

ITD21H00

Through hollow shaft $\varnothing 10$ to $\varnothing 14$ mm
100...10000 pulses per revolution

Overview

- Size $\varnothing 58$ mm
- Precise optical sensing
- Output signal level TTL or HTL
- Through hollow shaft $\varnothing 10...14$ mm
- Max. 10000 pulses per revolution
- Operating temperature $-30...+100$ °C
- Detachable cable – tangential outlet
- Top flexibility with numerous models



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	100 ... 10000
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	EN 61000-6-2
Emitted interference	EN 61000-6-3

Technical data - mechanical design

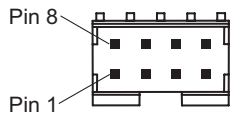
Size (flange)	$\varnothing 58$ mm
Shaft type	$\varnothing 10$ mm (through hollow shaft) $\varnothing 12$ mm (through hollow shaft) $\varnothing 14$ mm (through hollow shaft)
Protection EN 60529	IP 65
Operating speed	≤ 6000 rpm
Starting torque	≤ 0.015 Nm ($+20$ °C)
Material	Housing: aluminium Shaft: stainless steel
Operating temperature	$-30...+100$ °C
Relative humidity	90 % non-condensing
Resistance	EN 60068-2-6 Vibration 20 g, 60-2000 Hz EN 60068-2-27 Shock 100 g, 6 ms
Connection	Board connector, 8-pin
Weight approx.	150 g

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Terminal assignment

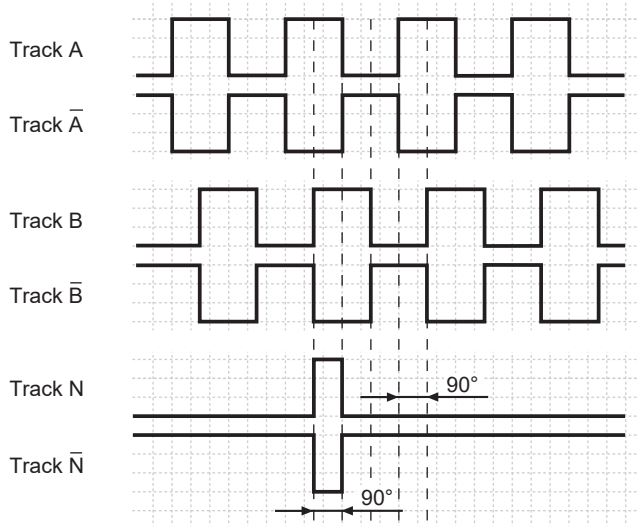
Connector	Assignment
Pin 1	UB
Pin 2	GND
Pin 3	Track A
Pin 4	Track A inv.
Pin 5	Track B
Pin 6	Track B inv.
Pin 7	Track N
Pin 8	Track N inv.



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

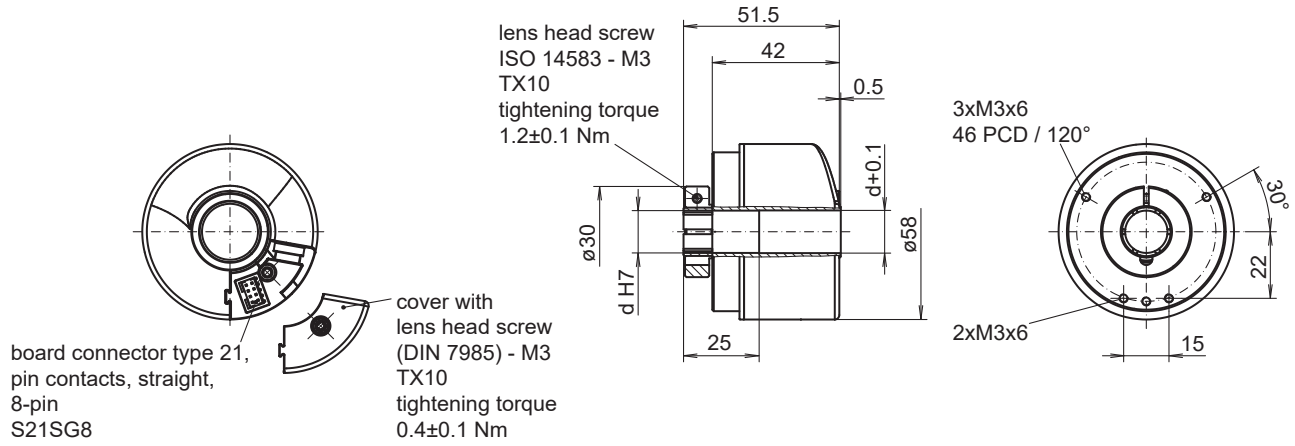
Outputs	Push-pull short-circuit proof
Output level High	$\geq U_B - 3$ V
Output level Low	≤ 1.5 V
Load	≤ 70 mA

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Dimensions



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Ordering reference

Product	ITD21H00	####	###	NI	S21SG8	E	##	65	###
Pulse number	ITD21H00								
100		100							
120		120							
150		150							
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							
8192 ⁽¹⁾		8192							
10000 ⁽¹⁾		10000							
Voltage supply									
UB= 5 VDC $\pm 5\%$ / TTL level, linedriver									T
UB= 8...30 VDC / HTL level, push-pull									H
UB= 5 VDC $\pm 5\%$ / TTL level, RS422-linedriver, Attention: not short-circuit proof!									K
UB= 8...30 VDC / TTL level, linedriver									R
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...+100 °C									E

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Ordering reference

	ITD21H00	####	###	NI	S21SG8	E	##	65	###
Through hollow shaft									
$\varnothing 10$ mm, clamping ring, A-side								10	
$\varnothing 12$ mm, clamping ring, A-side								12	
$\varnothing 14$ mm, clamping ring, A-side								14	
Protection class									
IP65								65	
Mounting kit									
1-arm, pitch circle diameter 74...95 mm, mounting M4/M5									006
3-arm, pitch circle diameter 76 mm, mounting 3 × M3 (120°)									019
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 (mounting kit 002)
11066083	Torque arm, 1-arm (mounting kit 006)
11073114	Torque arm, 3-armed (mounting kit 019)
11073119	Torque arm, 1-arm (mounting kit 021)
11069239	Torque arm, 1-arm (mounting kit 092)
11116921	Insulating sleeve $\varnothing 10$ mm/ $\varnothing 12$ mm/25 mm long
11116923	Insulating sleeve $\varnothing 12$ mm/ $\varnothing 14$ mm/25 mm long