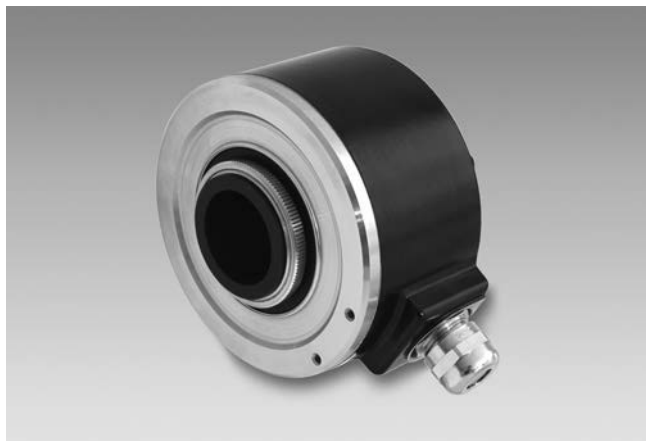


# Incremental encoders

Through hollow shaft  $\varnothing 20$  mm,  $\varnothing 25$  mm

2000...10000 pulses per revolution

## ITD 41 A 4 Y100



ITD 41 A 4 Y100 with through hollow shaft

### Technical data - electrical ratings

Voltage supply	5 VDC $\pm 5$ % 8...30 VDC
Reverse polarity protection	Yes
Consumption w/o load	$\leq 100$ mA
Pulses per revolution	2000...10000
Reference signal	Zero pulse, width $90^\circ$
Sensing method	Optical
Output frequency	$\leq 300$ kHz (TTL) $\leq 160$ kHz (HTL)
Output signals	A, B, N + inverted
Output stages	TTL linedriver (short-circuit proof) HTL push-pull (short-circuit proof)
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-3

### Features

- Robust encoder with isolated through hollow shaft  $\varnothing 20$  mm,  $\varnothing 25$  mm
- Bolted bearing for maximum reliability
- Max. 10000 pulses per revolution
- Optical sensing method
- Electrically isolated mounting
- Wide temperature range from  $-40...+100$  °C

### Optional

- Cable with connector

### Technical data - mechanical design

Size (flange)	$\varnothing 80$ mm
Shaft type	$\varnothing 20$ mm (through hollow shaft) $\varnothing 25$ mm (through hollow shaft)
Mounting kit	059 097
Protection DIN EN 60529	IP 65
Operating speed	$\leq 5000$ rpm $\leq 3000$ rpm IP 65 ( $> 70$ °C)
Starting torque	$\leq 0.02$ Nm ( $+20$ °C)
Materials	Housing: aluminium, black, powder-coated Shaft: stainless steel
Operating temperature	$-20...+70$ °C $-30...+100$ °C $-40...+100$ °C (only with mounting kit 97)
Relative humidity	90 % non-condensing
Resistance	DIN EN 60068-2-6 Vibration 10 g, 55-2000 Hz DIN EN 60068-2-27 Shock 30 g, 11 ms
Connection	Cable 1 m
Weight approx.	900 g

# Incremental encoders

Through hollow shaft  $\varnothing 20$  mm,  $\varnothing 25$  mm  
2000...10000 pulses per revolution

ITD 41 A 4 Y100

## Part number

ITD 41 A 4 Y100 

		NI	KR1				
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Mounting kit  
059 Mounting kit 059  
097 Mounting kit 097

Protection  
IP54 IP 54  
IP65 IP 65

Through hollow shaft  
20  $\varnothing 20$  mm  
25  $\varnothing 25$  mm

Operating temperature  
S -20...+70 °C  
L -30...+100 °C  
E -40...+100 °C (only with mounting kit 97)

Connection  
KR1 Cable 1 m, radial

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

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

Pulse number - see table

## Pulse number

2000	2500	3600	5000
2048	3072	4096	10000

# Incremental encoders

Through hollow shaft  $\varnothing 20$  mm,  $\varnothing 25$  mm

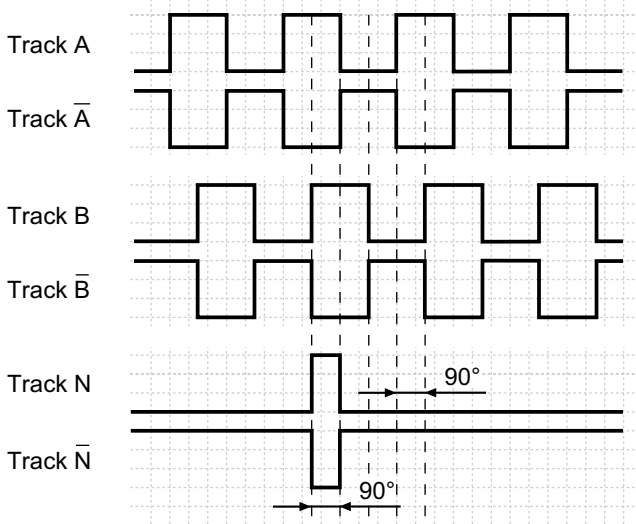
2000...10000 pulses per revolution

## ITD 41 A 4 Y100

### Output signals

Clockwise rotation when looking at the mounting side.

