

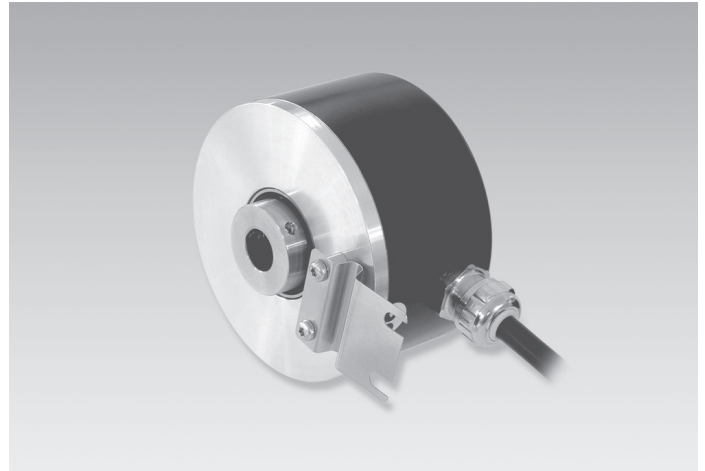
ITD 4 A 4

Blind hollow shaft $\varnothing 10$ to $\varnothing 16$ mm

5... 100 pulses per revolution

Overview

- Encoder with blind hollow shaft $\varnothing 10...16$ mm
- Max. 100 pulses per revolution
- Optical sensing method
- Mounting by torque support
- TTL or HTL output signals
- Cable output radial or axial



Technical data

Technical data - electrical ratings

Voltage supply	5 VDC $\pm 5\%$ 8...30 VDC
Reverse polarity protection	Yes
Consumption w/o load	≤ 100 mA
Pulses per revolution	5 ... 100
Reference signal	Zero pulse, width 90°
Sensing method	Optical
Output frequency	≤ 60 kHz
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

Technical data - mechanical design

Size (flange)	$\varnothing 80$ mm
Shaft type	$\varnothing 10...16$ mm (blind hollow shaft)

Optional

- Cable with connector

Technical data - mechanical design

Mounting kit	050
Protection DIN EN 60529	IP 65
Operating speed	≤ 8000 rpm ≤ 5000 rpm (IP 65)
Starting torque	$\leq 0,01$ 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	DIN EN 60068-2-6 Vibration 10 g, 55-2000 Hz DIN EN 60068-2-27 Shock 100 g, 11 ms
Connection	Cable 1 m
Weight approx.	550 g

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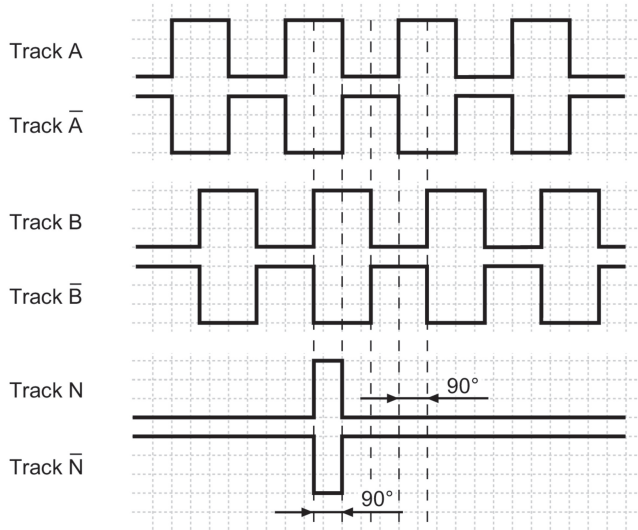
Terminal assignment

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
yellow	UB-Sense
violet	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

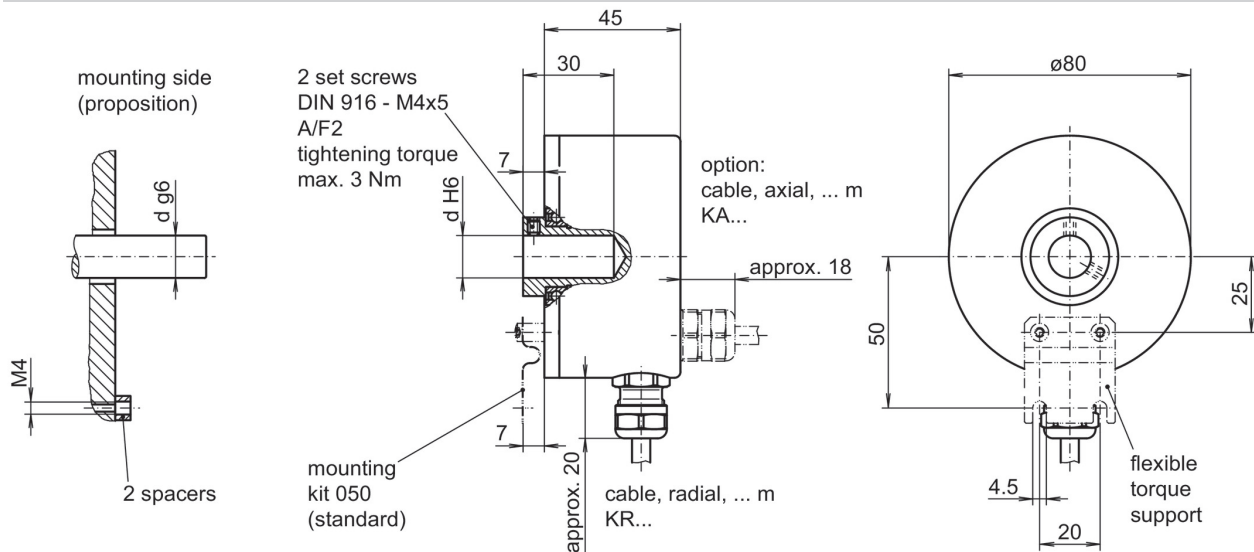
Outputs	Push-pull short-circuit proof
Output level High	$\geq UB - 3$ V
Output level Low	≤ 1.5 V
Load	≤ 70 mA

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Dimensions



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5...100 pulses per revolution

Ordering reference

		ITD 4 A 4	#####	#	NI	#####	#	##	####
Product		ITD 4 A 4							050
Pulse number									
5			5						
8			8						
16			16						
32			32						
60			60						
64			64						
100			100						
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			
Cable 1 m, axial						KA1			
Operating temperature									
-20...+70 °C								S	
-20...+100 °C								E	
Blind hollow shaft									
$\varnothing 10$ mm								10	
$\varnothing 12$ mm								12	
$\varnothing 14$ mm								14	
$\varnothing 15$ mm								15	
$\varnothing 16$ mm								16	
Protection									
IP 54									IP54
IP 65									IP65
Mounting kit									
Mounting kit 050									050

Other diameters on request.