

# Incremental encoders

Hollow shaft  $\varnothing 20$  mm,  $\varnothing 25$  mm

Resolution 2000...10000 pulses

## ITD 41 A 4 Y100



ITD 41 A 4 Y100 with 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
Resolution (steps/turn)	2000...10000
Reference signal	Zero pulse, width 90°
Sensing method	Optical
Output frequency	$\leq 300$ kHz (TTL) $\leq 160$ 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

### Features

- Robust encoder with isolated hollow shaft  $\varnothing 20$  mm,  $\varnothing 25$  mm
- Bolted bearing for maximum reliability
- Resolution max. 10000 ppr
- Optical sensing
- Electrically isolated mounting
- Wide temperature range from  $-40...+100$  °C

### Optional

- Cable with connector

### Technical data - mechanical design

Dimensions (flange)	$\varnothing 80$ mm
Shaft	$\varnothing 20$ mm hollow shaft $\varnothing 25$ mm hollow shaft
Motor shaft tolerance	0.25 mm axial 0.05 mm radial
Mounting kit variant	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
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

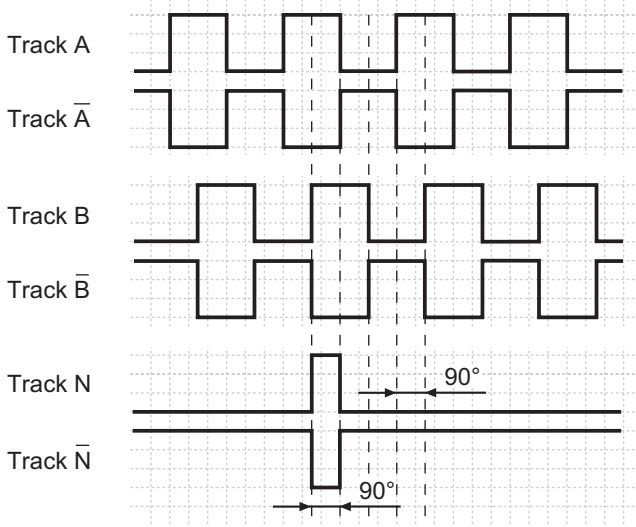
Hollow shaft  $\varnothing 20$  mm,  $\varnothing 25$  mm  
Resolution 2000...10000 pulses

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### Output signals

Clockwise rotation when looking at the mounting side.