NI-Output signals



### Terminal assignment

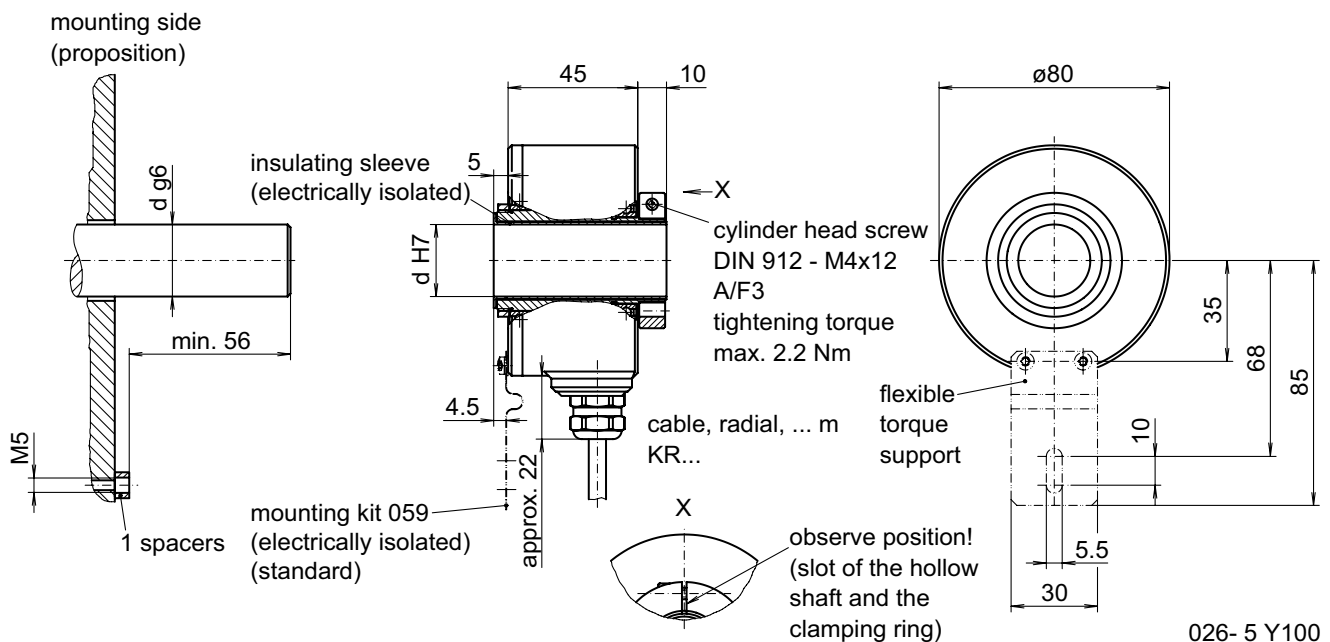
Core colour	Assignment
brown	Track A
green	Track A inv.
grey	Track B
pink	Track B inv.
red	Track N
black	Track N inv.
brown 0,5 mm <sup>2</sup>	UB
white 0,5 mm <sup>2</sup>	GND
blue	UB-Sense
white	GND-Sense
transparent	Shield/Housing

### Trigger level

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

Outputs	Push-pull short-circuit proof
Output level High	$\geq UB - 3$ V
Output level Low	$\leq 1.5$ V
Load	$\leq 70$ mA

### ITD 41 A 4 Y100 with mounting kit 59



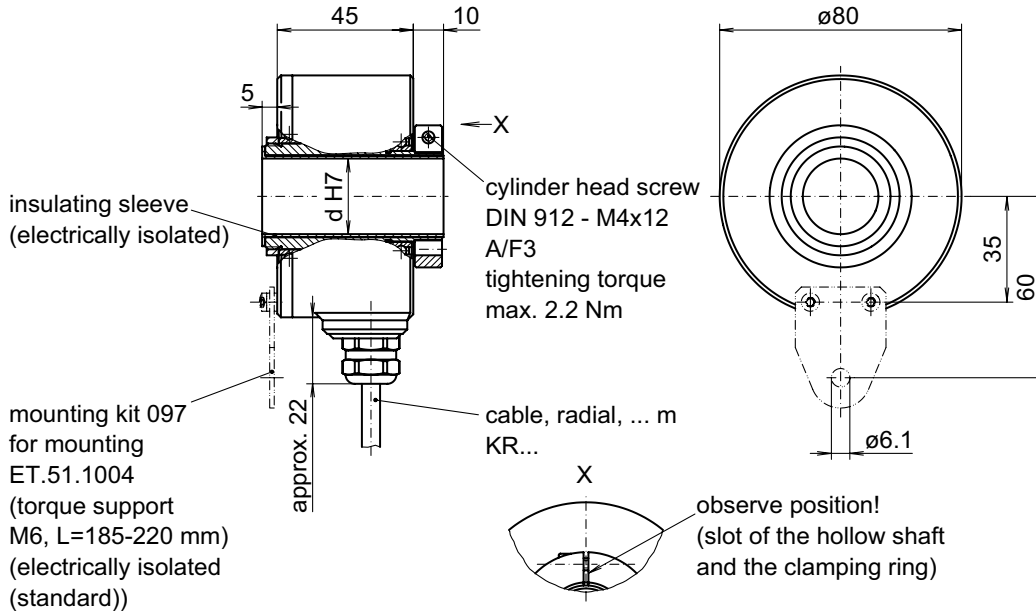
# Incremental encoders

Through hollow shaft  $\varnothing 20$  mm,  $\varnothing 25$  mm  
2000...10000 pulses per revolution

ITD 41 A 4 Y100

## Dimensions

### ITD 41 A 4 Y100 with mounting kit 97



### ITD 41 A 4 Y100 with mounting kit 97 and torque support size M6 (optional accessories)

