

ITD 20 B14 Y 9

Solid shaft $\varnothing 10$ mm with clamping flange
50...1024 pulses per revolution

Overview

- Encoder with solid shaft $\varnothing 10$ mm
- Max. 1024 pulses per revolution
- Optical sensing method
- Centering alignment $\varnothing 36$ mm, mounting screw hole circle $\varnothing 48$ 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	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	$\varnothing 10$ mm solid shaft (clamping flange)

Technical data - mechanical design

Admitted shaft load	≤ 40 N axial ≤ 60 N radial
Flange	Clamping flange
Protection EN 60529	IP 65
Operating speed	≤ 12000 rpm
Starting torque	≤ 0.01 Nm ($+20^\circ\text{C}$)
Material	Housing: aluminium, black, powder-coated Shaft: stainless steel
Operating temperature	$-20...+70^\circ\text{C}$ $-20...+100^\circ\text{C}$
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	Cable 1 m
Weight approx.	340 g

Optional

- Cable with connector
- Extended operating temperature range

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

Trigger level

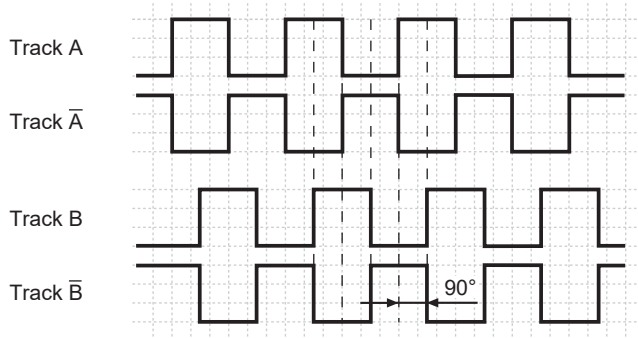
Outputs	Linedriver
Output level High	≥ 2.4 V
Output level Low	≤ 0.5 V
Load	≤ 70 mA

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

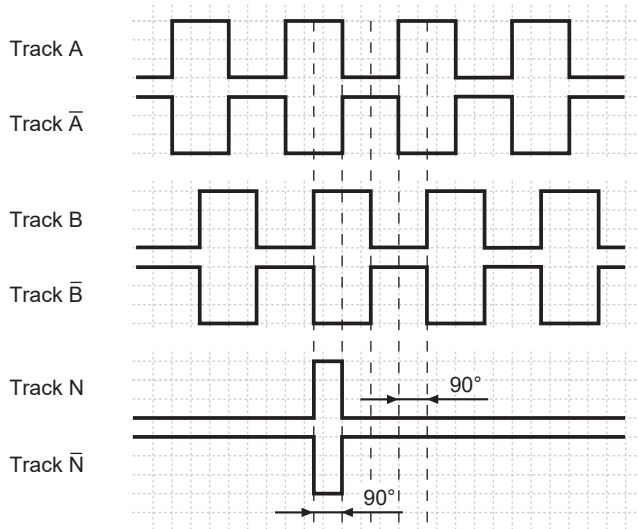
Output signals

Clockwise rotation when looking at the mounting side.

BI-Output signals



NI-Output signals

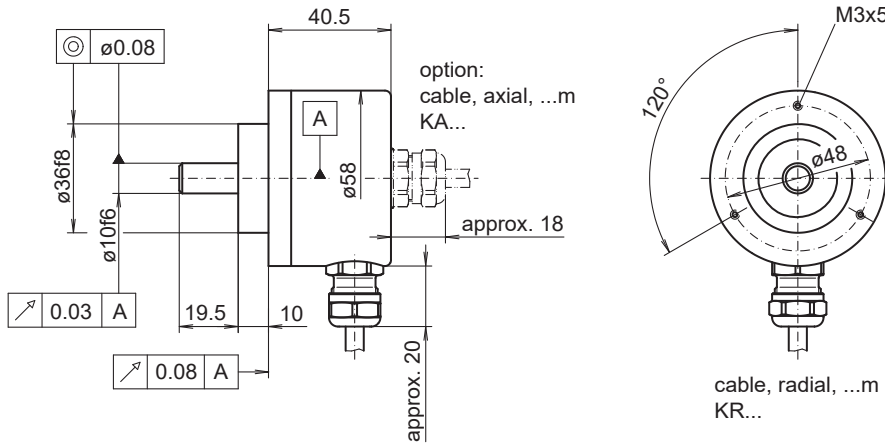


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Dimensions



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Ordering reference

Product		ITD 20 B14 Y 9	#####	#	####	#####	#	10	IP65
Pulse number		ITD 20 B14 Y 9							
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									
Cable 1 m, radial						KR1			
Cable 1 m, axial						KA1			
Operating temperature									
-20...+70 °C							S		
-20...+100 °C							E		
Flange / Solid shaft									
Clamping flange / ø10 mm								10	
Protection									
IP 65									IP65