

Overview

- Encoder with blind hollow shaft $\varnothing 10$...16mm
- Max. 2048 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	200 ... 2048
Reference signal	Zero pulse, width 90°
Sensing method	Optical
Output frequency	≤ 120 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
- Extended operating temperature range

Technical data - mechanical design

Mounting kit	050
Protection DIN EN 60529	IP 65
Operating speed	≤ 8000 rpm ≤ 5000 rpm IP 65 (> 70 °C)
Starting torque	$\leq 0,01$ Nm ($+20$ °C)
Material	Housing: aluminium, black, powder-coated Shaft: stainless steel
Operating temperature	-20 ... $+70$ °C -20 ... $+100$ °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

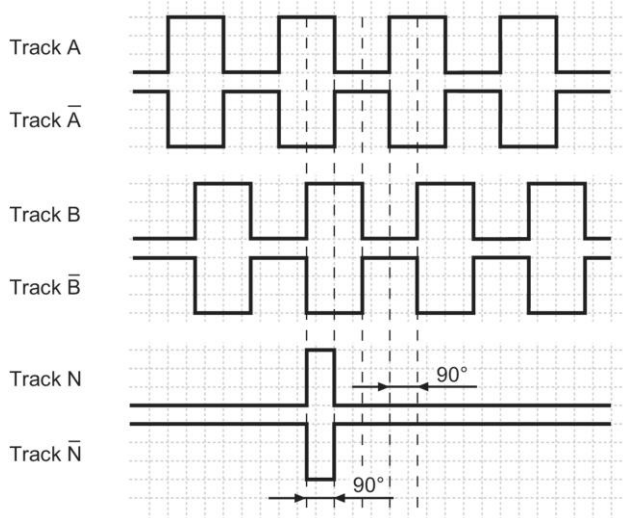
Terminal assignment

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

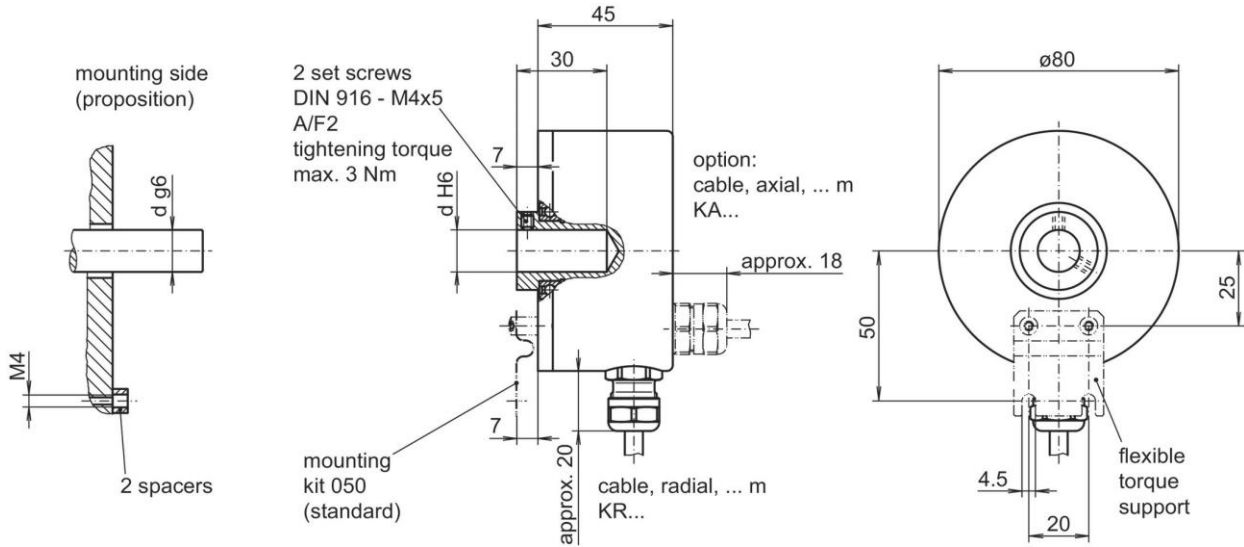
Outputs	Linedriver
Output level High	≥ 2.4 V
Output level Low	≤ 0.5 V
Load	≤ 70 mA

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

ITD 40 A 4

Blind hollow shaft $\varnothing 10$ to $\varnothing 16$ mm
200...2048 pulses per revolution

Dimensions



ITD 40 A 4

Blind hollow shaft $\varnothing 10$ to $\varnothing 16$ mm
200...2048 pulses per revolution

Ordering reference

	ITD 40 A 4	##### #	NI #####	# ##	#### 050
Product	ITD 40 A 4				
Pulse number					
200		200			
360		360			
500		500			
512		512			
720		720			
1000		1000			
1024		1024			
2048		2048			
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
$\varnothing 11$ mm					11
$\varnothing 12$ 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.