

Incremental encoders

Through hollow shaft $\varnothing 14$ mm
100...8192 pulses per revolution

ITD21H01 - HT High Temperature



ITD21H01 HT with through hollow shaft

Features

- Size $\varnothing 58$ mm
- Precise optical sensing
- Output signal level TTL
- Through hollow shaft, $\varnothing 14$ mm
- For cone clamping installation
- Max. 8192 pulses per revolution
- Operating temperature $-30...+120$ °C
- Detachable cable – tangential outlet

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	$\varnothing 14$ mm (through hollow shaft)
Motor shaft tolerance	0.25 mm axial 0.1 mm radial
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

ITD21H01

	T	NI	S21SG8	F	14	IP54
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						Protection	
						IP54	IP 54
						Through hollow shaft	
					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

11073114	Torque arm, 3-armed, bolt circle $\varnothing 76$ mm, mounting M3 (mounting kit 019)
11073115	Cone spreader shaft $\varnothing 10$ mm
11073116	Cone spreader shaft $\varnothing 10$ mm V1
11073117	Cone spreader shaft $\varnothing 14$ mm

Further connection cable lengths see accessories.

Incremental encoders

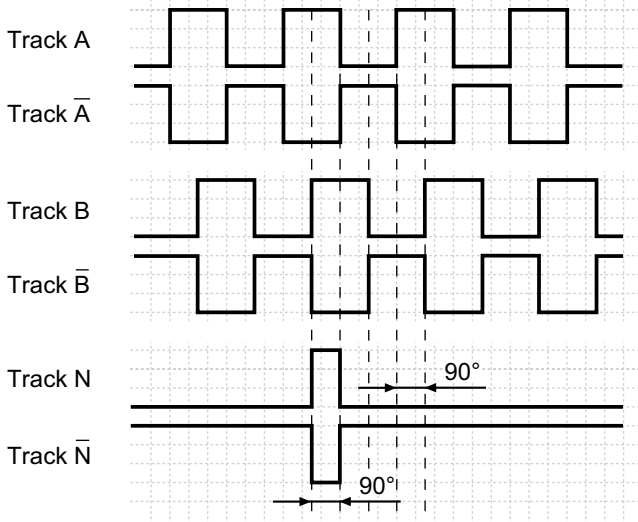
Through hollow shaft $\varnothing 14$ mm
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Output signals

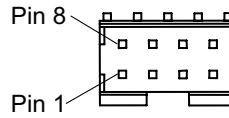
Clockwise rotation when looking at the mounting side.

NI-Output signals



Terminal assignment

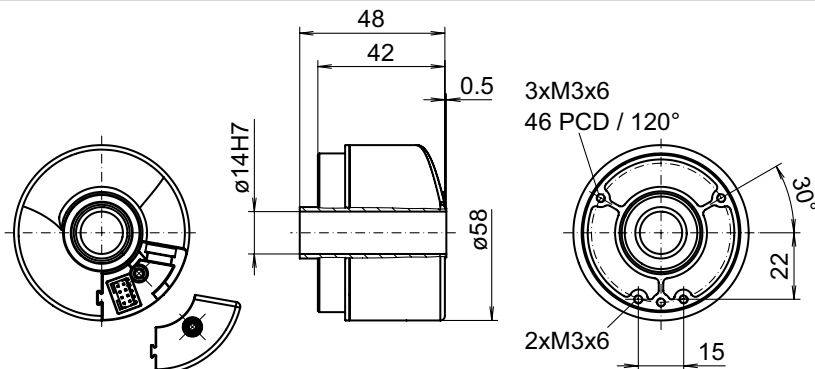
Connector	Assignment
Pin 1	UB
Pin 2	GND
Pin 3	Track A
Pin 4	Track A inv.
Pin 5	Track B
Pin 6	Track B inv.
Pin 7	Track N
Pin 8	Track N inv.



Trigger level

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

Dimensions



038-9 H01

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