

# 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 $\pm 5$ %
Reverse polarity protection	Yes
Consumption w/o load	$\leq 100$ mA
Pulses per revolution	100...8192
Reference signal	Zero pulse, width $90^\circ$
Sensing method	Optical
Output frequency	$\leq 300$ 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)
Motor shaft tolerance	0.25 mm axial 0.1 mm radial
Protection DIN EN 60529	IP 54
Operating speed	$\leq 6000$ rpm
Starting torque	$\leq 0.015$ 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	

### 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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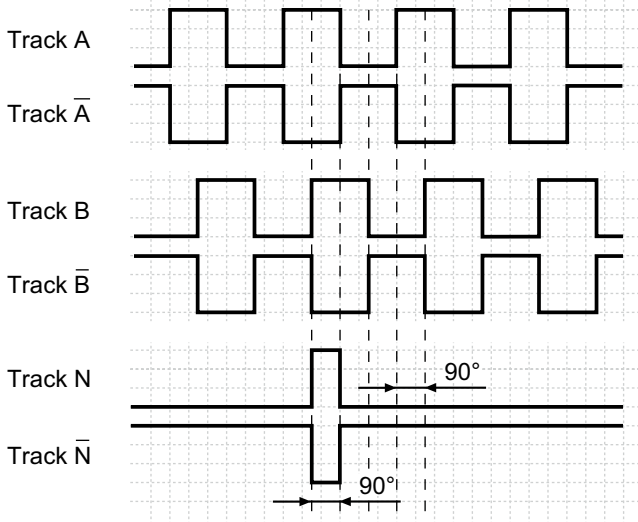
100...8192 pulses per revolution

## ITD21H00 - HT High Temperature

### Output signals

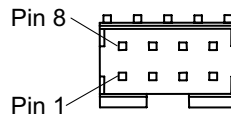
Clockwise rotation when looking at the mounting side.

NI-Output signals



### Terminal assignment

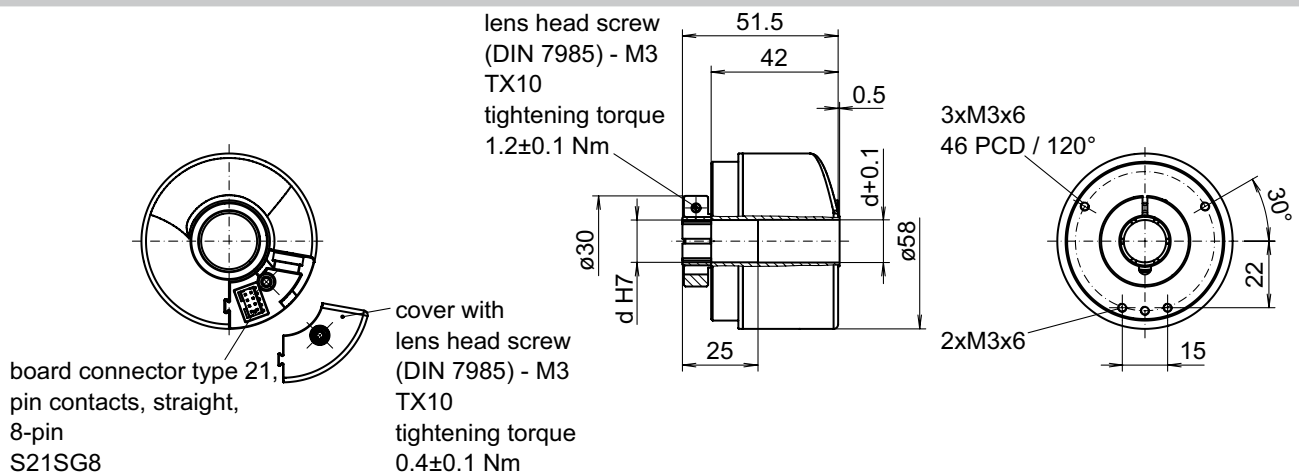
Connector	Assignment
Pin 1	UB
Pin 2	GND
Pin 3	Track A
Pin 4	Track A inv.
Pin 5	Track B
Pin 6	Track B inv.
Pin 7	Track N
Pin 8	Track N inv.



### Trigger level

Outputs	Linedriver
Output level High	$\geq 2.4$ V
Output level Low	$\leq 0.5$ V
Load	$\leq 70$ mA

### Dimensions



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