

Overview

- Encoder with through hollow shaft $\varnothing 17$... $\varnothing 27$ mm
- Max. 2048 pulses per revolution
- Optical sensing method
- 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	≤ 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	$\varnothing 17$... $\varnothing 27$ mm (through 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	≤ 5000 rpm ≤ 3000 rpm IP 65 ($> 70^\circ\text{C}$)
Starting torque	$\leq 0,015$ 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.	580 g

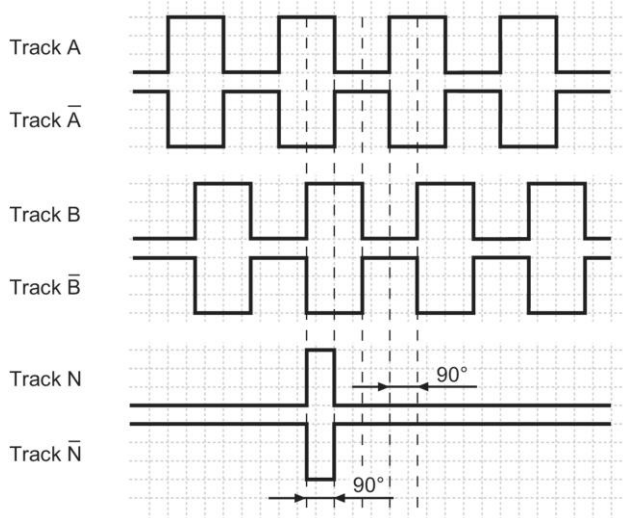
Terminal assignment

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

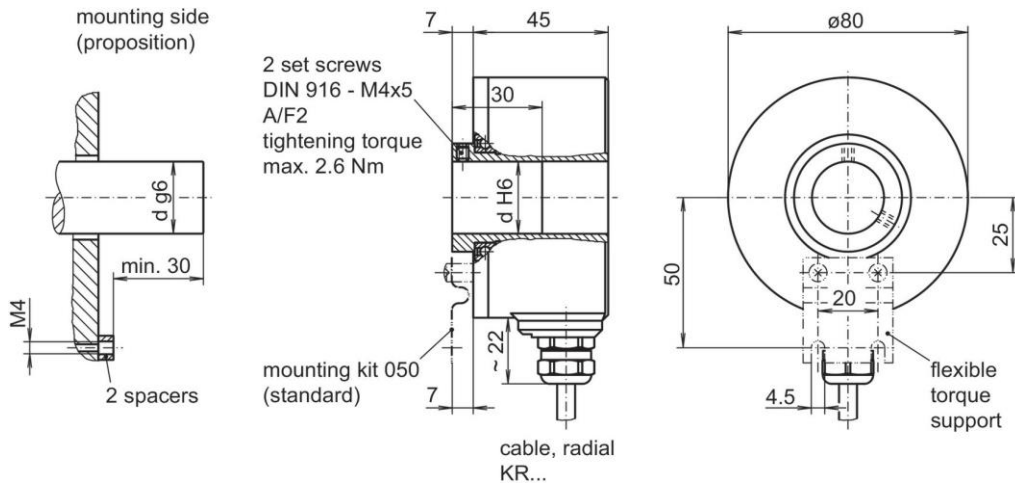


Trigger level

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

Dimensions



ITD 40 A 4 Y22

Through hollow shaft $\varnothing 17$ to $\varnothing 27$ mm
200...2048 pulses per revolution

Ordering reference

	ITD 40 A 4 Y22	##### # NI KR1 # ## ##### 050
Product	ITD 40 A 4 Y22	
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
Operating temperature		
-20...+70 °C		S
-20...+100 °C		E
Through hollow shaft		
$\varnothing 20$ mm		20
$\varnothing 25$ mm		25
Protection		
IP 54		IP54
IP 65		IP65
Mounting kit		
Mounting kit 050		050

Other diameters on request.