

ITD 21 B14

Solid shaft $\varnothing 6$ mm with synchro flange
1000...10000 pulses per revolution

Overview

- Encoder with solid shaft $\varnothing 6$ mm
- Max. 10000 pulses per revolution
- Optical sensing method
- Centering alignment $\varnothing 50$ mm, mounting screw hole circle $\varnothing 68$ mm
- Industrial standard
- TTL or HTL output signals
- Cable output radial or axial



Technical data

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	1000 ... 10000
Reference signal	Zero pulse, width 90°
Sensing method	Optical
Output frequency	≤ 300 kHz (TTL) ≤ 160 kHz (HTL)
Output signals	A, B, N + inverted
Output stages	TTL linedriver (short-circuit proof) HTL push-pull (short-circuit proof)
Interference immunity	EN 61000-6-2
Emitted interference	EN 61000-6-3

Technical data - mechanical design

Size (flange)	$\varnothing 58$ mm
Shaft type	$\varnothing 6$ mm solid shaft (synchro flange)

Technical data - mechanical design

Admitted shaft load	≤ 20 N axial ≤ 40 N radial
Flange	Synchro flange
Protection EN 60529	IP 65
Operating speed	≤ 12000 rpm
Starting torque	≤ 0.01 Nm ($+20$ °C)
Material	Housing: aluminium, black, powder-coated Shaft: stainless steel
Operating temperature	$-20...+70$ °C $-20...+100$ °C
Relative humidity	90 % non-condensing
Resistance	EN 60068-2-6 Vibration 10 g, 55-2000 Hz EN 60068-2-27 Shock 30 g, 11 ms
Connection	Cable 1 m
Weight approx.	400 g

Optional

- Cable with connector
- Extended operating temperature range

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Terminal assignment

Pulses per revolution ≤ 6000

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

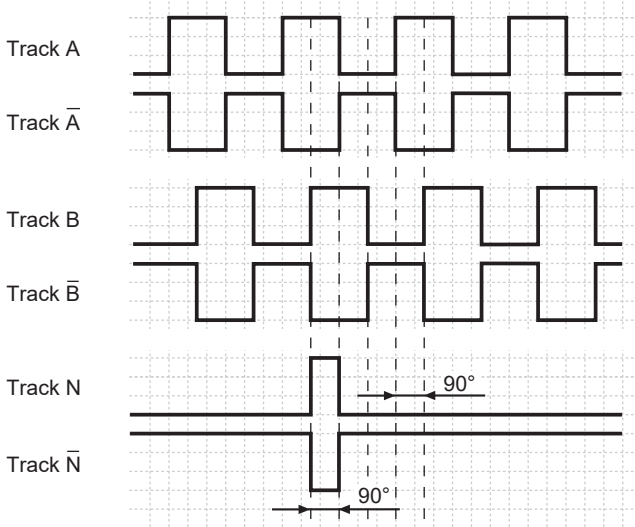
Pulses per revolution > 6000

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

Output signals

Clockwise rotation when looking at the mounting side.

NI-Output signals



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	$\geq UB - 3$ V
Output level Low	≤ 1.5 V
Load	≤ 70 mA

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Ordering reference

	ITD 21 B14	#####	#	NI	#####	#	6	IP65
Product	ITD 21 B14							
Pulse number								
1000		1000						
1024		1024						
1200		1200						
1250		1250						
1440		1440						
1500		1500						
1800		1800						
2000		2000						
2048		2048						
2500		2500						
3000		3000						
3600		3600						
4000		4000						
4096		4096						
5000		5000						
6000		6000						
7200 ⁽¹⁾		7200						
8192 ⁽¹⁾		8192						
9000 ⁽¹⁾		9000						
10000 ⁽¹⁾		10000						
Voltage supply / signals								
5 VDC / TTL level, linedriver				T				
8...30 VDC / HTL level, push-pull				H				
8...30 VDC / TTL level, linedriver				R				
Output signals								
A, A inv, B, B inv, N, N inv				NI				
Connection								
Cable 1 m, radial						KR1		
Cable 1 m, axial						KA1		
Operating temperature								
-20...+70 °C							S	
-20...+100 °C							E	
Flange / Solid shaft								
Synchro flange / ø6 mm								6
Protection								
IP 65								IP65

(1) Observe terminal assignment!

Accessories
Mounting accessories

11065545 Set of eccentric fixings type A