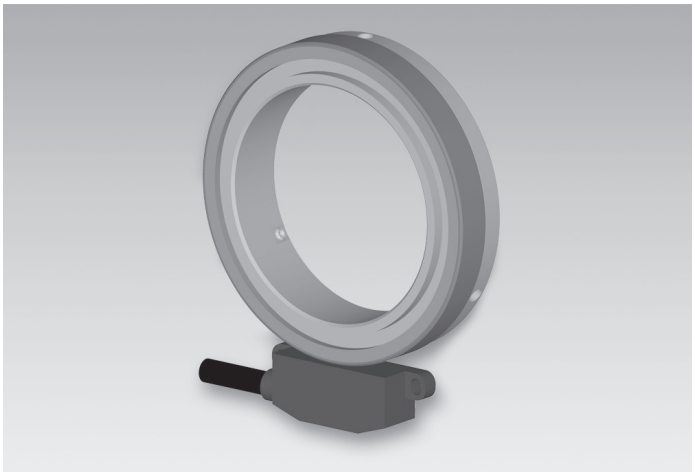
ITD69H02 - Rectangular signal

Through hollow shaft ø40 to ø68 mm

128...4096 pulses per revolution

Overview

- Bearingless magnetic encoder
- Max. 4096 pulses per revolution
- Output circuits: HTL or TTL
- Fast, easy and space saving installation
- Maintenance-free
- High accuracy - error max. ±0.2 °
- Rotation speed max. 6000 rpm
- High resistance to dirt and vibrations



Technical data

Technical data - electrical ratings	
Voltage supply	5 VDC ±5 % 8...26 VDC
Reverse polarity protection	Yes
Short-circuit proof	Yes
Consumption w/o load	≤50 mA
Pulses per revolution	128 … 4096
Interpolation	1-fold (single) 2-fold 4-fold 8-fold 16-fold 32-fold
Output signals	A 90° B + inverted A 90° B, N + inverted
Output stages	TTL linedriver (short-circuit proof) HTL push-pull (short-circuit proof)
Output current	≤30 mA
Output frequency	≤300 kHz (TTL) ≤160 kHz (HTL)
System accuracy	±0.2°

Technical data - electrical ratings	
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-3
Technical data - mechanical design	
Shaft type	ø40...68 mm (through hollow shaft)
Dimensions W x H x L	12 x 16 x 48 mm
Protection DIN EN 60529	IP 67 (relating to sealed electronics)
Operating speed	≤6000 rpm
Working distance	0,2 … 0,5 mm (radial), optimal 0,3 mm
Axial offset	±0,5 mm
Material	Housing: plastic Shaft: stainless steel
Operating temperature	-40...+100 °C (fixed cable)
Resistance	DIN EN 60068-2-6 Vibration 10 g, 55-2000 Hz DIN EN 60068-2-27 Shock 100 g, 11 ms
Weight approx.	390 g
Connection	Cable 1 m
Admitted cable length	15 m

Optional

- Cable with connector
- Redundant sensing

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Terminal assignment

With BI-signals, cable [4x2x0,08 mm2]

Core colour	Assignment
green	Track A
yellow	Track A inv.
grey	Track B
pink	Track B inv.
red	UB
blue	GND
transparent	Shield/Housing

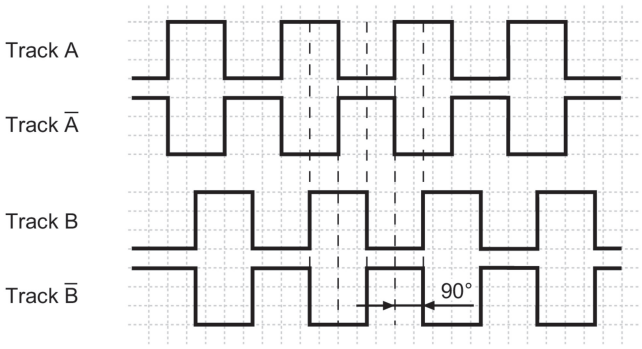
With NI-signals, cable [4x2x0,08 mm2]

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

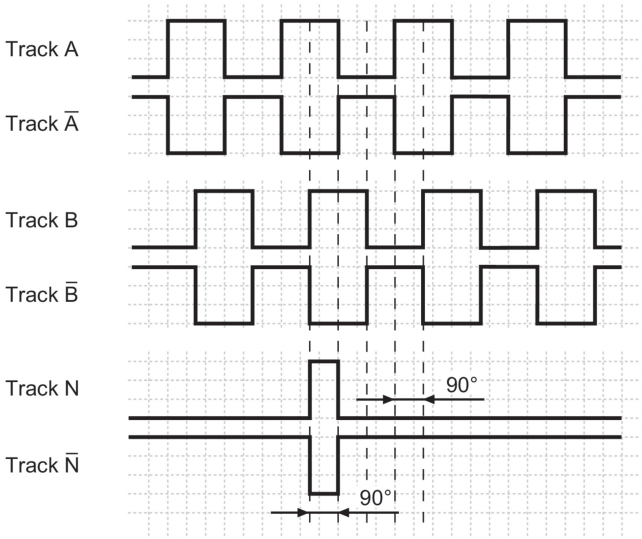
Output signals

Clockwise rotation when looking at the mounting side.

