Baumer
Passion for Sensors

Incremental encoders

ITD 21 A 4 Y22

Blind hollow shaft ø10 to ø14 mm

200…6000 pulses per revolution

Overview

- Encoder with blind hollow shaft ø10...14 mm
- Max. 6000 pulses per revolution
- Optical sensing method
- Mounting by torque support
- TTL or HTL output signals
- Flange connector radial
- High protection



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	200 … 6000
Reference signal	Zero pulse, width 90°
Sensing method	Optical
Output frequency	≤300 kHz (TTL) ≤160 kHz (HTL)
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	ø10 mm (blind hollow shaft) ø12 mm (blind hollow shaft) ø14 mm (blind hollow shaft)

Technical data - mechanical design	
Mounting kit	002
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

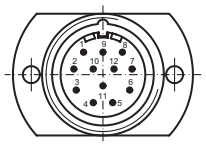
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Terminal assignment

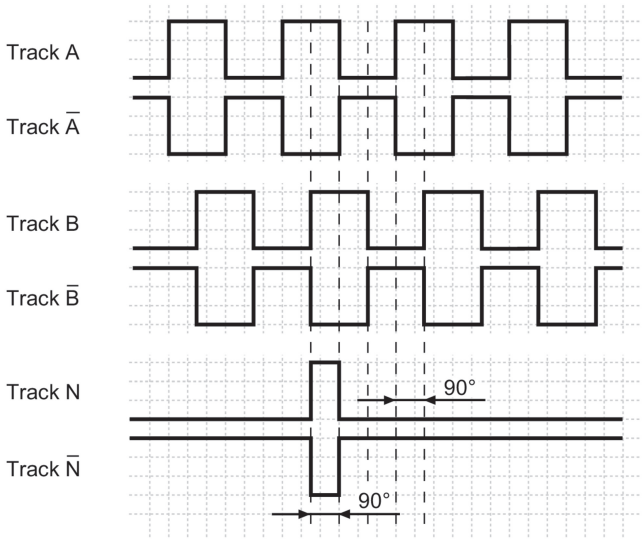
Connector	Assignment
Pin 5	Track A
Pin 6	Track A inv.
Pin 8	Track B
Pin 1	Track B inv.
Pin 3	Track N
Pin 4	Track N inv.
Pin 12	UB
Pin 10	GND
Pin 2	UB-Sense
Pin 11	GND-Sense
Pin 9	–
Pin 7	–



Output signals

Clockwise rotation when looking at the mounting side.

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

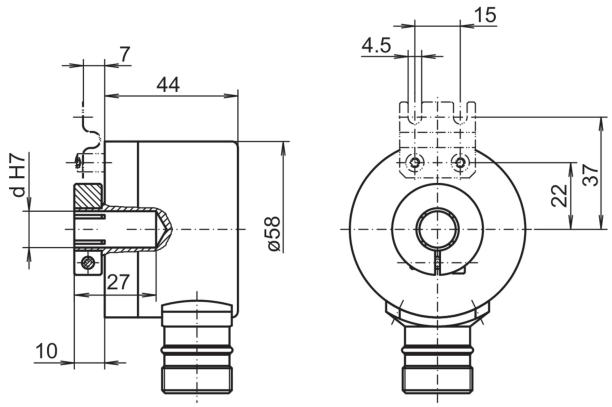
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Dimensions



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Ordering reference

	ITD 21 A 4 Y22	#####	#	NI	D2SR12	#	##	IP65	002
Product									
	ITD 21 A 4 Y22								
Pulse number									
200		200							
250		250							
256		256							
300		300							
360		360							
400		400							
500		500							
512		512							
600		600							
720		720							
800		800							
900		900							
1000		1000							
1024		1024							
1200		1200							
1250		1250							
1440		1440							
1500		1500							
1800		1800							
2000		2000							
2048		2048							
2500		2500							
3000		3000							
3600		3600							
4000		4000							
4096		4096							
5000		5000							
6000		6000							
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, 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									
ø10 mm							10		
ø12 mm							12		
ø14 mm							14		
Protection									
IP 65								IP65	
Mounting kit									
Mounting kit 002									002

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Accessories

Connectors and cables

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

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