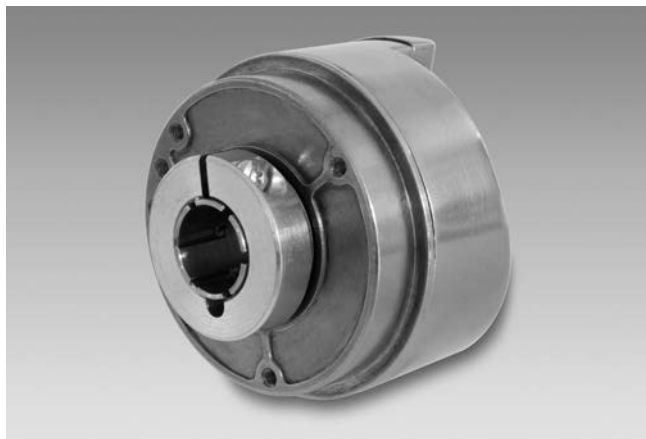


Incremental encoders

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) |
| 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 |

Incremental encoders

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ITD21H00 - HT High Temperature

Part number

ITD21H00

| | | | | | | |
|--|---|----|--------|---|--|------|
| | T | NI | S21SG8 | F | | IP54 |
|--|---|----|--------|---|--|------|

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.

Incremental encoders

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

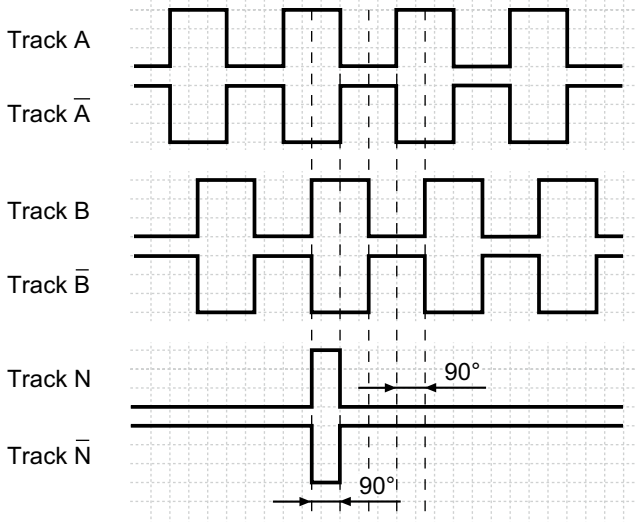
100...8192 pulses per revolution

ITD21H00 - HT High Temperature

Output signals

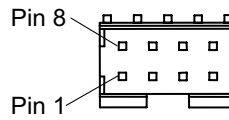
Clockwise rotation when looking at the mounting side.

NI-Output signals



Terminal assignment

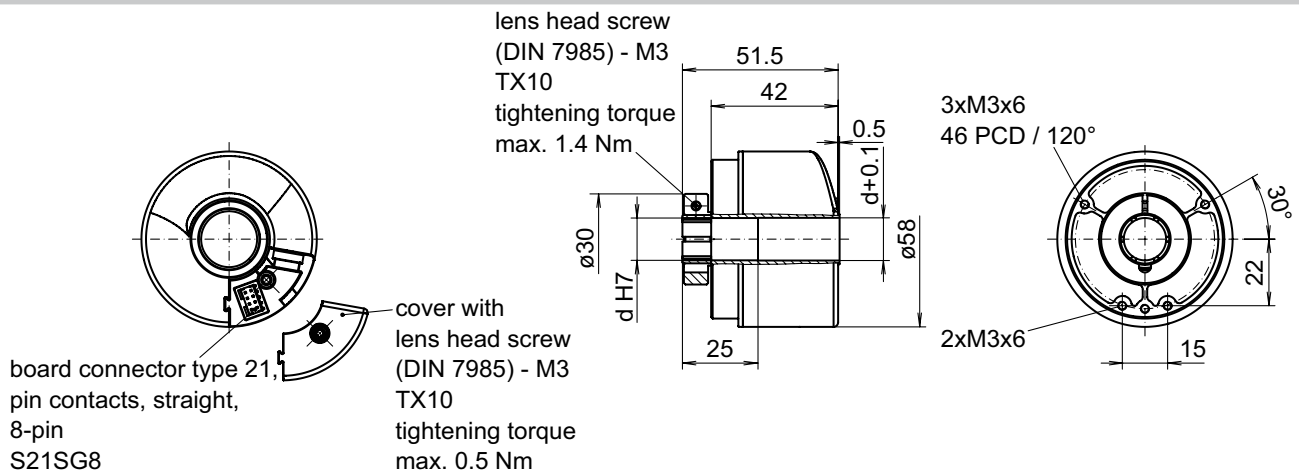
| Connector | Assignment |
|-----------|--------------|
| Pin 1 | UB |
| Pin 2 | GND |
| Pin 3 | Track A |
| Pin 4 | Track A inv. |
| Pin 5 | Track B |
| Pin 6 | Track B inv. |
| Pin 7 | Track N |
| Pin 8 | Track N inv. |



Trigger level

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

Dimensions



Incremental encoders

Through hollow shaft \varnothing 10 to \varnothing 14 mm
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ITD21H00 - HT High Temperature