BI-Output signals



NI-Output signals



Trigger level

Outputs	**Linedriver**
Output level High	≥2,5 V
Output level Low	≤0,5 V
Load	≤30 mA

Outputs	**Push-pull** short-circuit proof
Output level High	≥UB -3 V
Output level Low	≤1,5 V
Load	≤30 mA

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2020-02-20

ITD69H02 - Rectangular signal

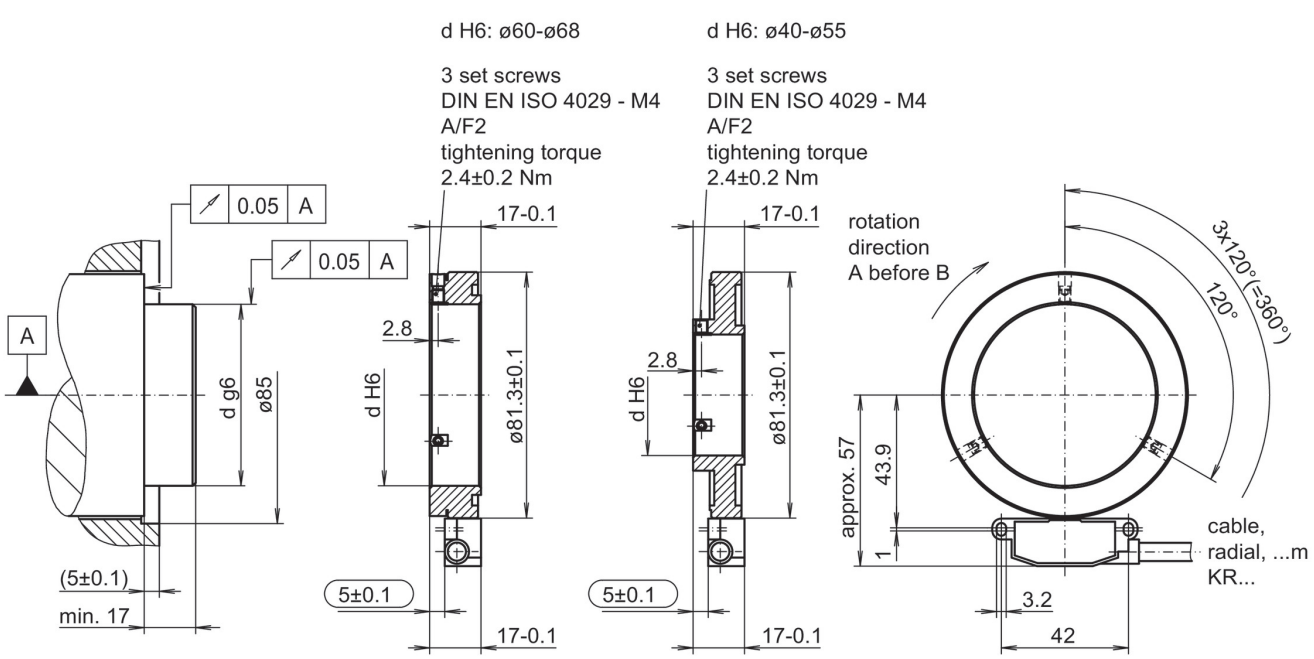
Through hollow shaft ø40 to ø68 mm

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Dimensions

mounting side (proposition)

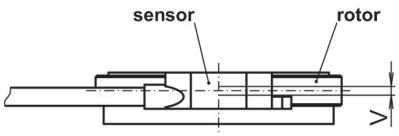
dimension drawing (optimal mounting)



Mounting tolerances, operating tolerances

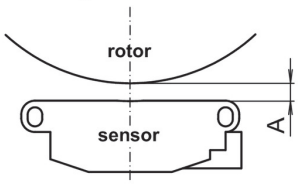
Permitted change of position sensor to rotor during mounting and operation:

Axial offset:



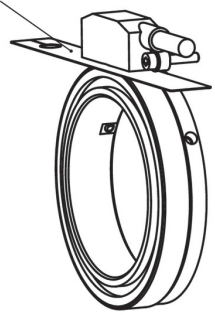
V = ±0.5 mm, optimal 0.1 mm

Working distance:



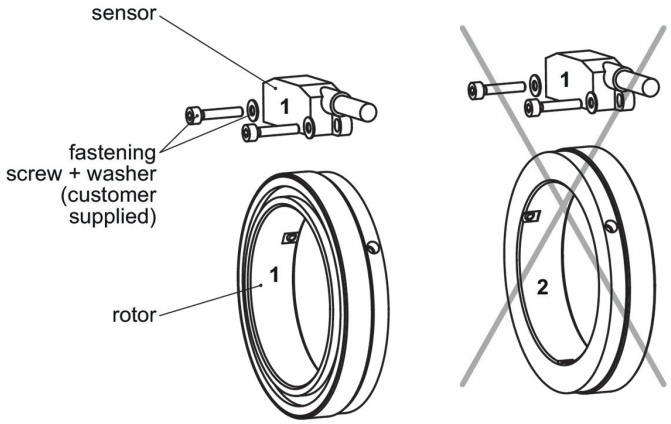
A = 0.2...0.5 mm,
optimal 0.3 mm

Use the distance band as a mounting tool for optimal gap (0.3 mm) between sensor and rotor.



Mounting position

Mounting position (1-1) sensor to rotor should not be altered!



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ITD69H02 - Rectangular signal

Through hollow shaft ø40 to ø68 mm

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Ordering reference

	ITD69H02	#####	#	####	KR1	E	##	IP67
Product								
	ITD69H02							
Pulse number								
128[1]		128						
256[1]		256						
512		512						
1024		1024						
2048		2048						
4096		4096						
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, 0, 0 inv				NI				
Connection								
Cable 1 m, radial					KR1			
Operating temperature								
-40...+100 °C						E		
Through hollow shaft								
ø40 mm							40	
ø42 mm							42	
ø45 mm							45	
ø50 mm							50	
ø55 mm							55	
ø60 mm							60	
ø65 mm							65	
ø68 mm							68	
Protection								
IP 67								IP67

(1) Featured pulse numbers available as BI output signals.

Other diameters on request.

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