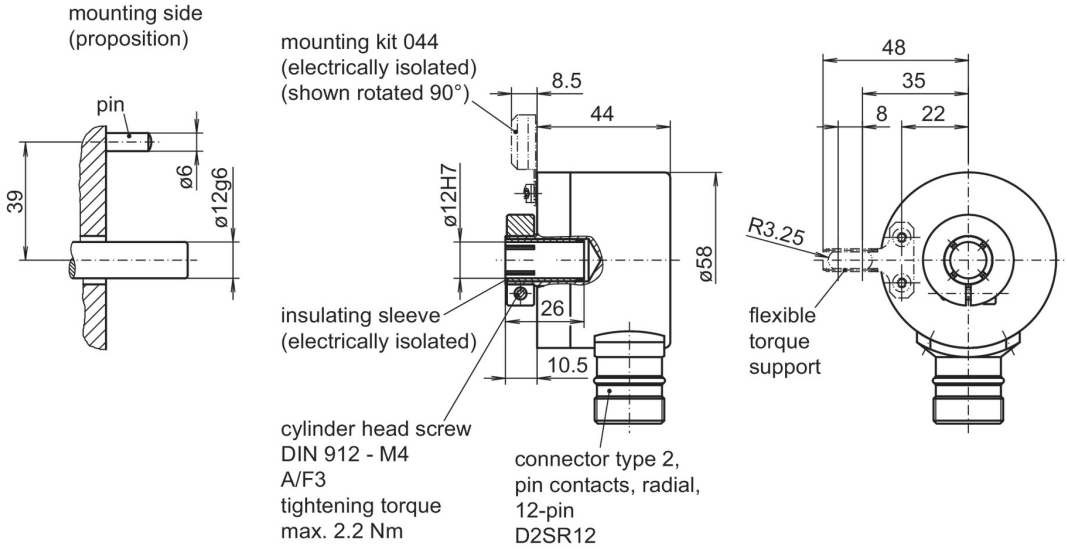
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Dimensions



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Ordering reference

	ITD 20 A 4 Y130	#####	#	####	D2SR12	#	12	IP65	044
Product	ITD 20 A 4 Y130								
Pulse number									
50		50							
60		60							
64		64							
88		88							
90		90							
100		100							
120		120							
128		128							
200		200							
250		250							
254		254							
256		256							
360		360							
400		400							
500		500							
512		512							
600		600							
1000		1000							
1024		1024							
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				
Operating temperature									
-20...+70 °C						S			
-20...+100 °C						E			
Blind hollow shaft									
ø12 mm							12		
Protection									
IP 65								IP65	
Mounting kit									
Mounting kit 044									044

Accessories

Connectors and cables

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

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