

Incremental encoders

Hollow shaft $\varnothing 28$ to $\varnothing 30$ mm

Resolution 1024...10000 pulses

ITD 41 A 4 Y68



ITD 41 A 4 Y68 with hollow shaft

Technical data - electrical ratings

Voltage supply	5 VDC $\pm 5\%$ 8...30 VDC
Reverse polarity protection	Yes
Consumption w/o load	≤ 100 mA
Resolution (steps/turn)	1024...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 circuit	TTL linedriver (short-circuit proof) HTL push-pull (short-circuit proof)
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 55011

Features

- Encoder with hollow shaft $\varnothing 28$ -30 mm
- Resolution max. 10000 ppr
- Optical sensing
- Mounting by torque support
- TTL or HTL output signals
- Cable output radial

Optional

- Cable with connector
- Extended operating temperature range

Technical data - mechanical design

Dimensions (flange)	$\varnothing 80$ mm
Shaft	$\varnothing 28$...30 mm hollow shaft
Motor shaft tolerance	0.25 mm axial 0.05 mm radial
Mounting kit variant	050
Protection DIN EN 60529	IP 65
Operating speed	≤ 5000 rpm ≤ 3000 rpm IP 65 ($>70^\circ\text{C}$)
Starting torque	≤ 0.01 Nm
Materials	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 30 g, 11 ms
Connection	Cable 1 m
Weight approx.	580 g

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Part number

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		NI	KR1				050
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Mounting kit
050 Mounting accessory kit 050

Protection
IP54 IP 54
IP65 IP 65

Hollow shaft
28 Hollow shaft ø28 mm clamping ring
29 Hollow shaft ø29 mm clamping ring
30 Hollow shaft ø30 mm clamping ring

Operating temperature
S -20...+70 °C
E -20...+100 °C

Connection
KR1 Cable 1 m, radial

Output signals
NI A, A inv, B, B inv, 0, 0 inv

Voltage supply / signals
T 5 VDC / TTL level, linedriver
H 8...30 VDC / HTL level, push pull
R 8...30 VDC / TTL level, linedriver

See part number (pulses)

Part number (pulses)

1024	2048	3072	4096	10000
2000	2500	3600	5000	

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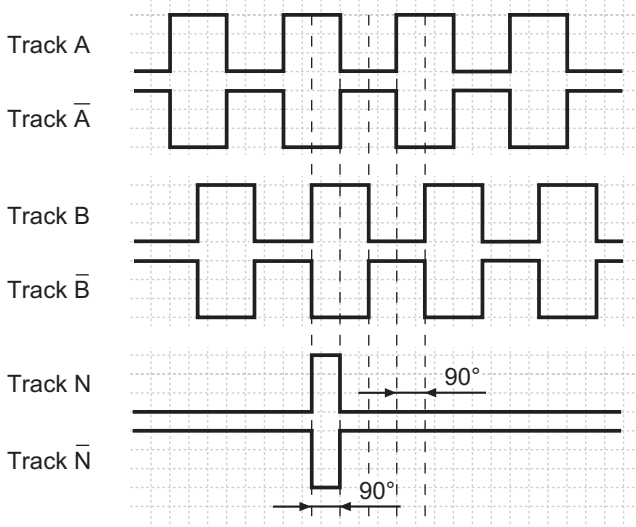
Resolution 1024...10000 pulses

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Output signals

Clockwise rotation when looking at the mounting side.

NI-Output signals



Terminal assignment

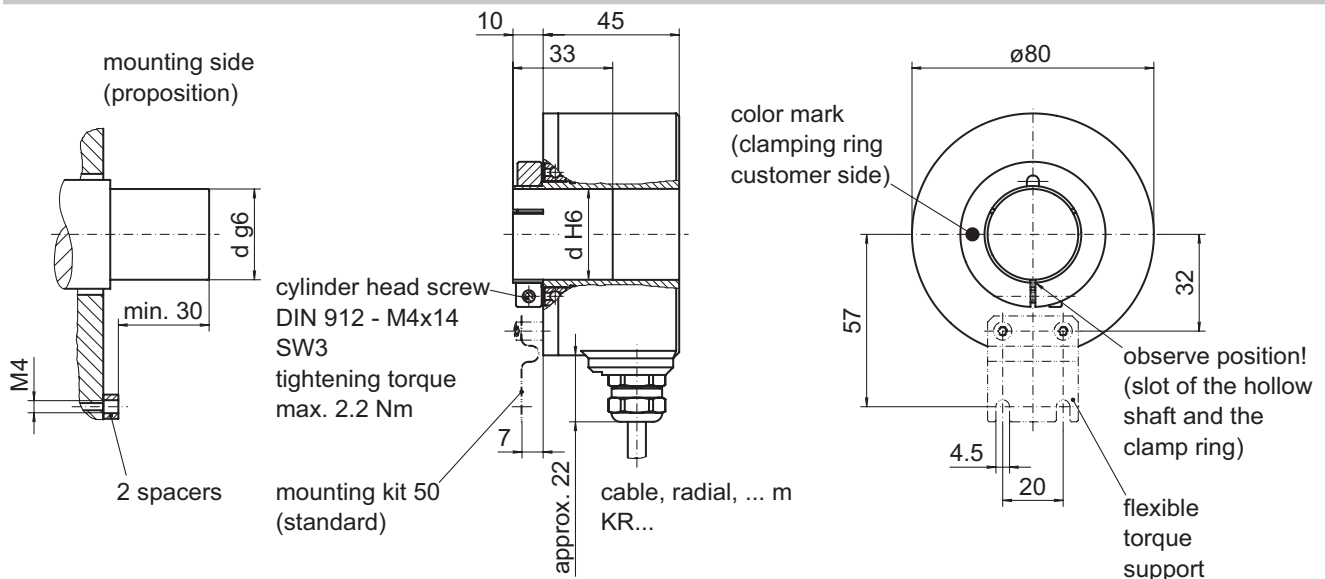
Core colour	Assignment
brown	Track A
green	Track A inv.
grey	Track B
pink	Track B inv.
red	Track N
black	Track N inv.
brown 0,5 mm ²	UB
white 0,5 mm ²	GND
blue	UB-Sense
white	GND-Sense
transparent	Shield/Housing

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



026- 5 Y68

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