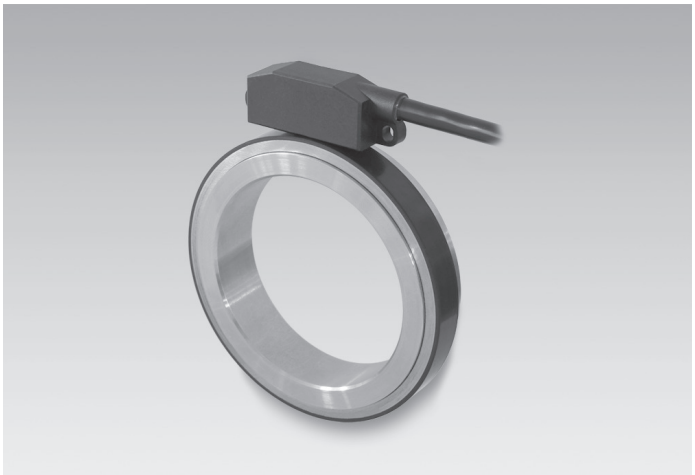
ITD69H00 - Sine signal

Through hollow shaft ø40 to ø65 mm

128 sinewave cycles per revolution

Overview

- Bearingless magnetic encoder
- 128 sinewave cycles per revolution
- Output circuit: Sine 1 Vpp
- Fast, easy and space saving installation
- Maintenance-free
- High accuracy - error max. ±0.2°
- Rotation speed max. 10000 rpm
- High resistance to dirt and vibrations



Technical data

Technical data - electrical ratings	
Voltage supply	5 VDC ±10 %
Reverse polarity protection	Yes
Short-circuit proof	Yes
Consumption w/o load	≤50 mA
Sinewave cycles per revolution	128
Output signals	A+, A-, B+, B- A+, A-, B+, B-, N+, N-
Output stages	SinCos 1 Vpp
Output frequency	≤180 kHz (-3 dB)
System accuracy	±0.2°
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-3
Technical data - mechanical design	
Shaft type	ø40...65 mm (through hollow shaft)

Technical data - mechanical design	
Dimensions W x H x L	12 x 16 x 48 mm
Protection DIN EN 60529	IP 67 (relating to sealed electronics)
Operating speed	≤10000 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

The product features and technical data specified do not express or imply any warranty. Technical modifications subject to change.
2020-03-24

ITD69H00 - Sine signal

Through hollow shaft ø40 to ø65 mm

128 sinewave cycles per revolution

Terminal assignment

With BI-signals, cable [4x2x0,08 mm²]

Core colour	Assignment
green	A +
yellow	A -
grey	B +
pink	B -
red	UB
blue	GND
transparent	Shield/Housing

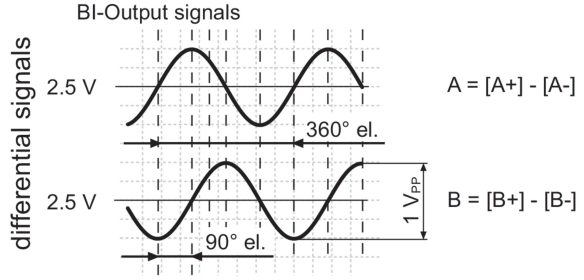
With NI-signals, cable [4x2x0,08 mm2]

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

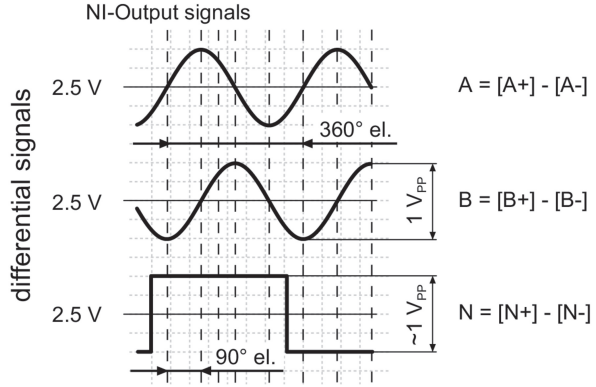
Output signals

Clockwise rotation when looking at the mounting side.

BI-Output signals



NI-Output signals



Output signal level

Outputs	Sine
Output amplitude A + B	1 V_{PP} at Z_0 = 120 Ω
Output amplitude N	approx. 2,5 V at Z_0 = 120 Ω

Outputs	Sine
Output amplitude A + B	1 V_{PP} at Z_0 = 120 Ω
Output amplitude N	approx. 2,5 V at Z_0 = 120 Ω

2020-03-24 The product features and technical data specified do not express or imply any warranty. Technical modifications subject to change.

