

# Incremental encoders

## Solid shaft $\varnothing 11$ mm with EURO flange

### 1000...6000 pulses per revolution

#### ITD 41 B10



ITD 41 B10 with EURO flange

#### Features

- Encoder with solid shaft  $\varnothing 11$  mm
- Max. 6000 pulses per revolution
- Optical sensing method
- Centering alignment  $\varnothing 85$  mm, mounting screw hole circle  $\varnothing 100$  mm
- Industrial standard with centering flange
- TTL or HTL output signals
- Cable output radial or axial

#### Optional

- Extended operating temperature range

#### Technical data - electrical ratings

Voltage supply	5 VDC $\pm 5$ % 8...30 VDC
Reverse polarity protection	Yes
Consumption w/o load	$\leq 100$ mA
Pulses per revolution	1000...6000
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 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)	$\varnothing 115$ mm
Shaft type	$\varnothing 11$ mm solid shaft
Admitted shaft load	$\leq 40$ N axial $\leq 60$ N radial
Flange	EURO flange B10
Protection DIN EN 60529	IP 65
Operating speed	$\leq 12000$ rpm
Starting torque	$\leq 0.012$ Nm ( $+20^\circ\text{C}$ )
Materials	Housing: aluminium 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.	850 g

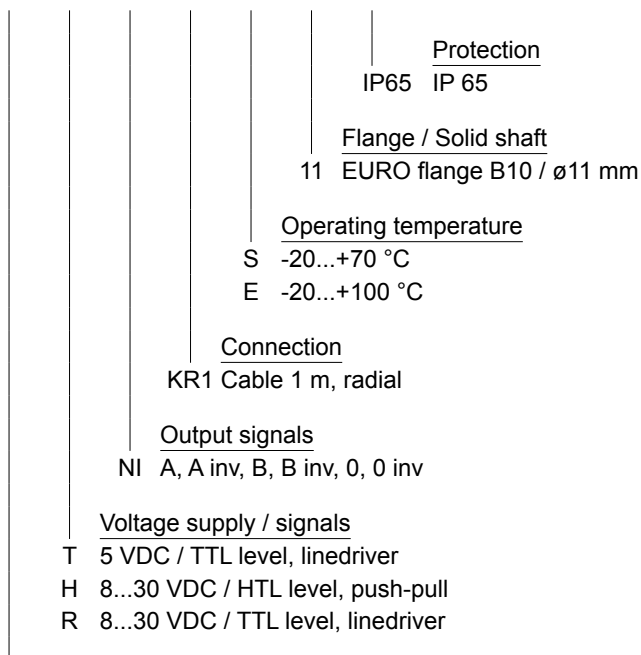
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## Part number

ITD 41 B10     **NI** **KR1**   **11** **IP65**



Pulse number - see table

## Pulse number

1000	1440	2048	4000
1024	1500	2500	4096
1200	1800	3000	5000
1250	2000	3600	6000

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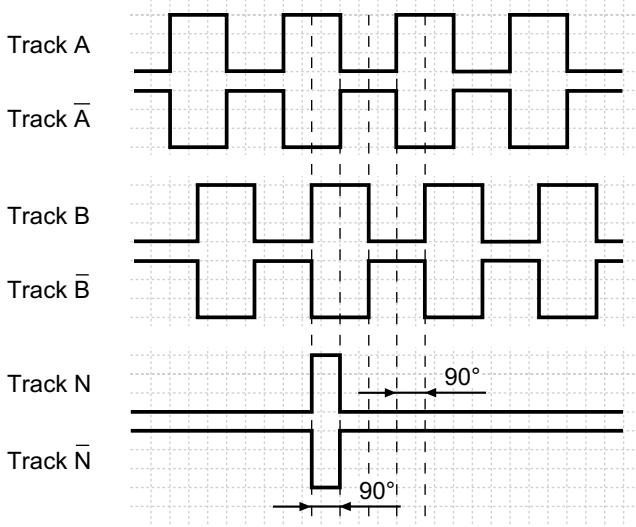
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##### Output signals

Clockwise rotation when looking at the mounting side.

NI-Output signals



##### Terminal assignment

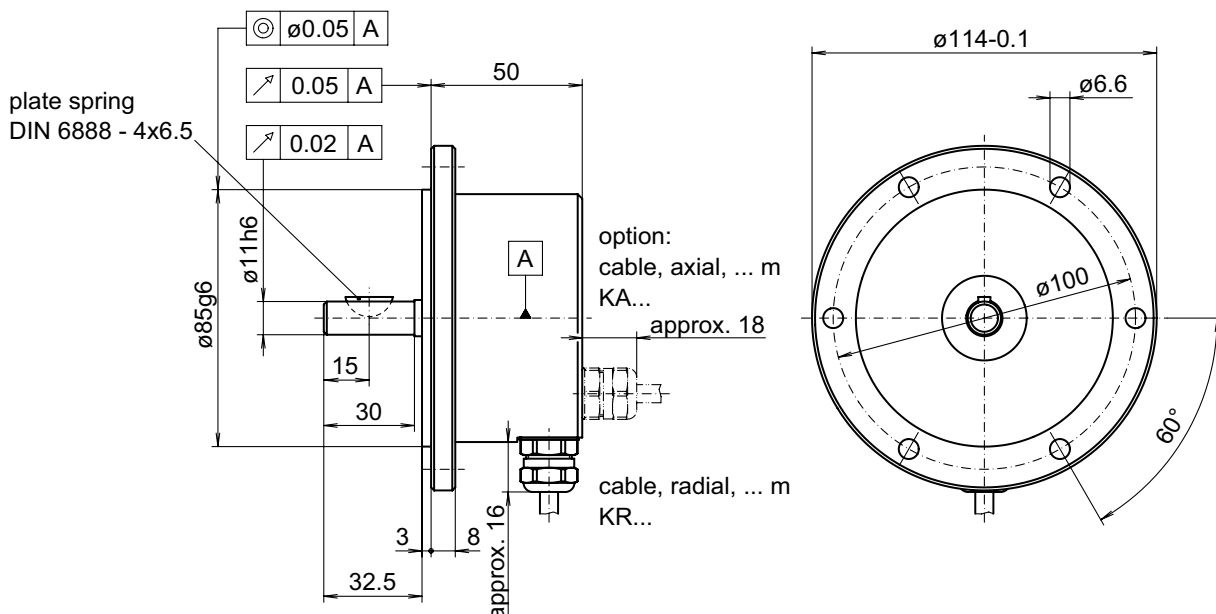
Core colour	Assignment
brown	Track A
green	Track A inv.
grey	Track B
pink	Track B inv.
red	Track N
black	Track N inv.
brown 0,5 mm <sup>2</sup>	UB
white 0,5 mm <sup>2</sup>	GND
blue	UB-Sense
white	GND-Sense
transparent	Shield/Housing

##### 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



025-7

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