

Incremental encoders

Through hollow shaft $\varnothing 10$ to $\varnothing 14$ mm

100...8192 pulses per revolution

ITD21H00 - HT High Temperature



ITD21H00 HT with through hollow shaft

Features

- Size $\varnothing 58$ mm
- Precise optical sensing
- Output signal level TTL
- Through hollow shaft $\varnothing 10...14$ mm
- Max. 8192 pulses per revolution
- Operating temperature $-30...+120$ °C
- Detachable cable – tangential outlet
- Top flexibility with numerous models

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)	$\varnothing 58$ mm
Shaft type	$\varnothing 10$ mm (through hollow shaft) $\varnothing 12$ mm (through hollow shaft) $\varnothing 14$ mm (through hollow shaft)
Protection DIN EN 60529	IP 54
Operating speed	≤ 6000 rpm
Starting torque	≤ 0.015 Nm ($+20$ °C)
Materials	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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Part number

ITD21H00

	T	NI	S21SG8	F		IP54
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Protection

IP54 IP 54

Through hollow shaft

10 $\varnothing 10$ mm

12 $\varnothing 12$ mm

14 $\varnothing 14$ mm

Operating temperature

F -30...+120 °C

Connection

S21SG8 Board connector type 21, pin contacts, straight, 8-pin

Output signals

NI A, A inv, B, B inv, 0, 0 inv

Voltage supply / signals

T 5 VDC / TTL level, linedriver

Pulse number - see table

Pulse number

100	360	900	1800	4096
120	400	1000	2000	5000
150	500	1024	2048	6000
200	512	1200	2500	8192*
250	600	1250	3000	
256	720	1440	3600	
300	800	1500	4000	

* Pulse numbers are interpolated.

Accessories

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

Mounting accessories

11066080	Torque arm, 1-arm, bolt circle $\varnothing 76$...80 mm, mounting M4 (mounting kit 002)
11066083	Torque arm, 1-arm, bolt circle $\varnothing 74$...94 mm, mounting M4/M5 (mounting kit 006)
11073114	Torque arm, 3-armed, bolt circle $\varnothing 76$ mm, mounting M3 (mounting kit 019)
11073119	Torque arm, 1-arm, bolt circle $\varnothing 65.5$...281 mm, mounting M4, can be cut to length (mounting kit 021)
11069239	Torque arm, 1-arm, bolt circle $\varnothing 110$...130 mm, mounting M5 (mounting kit 092)

Further connection cable lengths see accessories.

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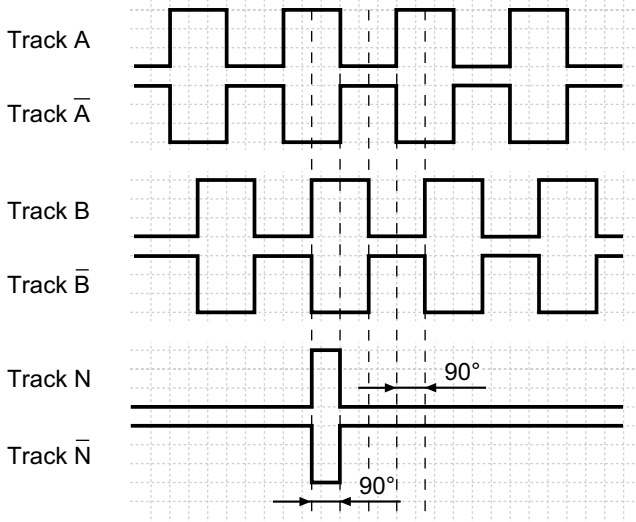
100...8192 pulses per revolution

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Output signals

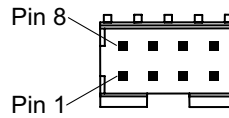
Clockwise rotation when looking at the mounting side.

NI-Output signals



Terminal assignment

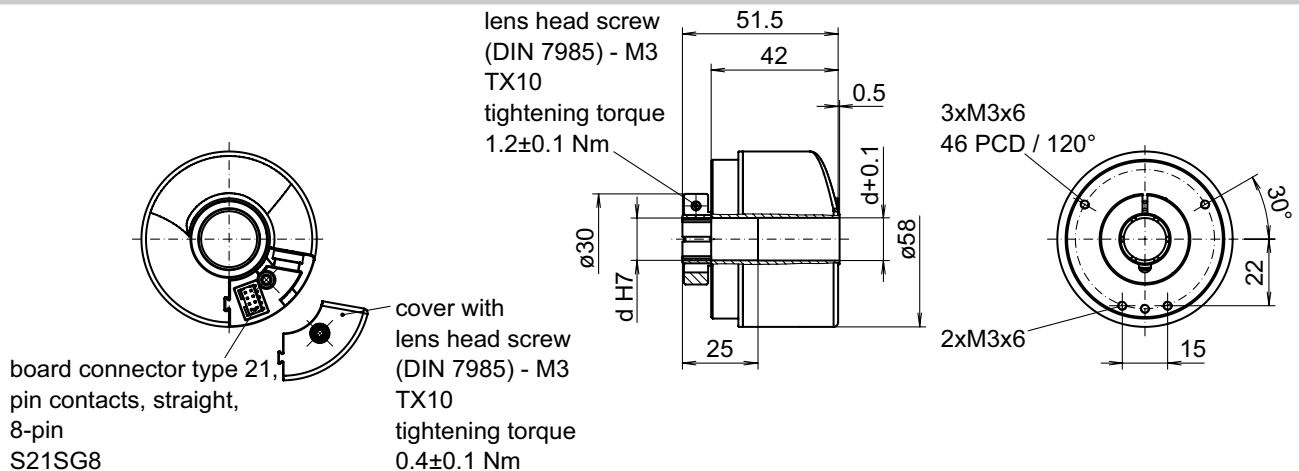
Connector	Assignment
Pin 1	UB
Pin 2	GND
Pin 3	Track A
Pin 4	Track A inv.
Pin 5	Track B
Pin 6	Track B inv.
Pin 7	Track N
Pin 8	Track N inv.



Trigger level

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

Dimensions



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