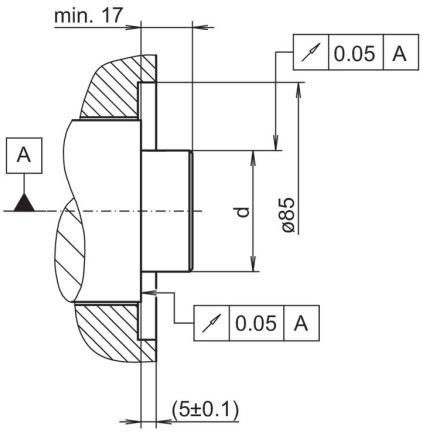
ITD69H00 - Sine signal

Through hollow shaft ø40 to ø65 mm

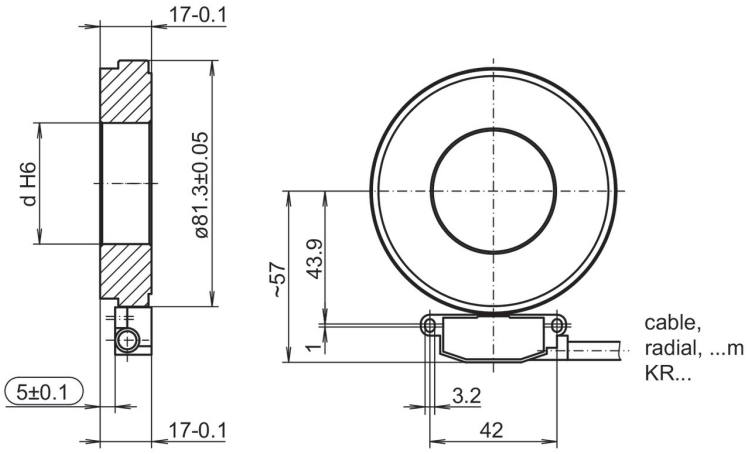
128 sinewave cycles per revolution

Dimensions

mounting side (proposition)



dimension drawing (optimal mounting)



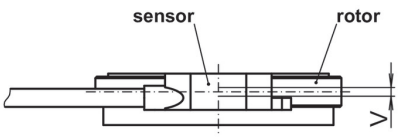
Mounting type	Shaft tolerance	Requirement
Shrink fitting	d p5	Maximum heating of the pole wheel $T_{(max)}$=100 °C
Adhesive mounting	d g6	Please observe the manufacturer's instructions for the adhesive mounting with respect to adhesives and adhesive air gap. Recommendation: Adhesive Loctite 3504

Installation note:
The system, consisting of sensor and rotor, form a matched pair. They may not be exchanged individually. The sensor should be mounted on an electrically conductive surface on potting side.

Mounting tolerances, operating tolerances

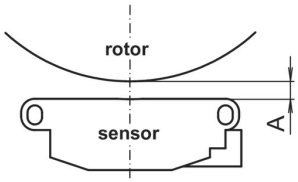
Permitted change of position sensor to rotor during mounting and operation:

Axial offset:



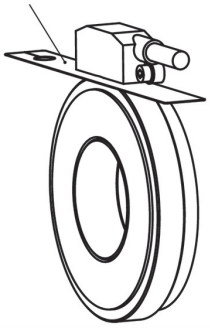
V = ±0.5 mm, optimal 0.1 mm

Working distance:



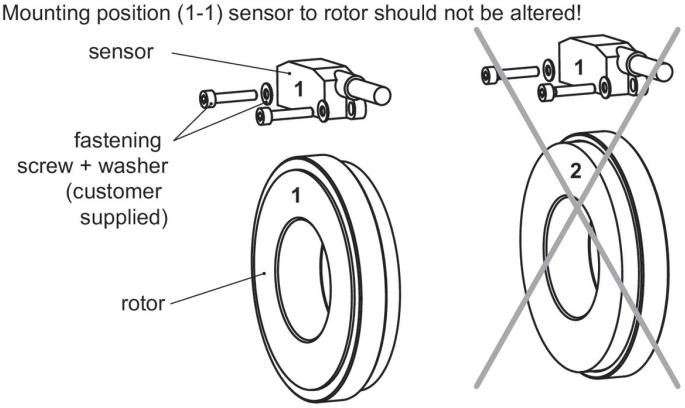
A = 0.2...0.5 mm,
optimal 0.3 mm

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!



2020-03-24 The product features and technical data specified do not express or imply any warranty. Technical modifications subject to change.

ITD69H00 - Sine signal

Through hollow shaft ø40 to ø65 mm

128 sinewave cycles per revolution

Ordering reference

	ITD69H00	128	M	####	KR1	E	######	IP	67
Product									
	ITD69H00								
Sinewave cycles									
128		128							
Voltage supply									
UB= 5 VDC ±10% / sine 1 Vpp			M						
Output signal sine									
A+, A-, B+, B-				BI					
A+, A-, B+, B-, N+, N-				NI					
Connection									
Cable radial, 1.00 m					KR1				
Operating temperature									
-40...+100 °C (fixiertes Kabel)						E			
Magnetic wheel H00									
Ø40 mm, for adhesive or heat-shrink mounting							40		
Ø45 mm, for adhesive or heat-shrink mounting							45		
Ø50 mm, for adhesive or heat-shrink mounting							50		
Ø55 mm, for adhesive or heat-shrink mounting							55		
Ø60 mm, for adhesive or heat-shrink mounting							60		
Ø65 mm, for adhesive or heat-shrink mounting							65		
IP								IP	
Protection class									
IP67 (relating to sealed electronics)									67

Other diameters on request.

2020-03-24 The product features and technical data specified do not express or imply any warranty. Technical modifications subject to change.