

ITD 20 B14 Y 1

Solid shaft $\varnothing 6$ mm with synchro flange

50...1024 pulses per revolution

Overview

- Encoder with solid shaft $\varnothing 6$ mm
- Max. 1024 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
- Flange connector radial



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	50 ... 1024
Reference signal	Zero pulse, width 90°
Sensing method	Optical
Output frequency	≤ 120 kHz
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

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 100 g, 11 ms
Connection	Connector M23 type 2, 12-pin
Weight approx.	240 g

Optional

- Extended operating temperature range

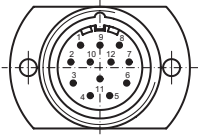
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Terminal assignment

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

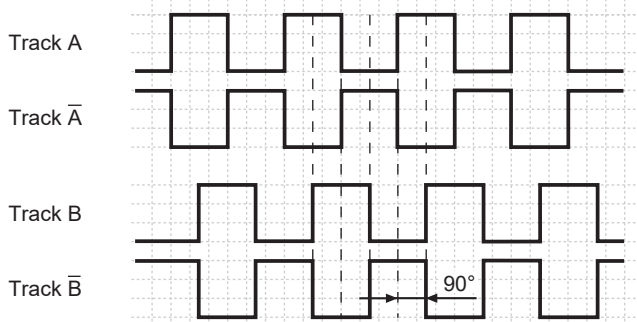
Outputs	Linedriver
Output level High	≥ 2.4 V
Output level Low	≤ 0.5 V
Load	≤ 70 mA

Outputs	Push-pull short-circuit proof
Output level High	$\geq UB - 3$ V
Output level Low	≤ 1.5 V
Load	≤ 70 mA

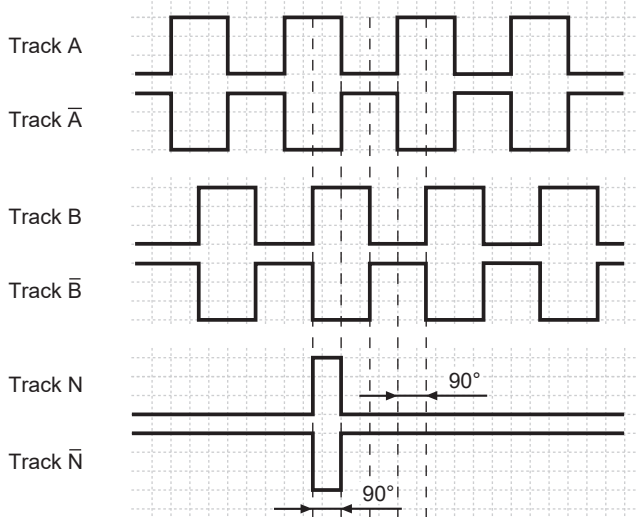
Output signals

Clockwise rotation when looking at the mounting side.

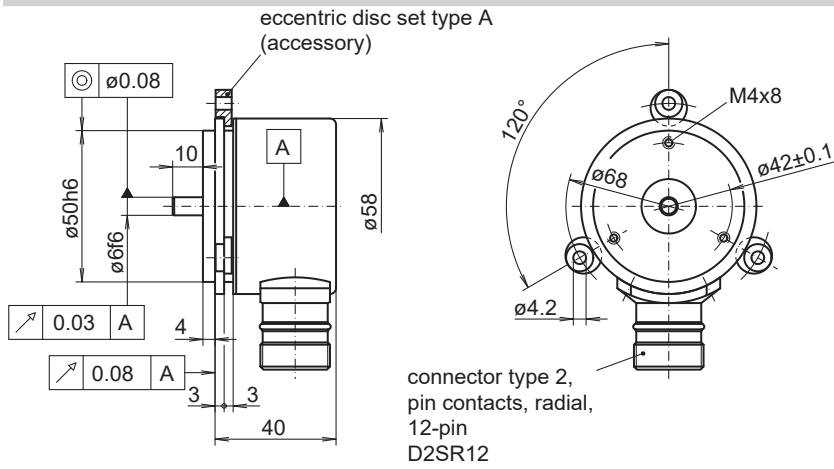
BI-Output signals



NI-Output signals



Dimensions



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Ordering reference

Product		ITD 20 B14 Y 1	#####	#	####	D2SR12	#	6	IP65
Pulse number		ITD 20 B14 Y 1							
50			50						
60			60						
64			64						
88			88						
90			90						
100			100						
120			120						
128			128						
200			200						
250			250						
254			254						
256			256						
360			360						
400			400						
500			500						
512			512						
600			600						
1000			1000						
1024			1024						
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					BI				
A, A inv, B, B inv, N, N inv					NI				
Connection									
Flange connector type 2, pin contacts, radial, 12-pin						D2SR12			
Operating temperature									
-20...+70 °C							S		
-20...+100 °C							E		
Flange / Solid shaft									
Synchro flange / ø6 mm								6	
Protection									
IP 65									IP65

Accessories

Mounting accessories

11065545 Set of eccentric fixings type A