Baumer
Passion for Sensors

Incremental encoders

ITD 20 B14 Y 9

Solid shaft ø10 mm with clamping flange
50…1024 pulses per revolution

Overview

- Encoder with solid shaft ø10 mm
- Max. 1024 pulses per revolution
- Optical sensing method
- Centering alignment ø36 mm, mounting screw hole circle ø48 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	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-3
Technical data - mechanical design	
Size (flange)	ø58 mm
Shaft type	ø10 mm solid shaft (clamping flange)

Technical data - mechanical design	
Admitted shaft load	≤40 N axial ≤60 N radial
Flange	Clamping flange
Protection DIN 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	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.	340 g

Optional

- Cable with connector
- Extended operating temperature range

2020-02-07 The product features and technical data specified do not express or imply any warranty. Technical modifications subject to change.

Incremental encoders

ITD 20 B14 Y 9

Solid shaft ø10 mm with clamping flange

50…1024 pulses per revolution

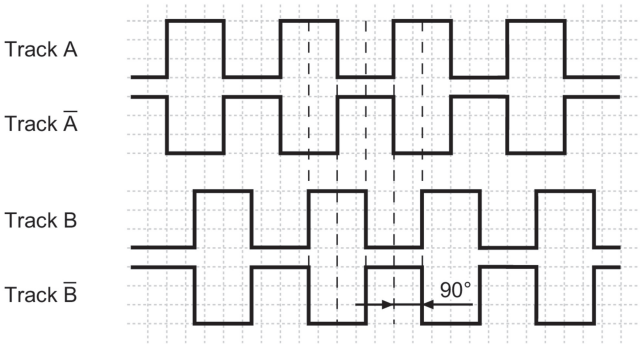
Terminal assignment

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 mm²	UB
white 0,5 mm²	GND
blue	UB-Sense
white	GND-Sense
transparent	Shield/Housing

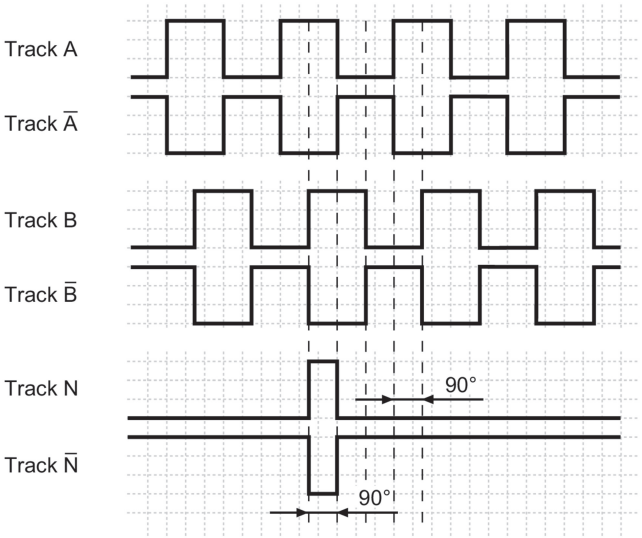
Output signals

Clockwise rotation when looking at the mounting side.

BI-Output signals



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	≥UB -3 V
Output level Low	≤1.5 V
Load	≤70 mA

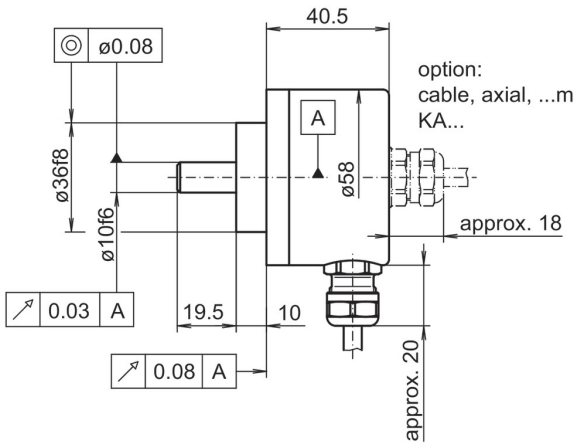
2020-02-07 The product features and technical data specified do not express or imply any warranty. Technical modifications subject to change.

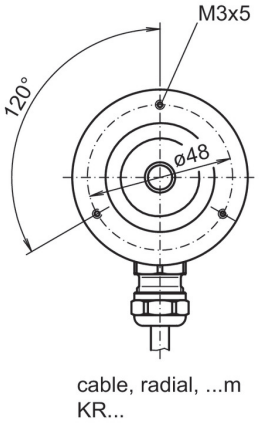
ITD 20 B14 Y 9

Solid shaft ø10 mm with clamping flange

50…1024 pulses per revolution

Dimensions





2020-02-07 The product features and technical data specified do not express or imply any warranty. Technical modifications subject to change.

Incremental encoders

ITD 20 B14 Y 9

Solid shaft ø10 mm with clamping flange
50…1024 pulses per revolution

Ordering reference

	ITD 20 B14 Y 9	#####	#	####	######	#	10	IP65
Product	ITD 20 B14 Y 9							
Pulse number								
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

2020-02-07 The product features and technical data specified do not express or imply any warranty. Technical modifications subject to change.