

# Incremental encoders

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

### 50...1024 pulses per revolution

#### ITD 20 B14 Y 1



ITD 20 B14 Y 1 with synchro flange

#### 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
- Flange socket radial

#### 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	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

#### 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	Connector M23 type 2, 12-pin
Weight approx.	240 g

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## Part number

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			D2SR12		6	IP65
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						<u>Protection</u>
						IP65 IP 65
						<u>Flange / Solid shaft</u>
					6	Synchro flange / $\varnothing 6$ mm
						<u>Operating temperature</u>
				S		-20...+70 °C
				E		-20...+100 °C
						<u>Connection</u>
						D2SR12 Flange socket type 2, pin contacts, radial, 12-pin
						<u>Output signals</u>
				BI		A, A inv, B, B inv
				NI		A, A inv, B, B inv, 0, 0 inv
						<u>Voltage supply / signals</u>
				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	

## Accessories

### Connectors and cables

11072792 Connector S2BG12, 1 m cable (ITD)

### Mounting accessories

11065545 Set of eccentric fixings type A

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

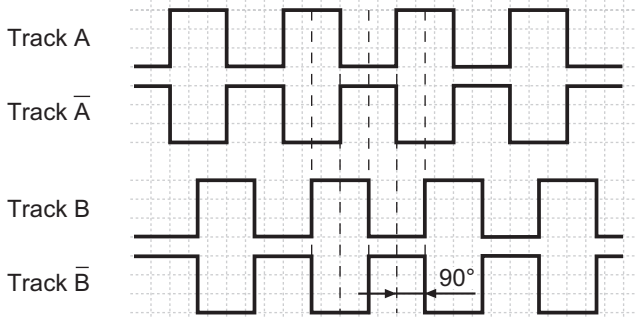
### 50...1024 pulses per revolution

#### ITD 20 B14 Y 1

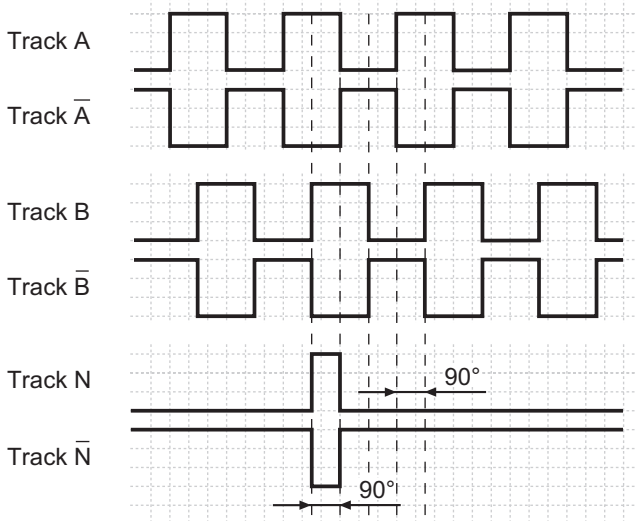
##### Output signals

Clockwise rotation when looking at the mounting side.

##### BI-Output signals

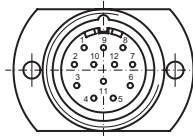


##### NI-Output signals



##### Terminal assignment

Connector	Assignment
Pin 5	Track A
Pin 6	Track A inv.
Pin 8	Track B
Pin 1	Track B inv.
Pin 3	Track N
Pin 4	Track N inv.
Pin 12	UB
Pin 10	GND
Pin 2	UB-Sense
Pin 11	GND-Sense
Pin 9	-
Pin 7	-



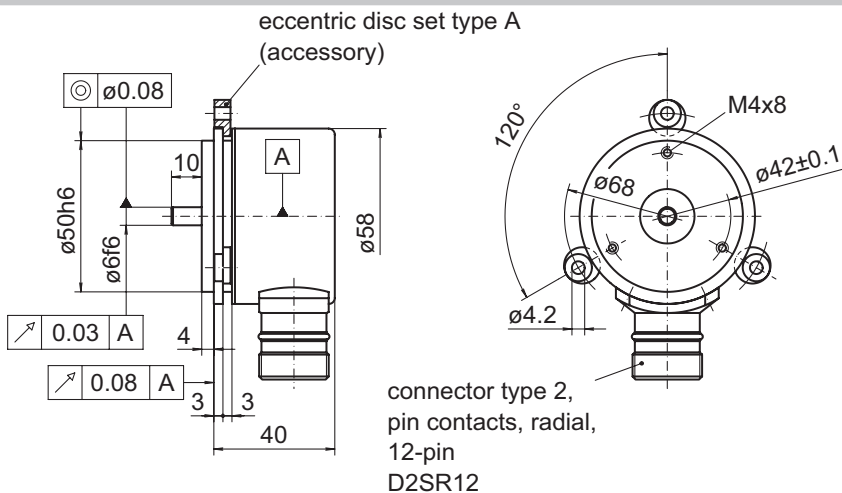
##### Trigger level

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 Y 1

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