Baumer
Passion for Sensors

Incremental encoders

ITD 20 A 4 Y120

Through hollow shaft ø10 to ø16 mm

200…2048 pulses per revolution

Overview

- Encoder with hollow shaft ø10...16 mm
- Max. 2048 pulses per revolution
- Optical sensing method
- Mounting by torque support
- TTL or HTL output signals
- Extended operating temperature range
- Tangential cable output



Technical data

Technical data - electrical ratings	
Voltage supply	5 VDC ±5 % 8...26 VDC
Reverse polarity protection	Yes
Consumption w/o load	≤85 mA
Pulses per revolution	200 … 2048
Reference signal	Zero pulse, width 90°
Sensing method	Optical
Output frequency	≤120 kHz
Output signals	A, B, N + inverted
Output stages	Linedriver/RS422 Push-pull short-circuit proof
Technical data - mechanical design	
Size (flange)	60 x 72 mm
Shaft type	ø10 mm (through hollow shaft) ø12 mm (through hollow shaft) ø14 mm (through hollow shaft) ø16 mm (through hollow shaft)

Technical data - mechanical design	
Mounting kit	019
Protection DIN EN 60529	IP 65
Operating speed	≤6000 rpm ≤3000 rpm IP 65 (>70 °C)
Starting torque	≤0,01 Nm (+20 °C)
Material	Housing: aluminium Shaft: stainless steel
Operating temperature	-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.	300 g

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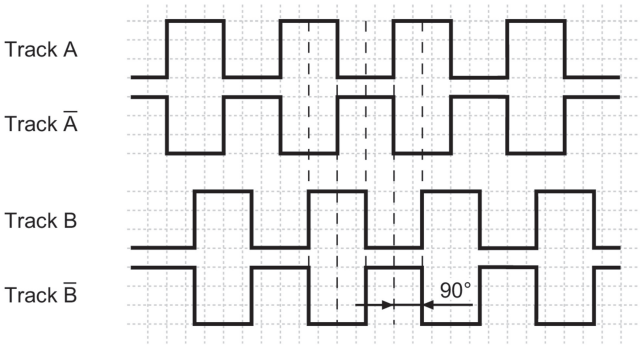
Terminal assignment

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
transparent	Shield/Housing

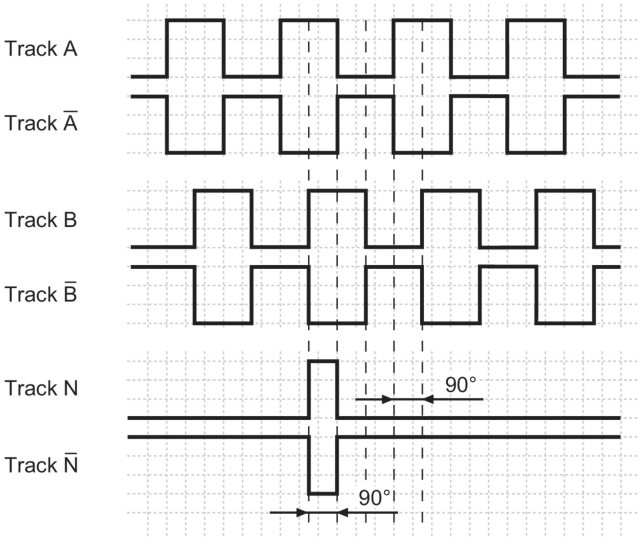
Output signals

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	≤20 mA

Outputs	**Push-pull** short-circuit proof
Output level High	≥UB -3 V
Output level Low	≤1.5 V
Load	≤20 mA

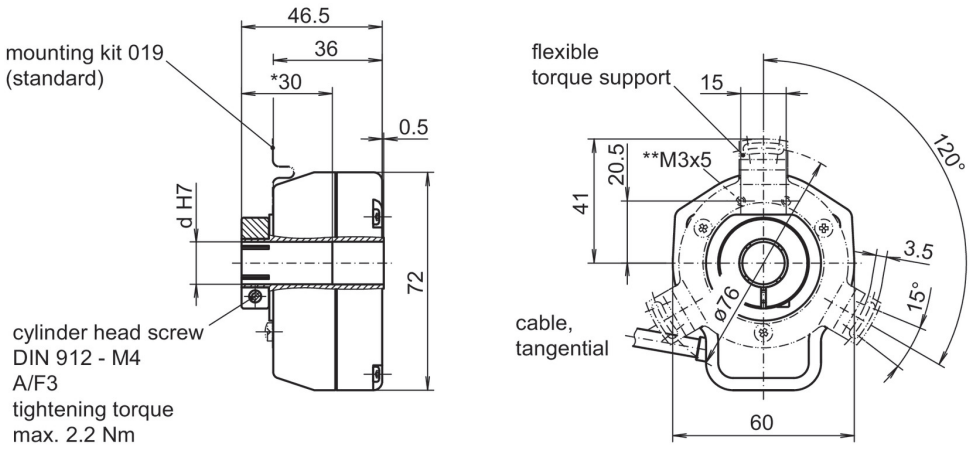
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Dimensions



* Measure 30 only by bore ø10 mm and ø12 mm.

** Mounting also for mounting kits of the ITD 2.-series possible. With ø16 mm hollow shaft the assembly of the mounting kit is possible only without spacers.

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Ordering reference

	ITD 20 A 4 Y120	#####	#	####	KT1	E	##	####	019
Product									
	ITD 20 A 4 Y120								
Pulse number									
200		200							
360		360							
500		500							
512		512							
720		720							
1000		1000							
1024		1024							
2000		2000							
2048		2048							
Voltage supply / signals									
5 VDC / TTL level, linedriver			T						
8...26 VDC / HTL level, push-pull			H						
Output signals									
A, A inv, B, B inv				BI					
A, A inv, B, B inv, N, N inv				NI					
Connection									
Cable 1 m, tangential, open cable end					KT1				
Operating temperature									
-20...+100 °C						E			
Through hollow shaft									
ø10 mm							10		
ø12 mm							12		
ø14 mm							14		
ø16 mm							16		
Protection									
IP 54								IP54	
IP 65								IP65	
Mounting kit									
Mounting kit 019									019

Other pulse numbers on request.

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