

Incremental encoders

Mini encoder with shaft $\varnothing 4$ mm

30...1024 pulses per revolution

ITD 01 B14



ITD 01 B14 with synchro flange

Features

- Mini encoder with solid shaft $\varnothing 4$ mm
- Max. 1024 pulses per revolution
- Optical sensing method
- Outer diameter $\varnothing 24$ mm
- TTL or HTL output signals
- Cable output radial or axial

Optional

- Cable with connector

Technical data - electrical ratings

Voltage supply	5 VDC ± 5 % 8...30 VDC
Reverse polarity protection	Yes
Consumption w/o load	≤ 25 mA
Pulses per revolution	30...1024
Reference signal	Zero pulse, width 90°
Sensing method	Optical
Output frequency	≤ 100 kHz
Output signals	A 90° B, N + inverted
Output stages	TTL Push-pull short-circuit proof

Technical data - mechanical design

Size (flange)	$\varnothing 24$ mm
Shaft type	$\varnothing 4$ mm solid shaft
Admitted shaft load	≤ 5 N axial ≤ 8 N radial
Flange	Synchro flange
Protection DIN EN 60529	IP 54
Operating speed	≤ 18000 rpm
Starting torque	≤ 0.006 Nm ($+20^\circ$ C)
Materials	Housing: aluminium Shaft: stainless steel
Operating temperature	$-20...+85^\circ$ 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.	50 g

Incremental encoders

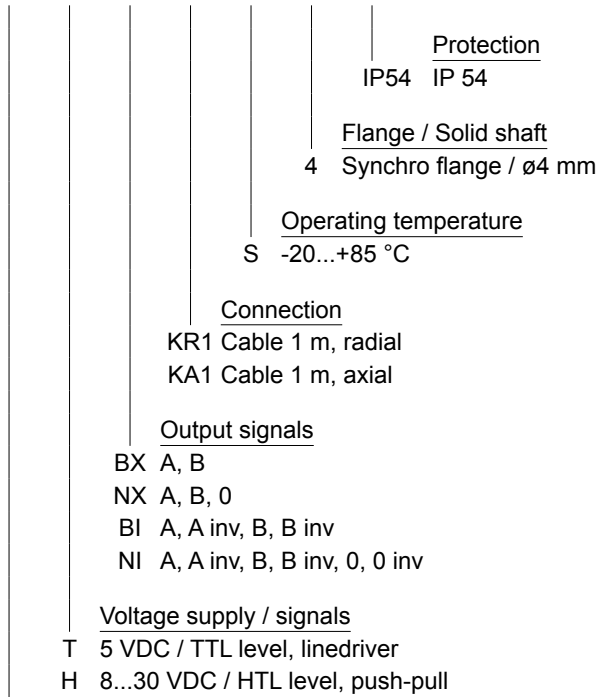
Mini encoder with shaft $\varnothing 4$ mm
30...1024 pulses per revolution

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Part number

ITD 01 B14

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Pulse number - see table

Pulse number

30	100	360	600	1024
60	300	500	1000	

Subject to modification in technic and design. Errors and omissions excepted.

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Mini encoder with shaft $\varnothing 4$ mm

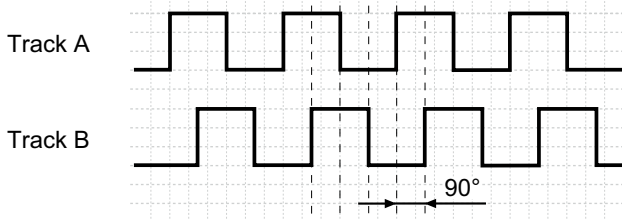
30...1024 pulses per revolution

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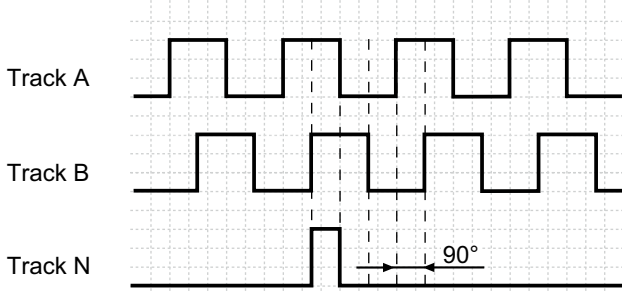
Output signals

Clockwise rotation when looking at the mounting side.

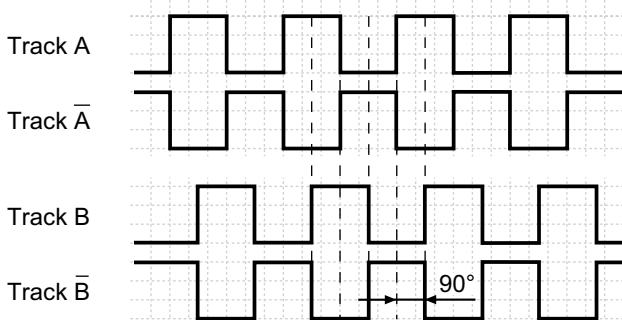
BX-Output signals



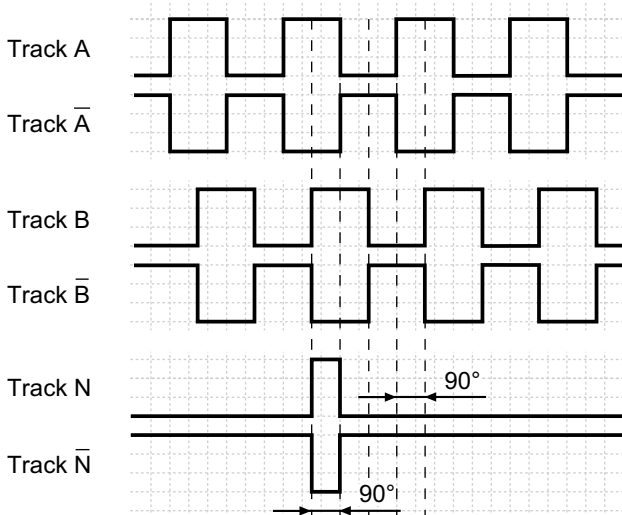
NX-Output signals



BI-Output signals



NI-Output signals



Terminal assignment

With BX-/NX-signals

Core colour	Assignment
green	Track A
yellow	Track B
grey	Track N
brown	UB
white	GND
transparent	Shield/Housing

With BI-/NI-signals

Core colour	Assignment
green	Track A
yellow	Track A inv.
grey	Track B
pink	Track B inv.
brown	Track N
white	Track N inv.
red	UB
blue	GND
transparent	Shield/Housing

Trigger level

Outputs	Linedriver
Output level High	≥ 2.4 V
Output level Low	≤ 0.5 V
Load	≤ 30 mA

Outputs	Push-pull short-circuit proof
Output level High	$\geq UB - 3$ V
Output level Low	≤ 1.5 V
Load	≤ 30 mA

