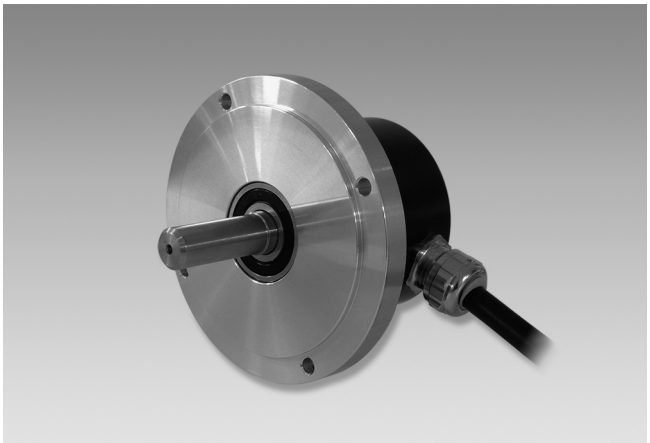
Incremental encoders

Shaft ø10 to ø12 mm with mounting flange

Resolution 1000…6000 pulses

ITD 21 B10 Y 2



ITD 21 B10 Y 2 with mounting flange

Features

- **Encoder with shaft ø10-12 mm**
- **Resolution max. 6000 ppr**
- **Optical sensing**
- **Centering alignment ø70 mm, mounting screw hole circle ø77 mm**
- **Industrial standard with centering flange**
- **TTL or HTL output signals**
- **Cable output radial or axial**

Optional

- **Cable with connector**
- **Extended operating temperature range**

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)	1000...6000
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

Technical data - mechanical design

Housing	ø58 mm
Shaft	ø10 mm ø11 mm ø12 mm
Flange	Mounting flange
Protection DIN EN 60529	IP 65
Operating speed	≤12000 rpm
Starting torque	≤0.01 Nm
Admitted shaft load	≤40 N axial ≤60 N radial
Materials	Housing: aluminium, black, powder-coated Shaft: stainless steel
Operating temperature	-20...+70 °C -20...+100 °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
Weight approx.	580 g
Connection	Cable 1 m

ITD 21 B10 Y 2

Part number

ITD 21 B10 Y 2			NI				IP65

Protection
IP65 IP 65

Flange / Shaft
10 ø10 mm
11 ø11 mm
12 ø12 mm

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

Connection
KR1 Cable 1 m, radial
KA1 Cable 1 m, axial

Output signals
NI A, A inv, B, B inv, N, N 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)

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

Incremental encoders

Shaft ø10 to ø12 mm with mounting flange

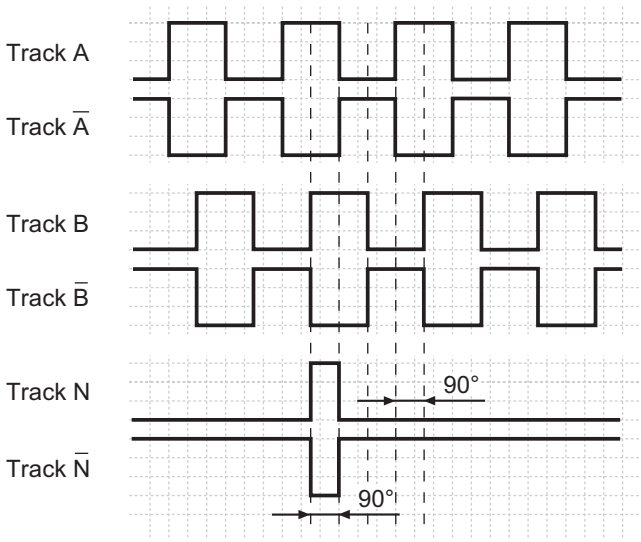
Resolution 1000…6000 pulses

ITD 21 B10 Y 2

Output signals

Clockwise rotation when looking at the mounting side.

NI-Output signals



Terminal assignment

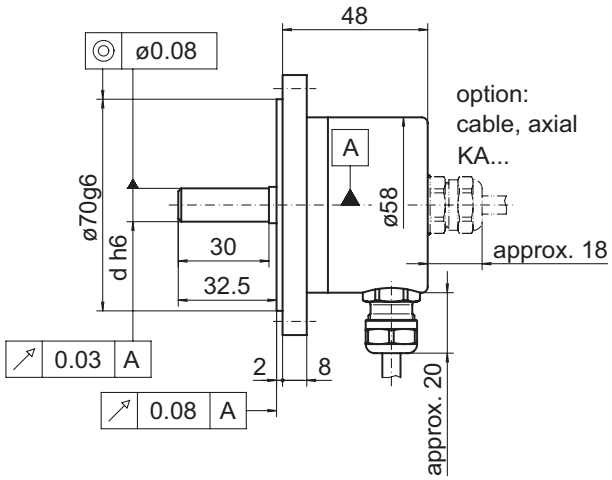
Core colour	Assignment
brown	Track A
green	Track A inv.
grey	Track B
pink	Track B inv.
red	Track N
black	Track N inv.
brown 0,5 mm²	UB
white 0,5 mm²	GND
blue	UB-Sense
white	GND-Sense
transparent	Shield/Housing

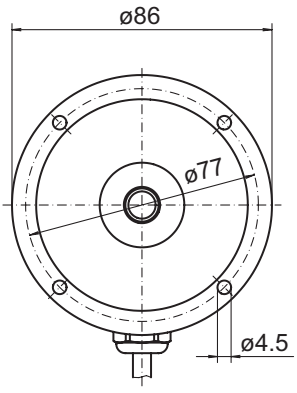
Trigger level

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	≥UB -3 V
Output level Low	≤1.5 V
Load	≤70 mA

Dimensions





cable, radial
KR...

029-10 Y 2

ITD 21 B10 Y 2