Incremental encoders

Solid shaft ø10 mm with clamping flange

50…1024 pulses per revolution

ITD 20 B14 Y 9

ITD 20 B14 Y 9 with clamping flange

Features

- **Encoder with solid shaft ø10 mm**
- **Max. 1024 pulses per revolution**
- **Optical sensing**
- **Centering alignment ø36 mm, mounting screw hole circle ø48 mm**
- **Industrial standard**
- **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
Pulses per revolution	50...1024
Reference signal	Zero pulse, width 90°
Sensing method	Optical
Output frequency	≤120 kHz
Output signals	A, B, N + inverted
Output stage	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)	ø58 mm
Shaft type	ø10 mm solid shaft (clamping flange)
Shaft loading	≤40 N axial ≤60 N radial
Flange	Clamping flange
Protection DIN EN 60529	IP 65
Operating speed	≤12000 rpm
Starting torque	≤0.01 Nm (+20 °C)
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 100 g, 11 ms
Connection	Cable 1 m
Weight approx.	340 g

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Part number

ITD 20 B14 Y 9 | | | | | | **10** | **IP65** |

- Protection
  - IP65 IP 65
- Flange / Solid shaft
  - 10 Clamping flange / ø10 mm
- Operating temperature
  - S -20...+70 °C
  - E -20...+100 °C
- Connection
  - KR1 Cable 1 m, radial
  - KA1 Cable 1 m, axial
- Output signals
  - BI A, A inv, B, B inv
  - 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
- Pulse number - see table

Pulse number

50	90	200	360	600
60	100	250	400	1000
64	120	254	500	1024
88	128	256	512	

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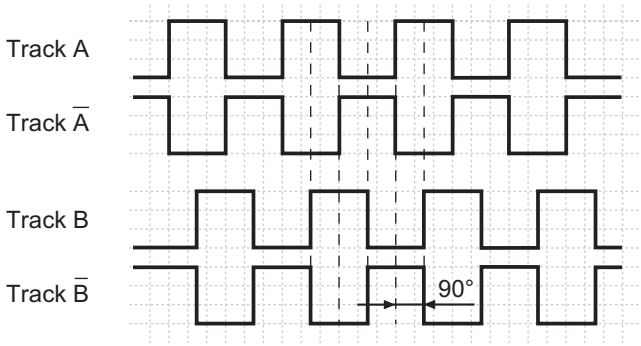
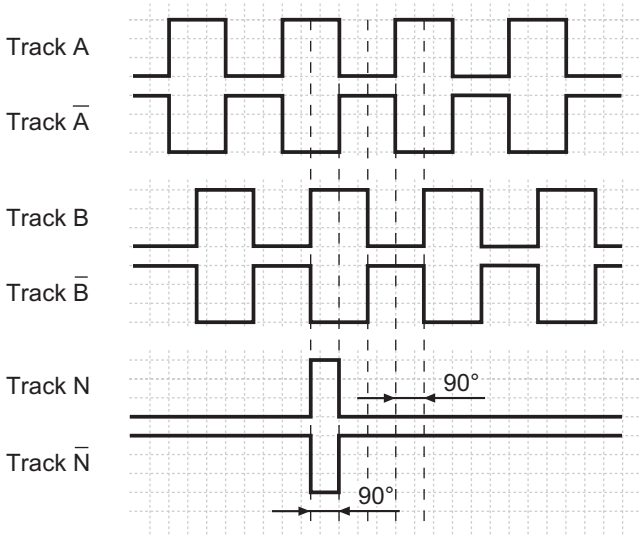
Output signals

Clockwise rotation when looking at the mounting side.

BI-Output signals



NI-Output signals



Terminal assignment

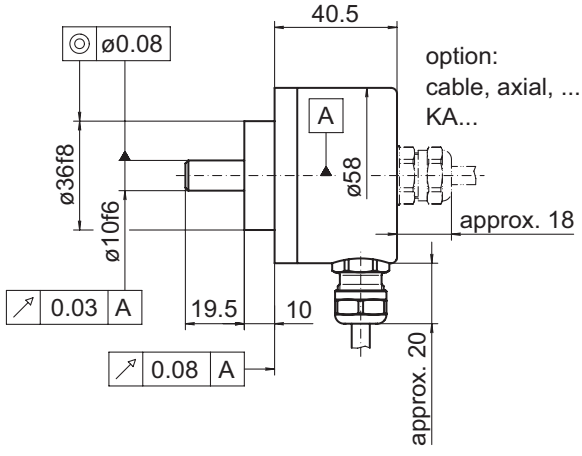
Core colour	Assignment
brown	Track A
green	Track A inv.
grey	Track B
pink	Track B inv.
red	Track N
black	Track N inv.
brown 0,5 mm²	UB
white 0,5 mm²	GND
blue	UB-Sense
white	GND-Sense
transparent	Shield/Housing

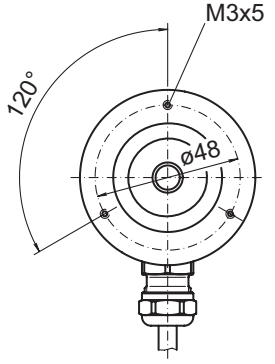
Trigger level

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, ...m
KR...

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