Baumer
Passion for Sensors

Incremental encoders

ITD21H00 HT

Through hollow shaft ø10 to ø14 mm
100…8192 pulses per revolution

Overview

- Size ø58 mm
- Precise optical sensing
- Output signal level TTL
- Through hollow shaft ø10...14 mm
- Max. 8192 pulses per revolution
- Operating temperature -30...+120 °C
- Detachable cable – tangential outlet
- Top flexibility with numerous models



Technical data

Technical data - electrical ratings	
Voltage supply	5 VDC ±5 %
Reverse polarity protection	Yes
Consumption w/o load	≤100 mA
Pulses per revolution	100 … 8192
Reference signal	Zero pulse, width 90°
Sensing method	Optical
Output frequency	≤300 kHz (TTL)
Output signals	A, B, N + inverted
Output stages	TTL linedriver (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

Technical data - mechanical design	
Shaft type	ø10 mm (through hollow shaft) ø12 mm (through hollow shaft) ø14 mm (through hollow shaft)
Protection DIN EN 60529	IP 54
Operating speed	≤6000 rpm
Starting torque	≤0,015 Nm (+20 °C)
Material	Housing: aluminium Shaft: stainless steel
Operating temperature	-30...+120 °C
Relative humidity	90 % non-condensing
Resistance	DIN EN 60068-2-6 Vibration 20 g, 60-2000 Hz DIN EN 60068-2-27 Shock 100 g, 6 ms
Connection	Board connector, 8-pin
Weight approx.	150 g

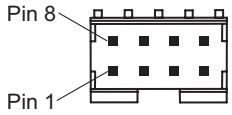
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Terminal assignment

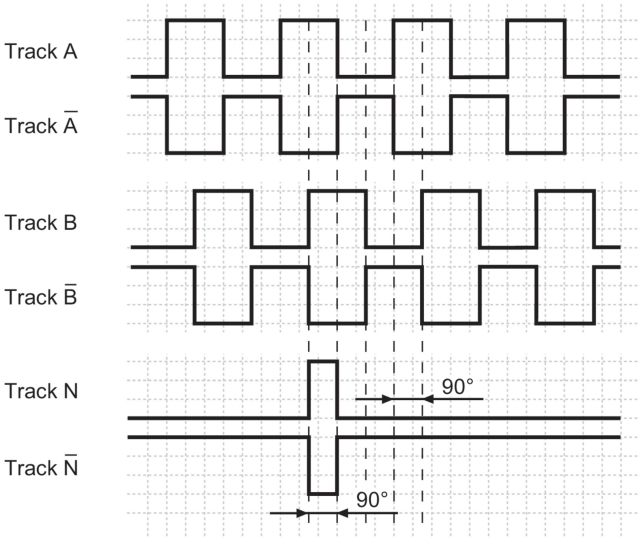
Connector	Assignment
Pin 1	UB
Pin 2	GND
Pin 3	Track A
Pin 4	Track A inv.
Pin 5	Track B
Pin 6	Track B inv.
Pin 7	Track N
Pin 8	Track N inv.



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

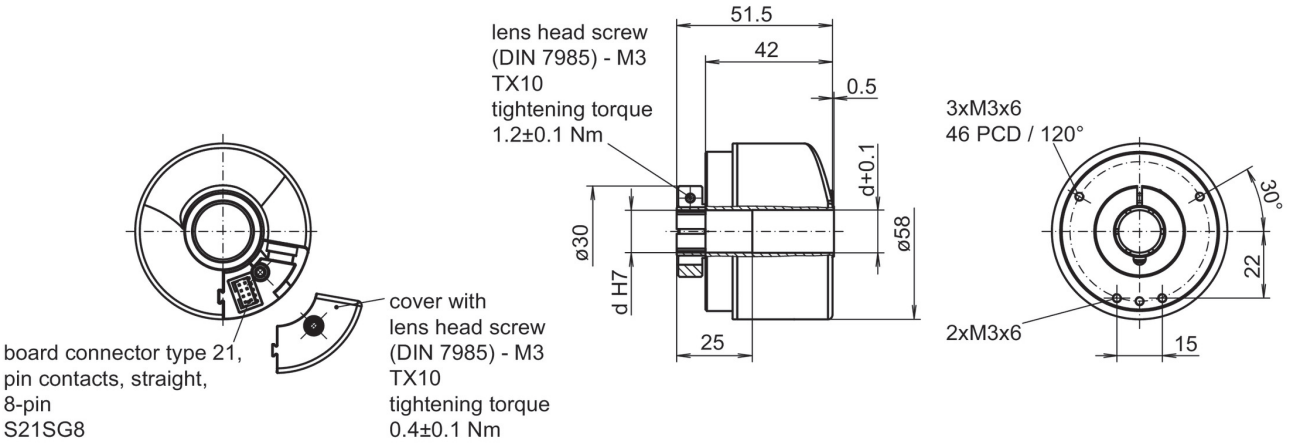
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Dimensions



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Ordering reference

	ITD21H00	####	T	NI	S21SG8	F	##	54	###
Product	ITD21H00								
Pulse number									
100		100							
120		120							
128		150							
200		200							
250		250							
256		256							
300		300							
360		360							
400		400							
500		500							
512		512							
600		600							
720		720							
900		800							
900		900							
1000		1000							
1024		1024							
1200		1200							
1250		1250							
1250		1440							
1250		1500							
1800		1800							
2000		2000							
2048		2048							
2500		2500							
3000		3000							
3600		3600							
5000		4000							
4096		4096							
5000		5000							
6000		6000							
8192[1]		8192							
Voltage supply									
UB= 5 VDC ±5% / TTL level, linedriver			T						
Output signal									
A, A inv, B, B inv, N, N inv				NI					
Connection									
Board connector type 21, pin contacts, straight, 8-pin					S21SG8				
Operating temperature									
-30...+120 °C						F			
Through hollow shaft									
ø10 mm, clamping ring, A-side							10		
ø12 mm, clamping ring, A-side							12		
ø14 mm, clamping ring, A-side							14		
Protection class									
IP54								54	

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Ordering reference

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Mounting kit									
1-arm, pitch circle diameter 74...95 mm, mounting M4/M5									006
1-arm, pitch circle diameter 65.5...281 mm, mounting M4, cut to length									021

(1) Pulse numbers are interpolated.

Accessories

Mounting accessories

11066080	Torque arm, 1-arm, bolt circle ø76…80 mm, mounting M4 (mounting kit 002)
11066083	Torque arm, 1-arm, bolt circle ø74…94 mm, mounting M4/M5 (mounting kit 006)
11073114	Torque arm, 3-armed, bolt circle ø76 mm, mounting M3 (mounting kit 019)
11073119	Torque arm, 1-arm, bolt circle ø65.5...281 mm, mounting M4, can be cut to length (mounting kit 021)
11069239	Torque arm, 1-arm, bolt circle ø110…130 mm, mounting M5 (mounting kit 092)

Connectors and cables

11071187	Connection cable with FCI, 8-pin / wire end sleeves, 0.6 m
11071188	Connection cable with FCI, 8-pin / wire end sleeves, 1 m
11112263	Connection cable with FCI, 8-pin / wire end sleeves, 3 m
11071189	Connection cable with crimp contacts, 0.2 m

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