

## ITD 41 A 4 Y22

Through hollow shaft  $\varnothing 17$  to  $\varnothing 27$  mm  
2000...10000 pulses per revolution

### Overview

- Encoder with through hollow shaft  $\varnothing 17...27$  mm
- Max. 10000 pulses per revolution
- Optical sensing method
- Through hollow shaft
- Mounting by torque support
- TTL or HTL output signals
- Cable output radial



### Technical data

#### 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	EN 61000-6-2
Emitted interference	EN 61000-6-3

#### Technical data - mechanical design

Size (flange)	$\varnothing 80$ mm
Shaft type	$\varnothing 17...27$ mm (through hollow shaft)

#### Technical data - mechanical design

Mounting kit	050
Protection EN 60529	IP 65
Operating speed	$\leq 5000$ rpm $\leq 3000$ rpm IP 65 ( $> 70^\circ\text{C}$ )
Starting torque	$\leq 0,025$ Nm ( $+20^\circ\text{C}$ )
Material	Housing: aluminium, black, powder-coated Shaft: stainless steel
Operating temperature	$-20...+70^\circ\text{C}$ $-20...+100^\circ\text{C}$
Relative humidity	90 % non-condensing
Resistance	EN 60068-2-6 Vibration 10 g, 55-2000 Hz EN 60068-2-27 Shock 30 g, 11 ms
Connection	Cable 1 m
Weight approx.	580 g

### Optional

- Cable with connector
- Extended operating temperature range

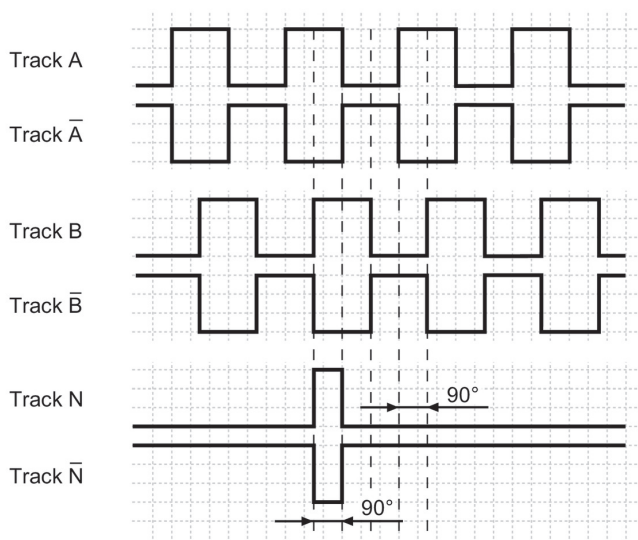
**Terminal assignment**

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

**Output signals**

Clockwise rotation when looking at the mounting side.

NI-Output signals



**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



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**Ordering reference**

ITD 41 A 4 Y22		#####	#	NI	KR1	#	##	####	050
<b>Product</b>	ITD 41 A 4 Y22								
	ITD 41 A 4 Y22								
<b>Pulse number</b>									
2000		2000							
2048		2048							
2500		2500							
3072		3072							
3600		3600							
4096		4096							
5000		5000							
10000		10000							
<b>Voltage supply / signals</b>									
5 VDC / TTL level, linedriver				T					
8...30 VDC / HTL level, push-pull				H					
8...30 VDC / TTL level, linedriver				R					
<b>Output signals</b>									
A, A inv, B, B inv, N, N inv				NI					
<b>Connection</b>									
Cable 1 m, radial					KR1				
<b>Operating temperature</b>									
-20...+70 °C							S		
-20...+100 °C							E		
<b>Through hollow shaft</b>									
$\varnothing 20$ mm								20	
$\varnothing 25$ mm								25	
$\varnothing 27$ mm								27	
<b>Protection</b>									
IP 54									IP54
IP 65									IP65
<b>Mounting kit</b>									
Mounting kit 050									050

Other diameters on request.