NI-Output signals



### Terminal assignment

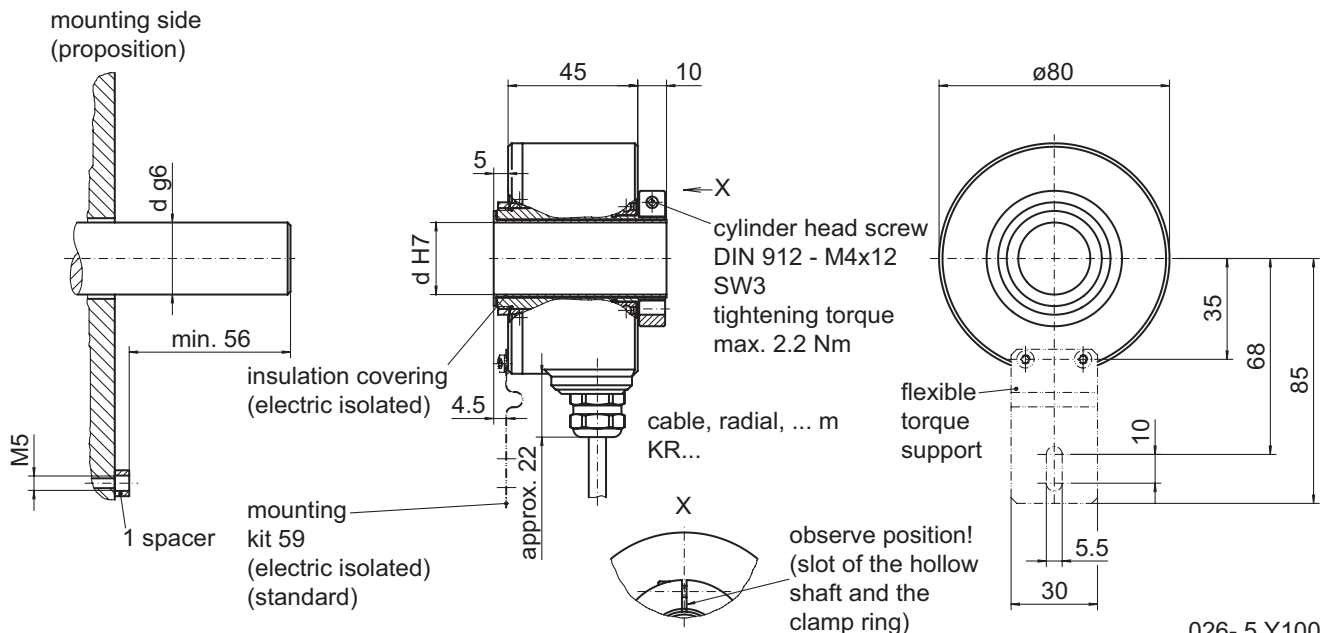
Core colour	Assignment
brown	Track A
green	Track A inv.
grey	Track B
pink	Track B inv.
red	Track N
black	Track N inv.
brown 0,5 mm <sup>2</sup>	UB
white 0,5 mm <sup>2</sup>	GND
blue	UB-Sense
white	GND-Sense
transparent	Shield/Housing

### 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



026- 5 Y100

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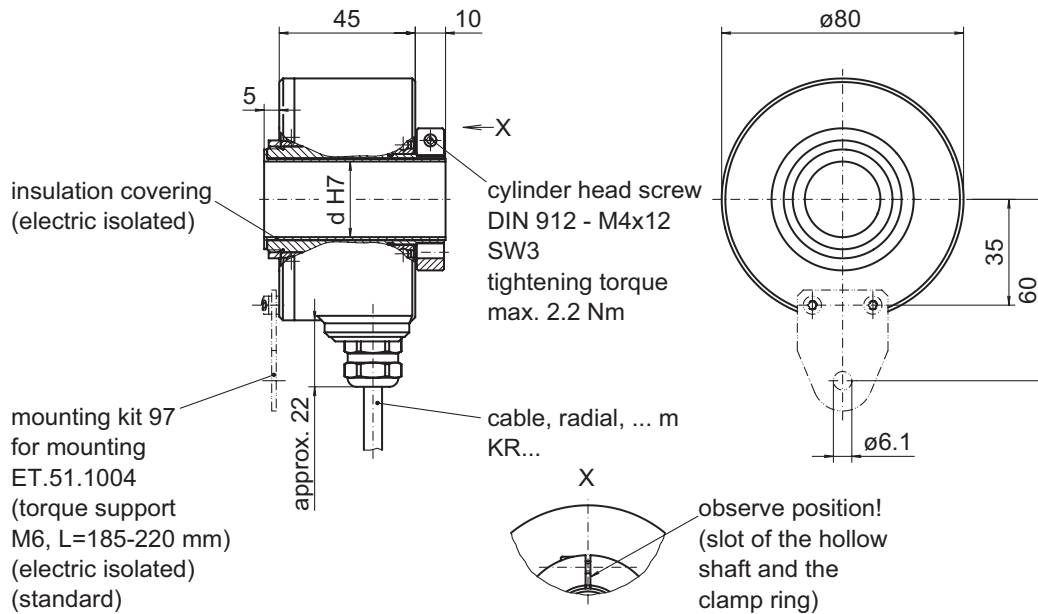
Hollow shaft  $\varnothing 20$  mm,  $\varnothing 25$  mm

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## 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)

