

# Incremental encoders

## Solid shaft $\varnothing 6$ mm with synchro flange

### 50...1024 pulses per revolution

#### ITD 20 B14



ITD 20 B14 with synchro flange

#### 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	50...1024
Reference signal	Zero pulse, width $90^\circ$
Sensing method	Optical
Output frequency	$\leq 120$ 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

#### Features

- Encoder with solid shaft  $\varnothing 6$  mm
- Max. 1024 pulses per revolution
- Optical sensing
- Centering alignment  $\varnothing 50$  mm, mounting screw hole circle  $\varnothing 68$  mm
- Industrial standard
- TTL or HTL output signals
- Cable output radial or axial

#### Optional

- Cable with connector
- Extended operating temperature range

#### Technical data - mechanical design

Size (flange)	$\varnothing 58$ mm
Shaft type	$\varnothing 6$ mm solid shaft
Shaft loading	$\leq 20$ N axial $\leq 40$ N radial
Flange	Synchro flange
Protection DIN EN 60529	IP 65
Operating speed	$\leq 12000$ rpm
Starting torque	$\leq 0.01$ 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.	310 g

# Incremental encoders

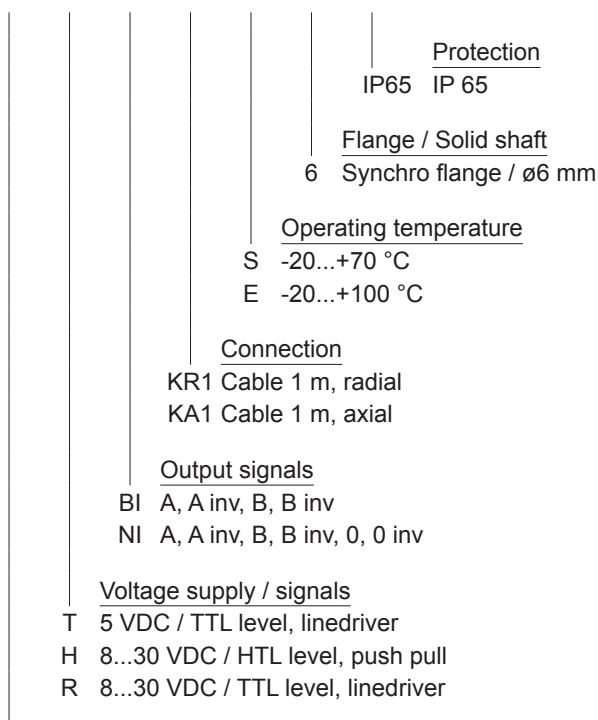
Solid shaft  $\varnothing 6$  mm with synchro flange  
50...1024 pulses per revolution

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## Part number

ITD 20 B14 

					<b>6</b>	<b>IP65</b>
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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	

## Accessories

### Mounting accessories

11065545	Set of eccentric fixings type A
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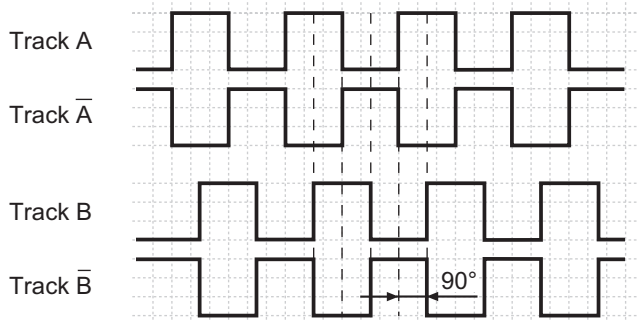
### 50...1024 pulses per revolution

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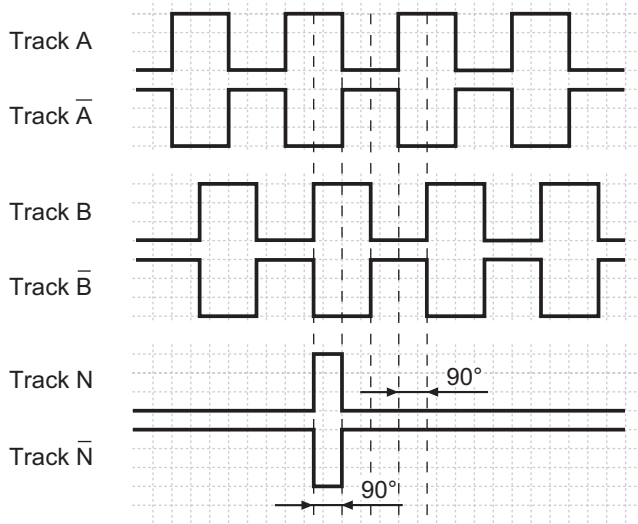
#### Output signals

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 mm <sup>2</sup>	UB
white 0,5 mm <sup>2</sup>	GND
blue	UB-Sense
white	GND-Sense
transparent	Shield/Housing

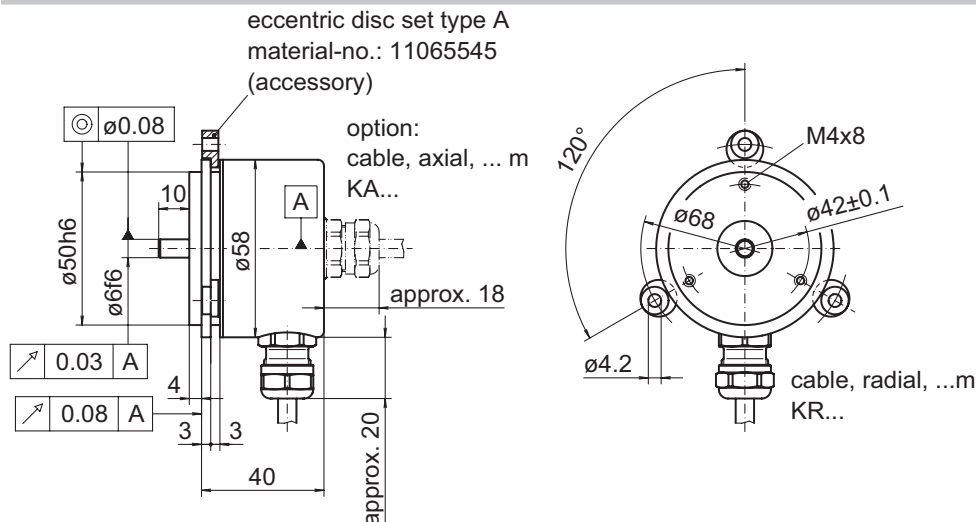
#### Trigger level

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



027-4

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