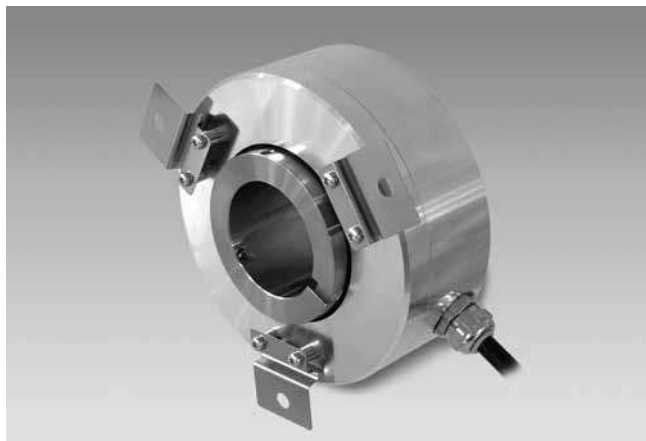


# Incremental encoders

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

Resolution 1024...4096 pulses

## ITD 61 A 4



ITD 61 A 4 with hollow shaft

### Features

- Encoder with hollow shaft  $\varnothing 30$ -50 mm
- Resolution max. 4096 ppr
- Optical sensing
- Flat design
- Mounting by torque support
- Mounting hole circle  $\varnothing 134$  mm
- TTL or HTL output signals
- Cable output radial

### Optional

- Cable with connector

### Technical data - electrical ratings

Voltage supply	5 VDC $\pm 5\%$ 8...30 VDC
Reverse polarity protection	Yes
Consumption w/o load	$\leq 100$ mA
Resolution (steps/turn)	1024...4096
Reference signal	Zero pulse, width $90^\circ$
Sensing method	Optical
Output frequency	$\leq 300$ kHz (TTL) $\leq 160$ 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

### 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	051
Protection DIN EN 60529	IP 54
Operating speed	$\leq 4000$ rpm
Starting torque	$\leq 0.15$ Nm (IP 30)
Materials	Aluminium, bare 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.	1500 g

# Incremental encoders

Hollow shaft ø30 to ø50 mm

Resolution 1024...4096 pulses

ITD 61 A 4

## Part number

ITD 61 A 4 

		NI	KR1	S		IP54	051
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Mounting kit

051 Mounting accessory kit 051

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

# Incremental encoders

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

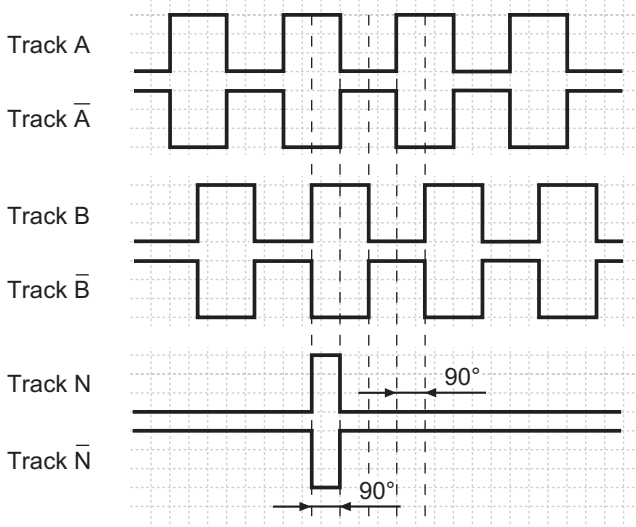
Resolution 1024...4096 pulses

## ITD 61 A 4

### Output signals

Clockwise rotation when looking at the mounting side.

NI-Output signals



### Terminal assignment

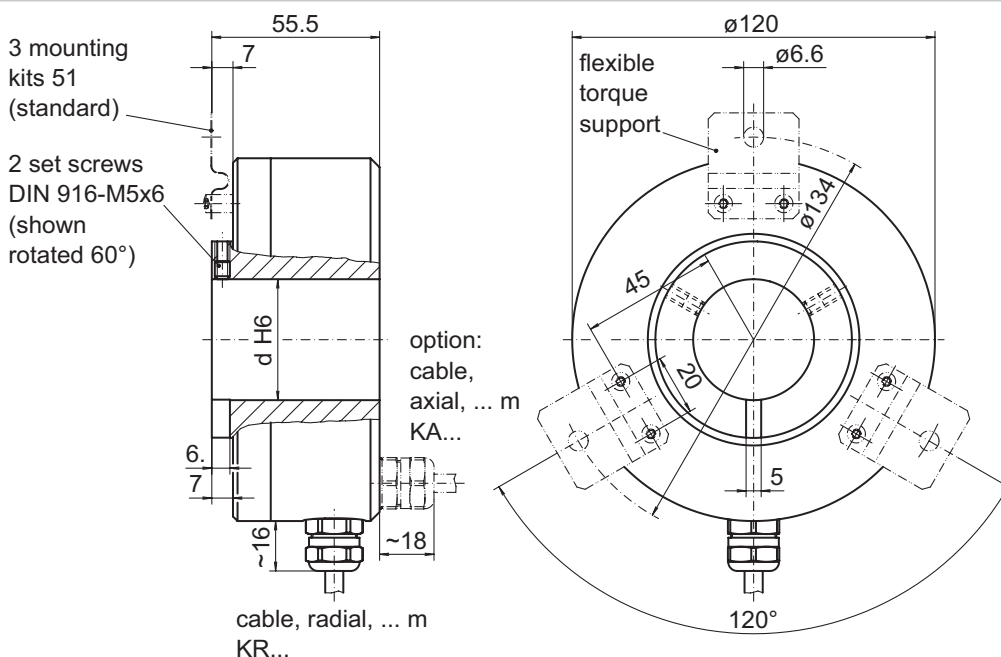
Core colour	Assignment
brown	Track A
green	Track A inv.
grey	Track B
pink	Track B inv.
red	Track N
black	Track N inv.
brown 0,5 mm <sup>2</sup>	UB
white 0,5 mm <sup>2</sup>	GND
blue	UB-Sense
white	GND-Sense
transparent	Shield/Housing

### Trigger level

Outputs	Linedriver
Output level High	$\geq 2.4$ V
Output level Low	$\leq 0.5$ V
Load	$\leq 70$ mA

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

### Dimensions



026-30

**Incremental encoders**  
Hollow shaft  $\varnothing 30$  to  $\varnothing 50$  mm  
Resolution 1024...4096 pulses

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**ITD 61 A 4**