

ITD 41 A 4 Y 2

Through hollow shaft $\varnothing 10$ to $\varnothing 16$ mm
2000...10000 pulses per revolution

Overview

- Encoder with through hollow shaft $\varnothing 10 \dots 16$ 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 ± 5 % 8...30 VDC
Reverse polarity protection	Yes
Consumption w/o load	≤ 100 mA
Pulses per revolution	2000 ... 10000
Reference signal	Zero pulse, width 90°
Sensing method	Optical
Output frequency	≤ 300 kHz (TTL) ≤ 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	$\varnothing 10 \dots 16$ mm (through hollow shaft)

Technical data - mechanical design

Mounting kit	050
Protection EN 60529	IP 65
Operating speed	≤ 8000 rpm ≤ 5000 rpm IP 65 (> 70 °C)
Starting torque	≤ 0.015 Nm ($+20$ °C)
Material	Housing: aluminium, black, powder-coated Shaft: stainless steel
Operating temperature	$-20 \dots +70$ °C $-20 \dots +100$ °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.	600 g

Optional

- Cable with connector
- Extended operating temperature range

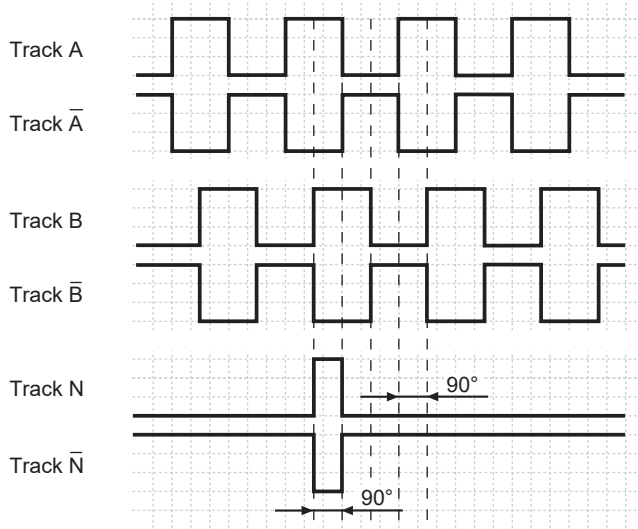
Terminal assignment

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 ²	UB
white 0,5 mm ²	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	≥ 2.4 V
Output level Low	≤ 0.5 V
Load	≤ 70 mA

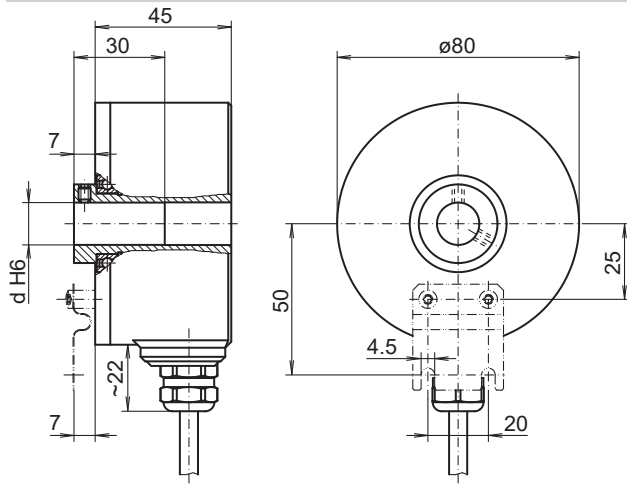
Outputs	Push-pull short-circuit proof
Output level High	$\geq U_B - 3$ V
Output level Low	≤ 1.5 V
Load	≤ 70 mA

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Dimensions



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Ordering reference

		ITD 41 A 4 Y 2	#####	#	NI	KR1	#	##	####	050
Product		ITD 41 A 4 Y 2								
Pulse number										
	2000		2000							
	2048		2048							
	2500		2500							
	3072		3072							
	3600		3600							
	4096		4096							
	5000		5000							
	10000		10000							
Voltage supply / signals										
	5 VDC / TTL level, linedriver				T					
	8...30 VDC / HTL level, push-pull				H					
	8...30 VDC / TTL level, linedriver				R					
Output signals										
	A, A inv, B, B inv, N, N inv				NI					
Connection										
	Cable 1 m, radial					KR1				
Operating temperature										
	-20...+70 °C							S		
	-20...+100 °C							E		
Through hollow shaft										
	ø12 mm								12	
	ø14 mm								14	
	ø15 mm								15	
	ø16 mm								16	
Protection										
	IP 54								IP54	
	IP 65								IP65	
Mounting kit										
	Mounting kit 050									050

Other diameters on request.