Incremental encoders

Through hollow shaft ø14 mm

Resolution 200…4096 pulses

ITD 21 A 4 Y82

ITD 21 A 4 Y82 with through hollow shaft

Features

- **Encoder with through hollow shaft ø14 mm**
- **Resolution max. 4096 ppr**
- **Optical sensing**
- **Mounting by torque support**
- **TTL or HTL output signals**
- **Cable output radial**

Technical data - electrical ratings

Voltage supply	5 VDC ±5 % 8...30 VDC
Reverse polarity protection	Yes
Consumption w/o load	≤100 mA
Resolution (steps/turn)	200...4096
Reference signal	Zero pulse, width 90°
Sensing method	Optical
Output frequency	≤300 kHz (TTL) ≤160 kHz (HTL)
Output signals	A, B, N + inverted
Output circuit	TTL linedriver (short-circuit proof) HTL push-pull (short-circuit proof)
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 55011

Technical data - mechanical design

Dimensions (flange)	ø58 mm
Shaft type	ø14 mm (through hollow shaft)
Motor shaft tolerance	0.25 mm axial 0.1 mm radial
Mounting kit variant	021
Protection DIN EN 60529	IP 54
Operating speed	≤8000 rpm
Starting torque	≤0.01 Nm (+20 °C)
Materials	Housing: aluminium, black, powder-coated Shaft: stainless steel
Operating temperature	-20...+100 °C -20...+120 °C
Relative humidity	90 % non-condensing
Resistance	DIN EN 60068-2-6 Vibration 20 g, 55-2000 Hz DIN EN 60068-2-27 Shock 100 g, 6 ms
Connection	Cable 1 m
Weight approx.	300 g

Subject to modification in technic and design. Errors and omissions excepted.

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Part number

ITD 21 A 4 Y82			NI	KR1		14	IP54	021

See part number (pulses)

Voltage supply / signals
- T 5 VDC / TTL level, linedriver
- H 8...30 VDC / HTL level, push pull
- R 8...30 VDC / TTL level, linedriver

Output signals
- NI A, A inv, B, B inv, 0, 0 inv

Connection
- KR1 Cable 1 m, radial

Operating temperature
- E -20...+100 °C (HTL)
- F -20...+120 °C (TTL)

Through hollow shaft
- 14 ø14 mm

Protection
- IP54 IP 54

Mounting kit
- 021 Mounting accessory kit 021

Part number (pulses)

200	500	1000	1800	4000
250	512	1024	2000	4096
256	600	1200	2048	
300	720	1250	2500	
360	800	1440	3000	
400	900	1500	3600	

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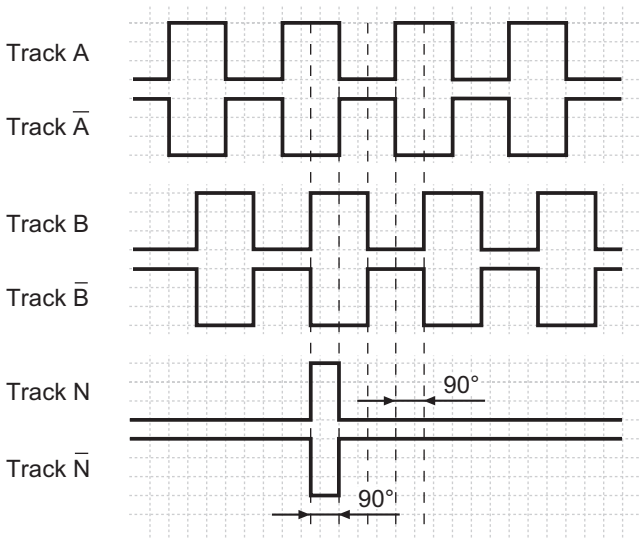
Output signals

Clockwise rotation when looking at the mounting side.

NI-Output signals



Terminal assignment

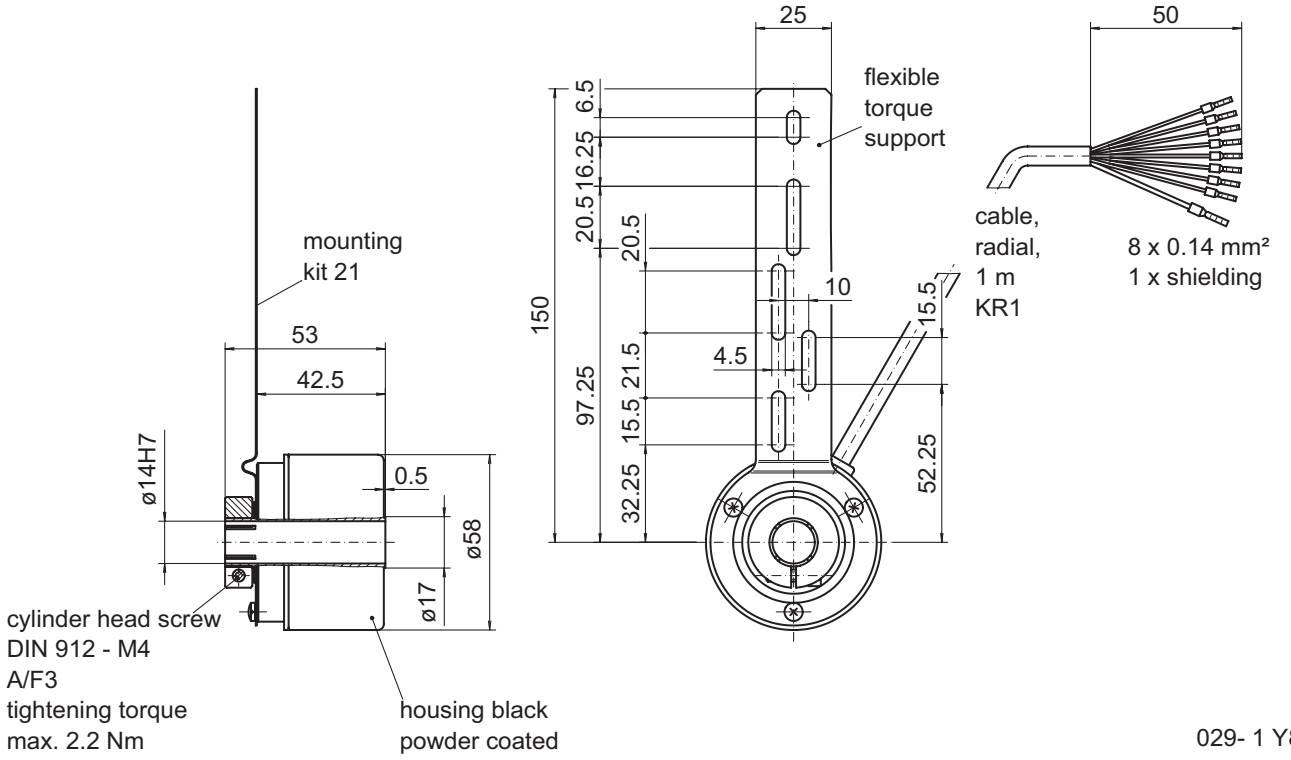
Core colour	Assignment
green	Track A
brown	Track A inv.
grey	Track B
black	Track B inv.
pink	Track N
white	Track N inv.
red	UB
blue	GND
transparent	Shield/Housing

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	≥UB -3 V
Output level Low	≤1.5 V
Load	≤70 mA

Dimensions



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