

Incremental encoders

Hollow shaft $\varnothing 30$ to $\varnothing 50$ mm

Resolution 1024...4096 pulses

ITD 61 A 4 Y 4



ITD 61 A 4 Y 4 with hollow shaft

Technical data - electrical ratings

Voltage supply	5 VDC ± 5 % 8...30 VDC
Reverse polarity protection	Yes
Consumption w/o load	≤ 100 mA
Resolution (steps/turn)	1024...4096
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 $\varnothing 30$ -50 mm
- Resolution max. 4096 ppr
- Optical sensing
- NIRO design
- Flat design
- Mounting by torque support
- Mounting hole circle $\varnothing 130$ mm
- TTL or HTL output signals
- Cable output radial

Optional

- Cable with connector

Technical data - mechanical design

Dimensions (flange)	$\varnothing 120$ mm
Shaft	$\varnothing 30$...50 mm hollow shaft
Motor shaft tolerance	0.5 mm axial 0.1 mm radial
Mounting kit variant	058
Protection DIN EN 60529	IP 54
Operating speed	≤ 4000 rpm
Materials	Housing: stainless steel Shaft: stainless steel
Operating temperature	-20...+70 °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.	1650 g

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Part number

ITD 61 A 4 Y 4			NI	KR1	S		IP54	058
								Mounting kit 058 Mounting accessory kit 058
							Protection IP54 IP 54	
							Hollow shaft 30 Hollow shaft ø30 mm 32 Hollow shaft ø32 mm 35 Hollow shaft ø35 mm 38 Hollow shaft ø38 mm 40 Hollow shaft ø40 mm 42 Hollow shaft ø42 mm 44 Hollow shaft ø44 mm 45 Hollow shaft ø45 mm 48 Hollow shaft ø48 mm 50 Hollow shaft ø50 mm	
							Operating temperature S -20...+70 °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	2500	4096
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Output signals

Clockwise rotation when looking at the mounting side.

NI-Output signals

Track A

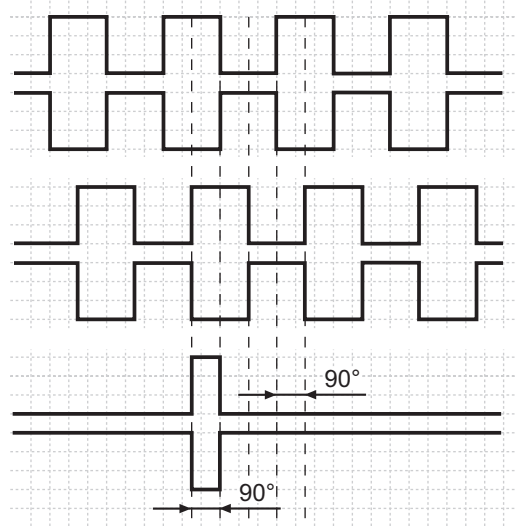
Track $\bar{A}$

Track B

Track $\bar{B}$

Track N

Track $\bar{N}$



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

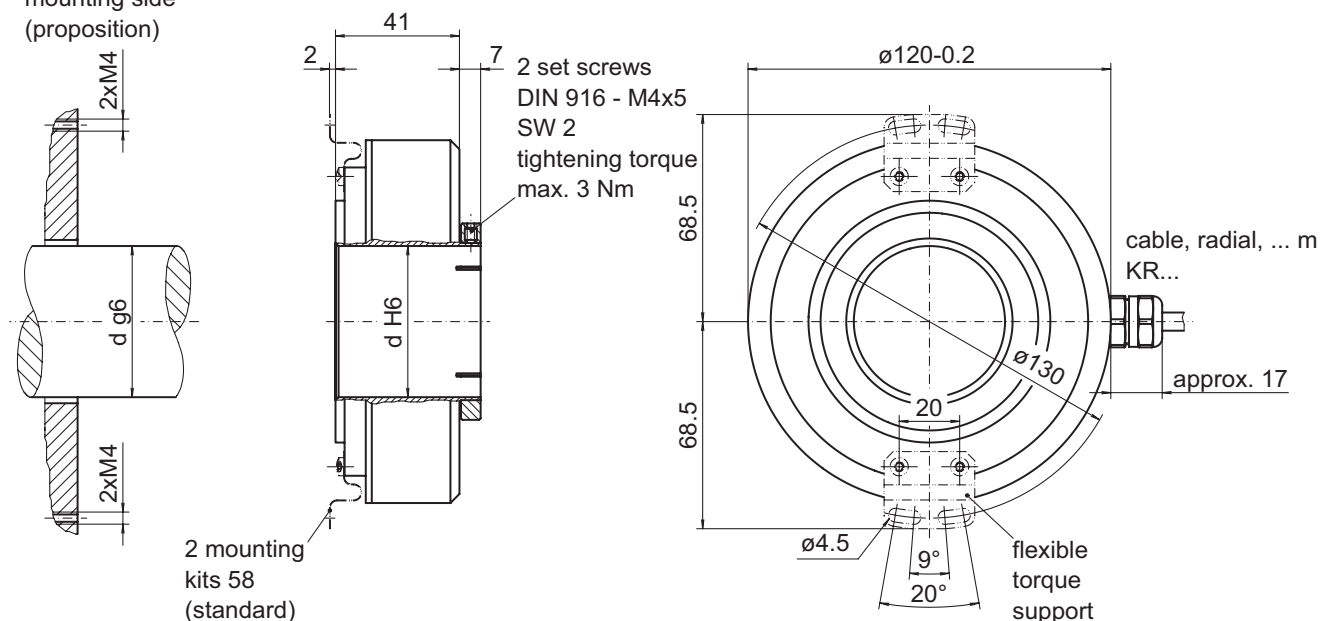
Trigger level

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

mounting side
(proposition)



026-30 Y 4

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