Baumer
Passion for Sensors

Incremental encoders

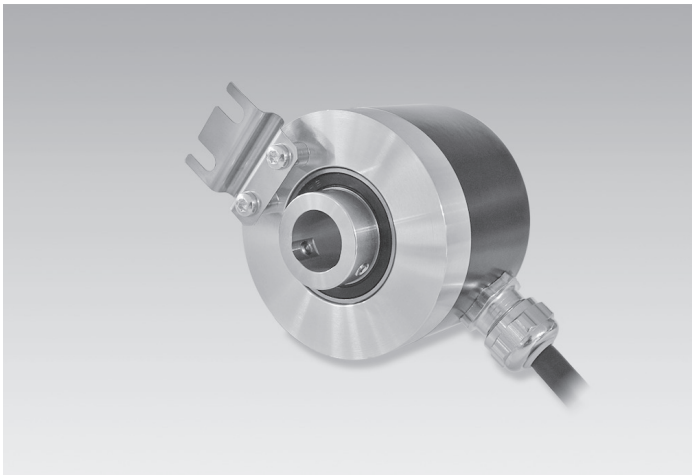
ITD 20 A 4

Blind hollow shaft ø8 to ø14 mm

50…1024 pulses per revolution

Overview

- Encoder with blind hollow shaft up to ø14 mm
- Max. 1024 pulses per revolution
- Optical sensing method
- Mounting by torque support
- TTL or HTL output signals
- Cable output 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	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	ø8...14 mm (blind hollow shaft)

Technical data - mechanical design	
Mounting kit	001
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, 6 ms
Connection	Cable 1 m
Weight approx.	260 g

Optional

- Cable with connector
- Extended operating temperature range

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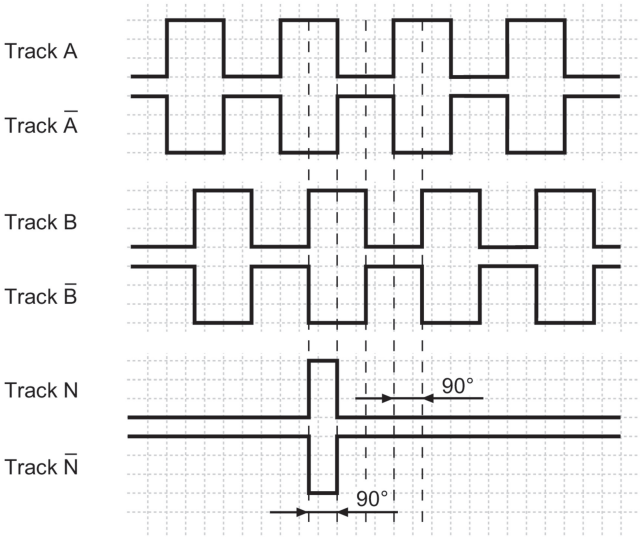
Terminal assignment

Core colour	Assignment
brown	Track A
green	Track A inv.
grey	Track B
pink	Track B inv.
red	Track N
black	Track N inv.
brown 0,5 mm²	UB
white 0,5 mm²	GND
blue	UB-Sense
white	GND-Sense
transparent	Shield/Housing

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

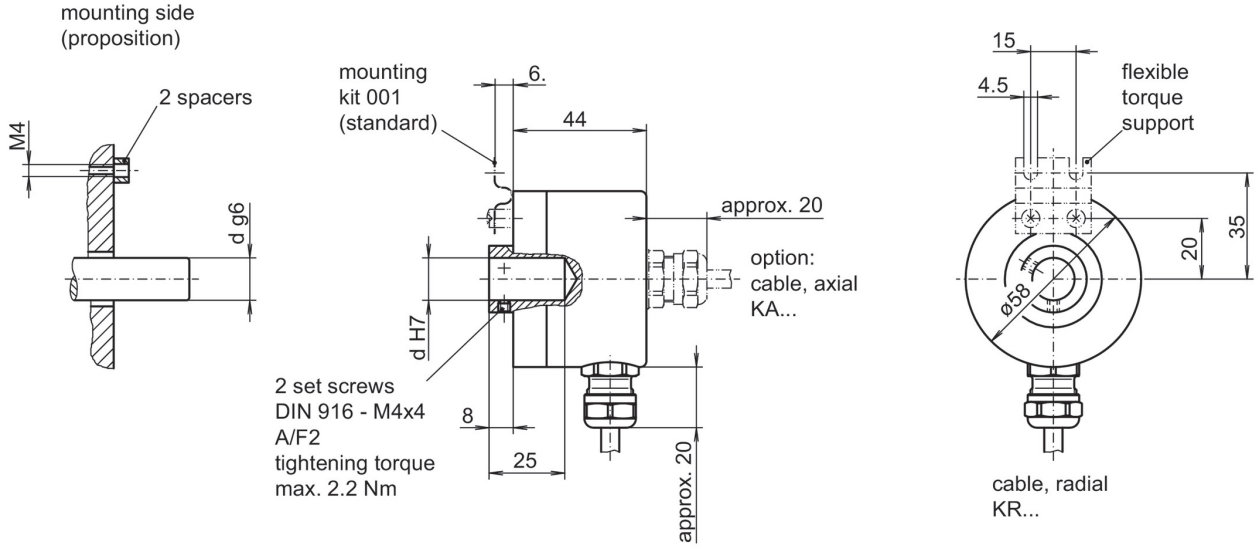
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Dimensions



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Ordering reference

	ITD 20 A 4	#####	#	NI	######	#	##	IP65	001
Product									
	ITD 20 A 4								
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, N, N inv				NI					
Connection									
Cable 1 m, radial					KR1				
Cable 1 m, axial					KA1				
Operating temperature									
-20...+70 °C						S			
-20...+100 °C						E			
Blind hollow shaft									
ø8 mm							8		
ø9 mm							9		
ø10 mm							10		
ø12 mm							12		
ø14 mm							14		
Protection									
IP 65								IP65	
Mounting kit									
Mounting kit 001									001

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