

Incremental Encoder Kit

Optical reflective

Hollow shaft

High resolution



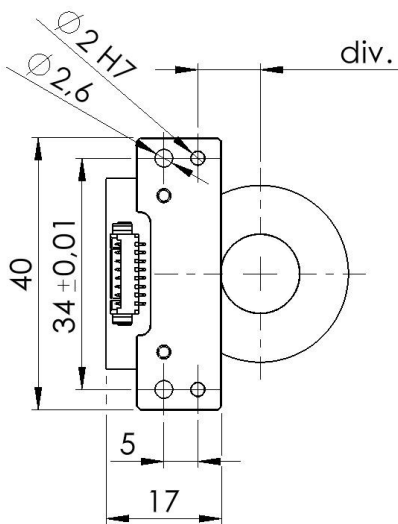
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Description

The EBG-Head Kit is an optical encoder system. It's a reflective kit encoder that can be fixed quickly and easily on different hollow shaft applications and on different mounting situations. The encoder is developed for incremental positioning and rotational speed control. There are 2 different sizes of code discs available. Other sizes are possible on customer request.

Dimensions



Features

- Incremental encoder
- Channels: A+, A-, B+, B-, I+, I-
- Interface: TTL, RS422 (3,3V level)
- Resolution: up to 500.000 cpr
- Output frequency: up to 12 MHz
- Power supply: 5 VDC
- Small size: 40.0 mm x 17.0 mm x 5.5mm
- Bearing free
- Operating temperature: -20°C to +85°C
- Compliant EU-directive 2011/65/EU (RoHS)

Applications

- Motor feedback
- Hollow-shaft, torque motor systems

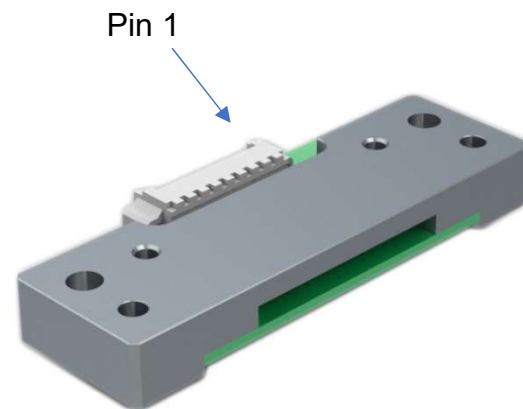
Recommended operating conditions

Parameter	Symbol	Min.	Typ	Max.	Unit	Notes
Supply voltage	U _B	4.75	5	5.25	V _{DC}	
Supply current	I _{UB}	50	70	90	mA	no Load
Startup time	t _{st}		20		ms	
Signals ABI						
Output current	I _{out}			±20	mA	per channel
Short circuit current	I _{out-max}			±35	mA	per channel
High level output voltage	V _{oH}	2.4		3.3	V _{DC}	R _L =120Ω
Low level output voltage	V _{oL}	0.0		0.7	V _{DC}	R _L =120Ω
Rise / Fall time	t _r		20		ns	
Latency	t _L		2.4	5	µs	
Output frequency	f _{out}			12	MHz	
Native Resolution						
30 mm disc	n		1,024		cpr	
132 mm disc	n		5,000		cpr	
Rotation speed						
30 mm disc	v			7,000	U/min	
132 mm disc	v			1,400	U/min	
Mechanic						
Radial misalignment				±0,15	mm	
Tangential misalignment				±0,15	mm	
Air gap		0,6	0,75	0,9	mm	
Environment						
Operating temperature	T _A	-20	25	85	°C	
Storage temperature	T _S	-40		85	°C	
Humidity exposure				90	%RH	not condensing
System						
Relative Angular Accuracy				± 0.003	°m	Code disc
Absolute Angular Accuracy				± 0.01	°m	Code disc

ESD Warning: Normal handling precautions should be taken to avoid static discharge damage to the sensor.

Pin Description

Pin	Signal	Cable color
1	A+	Red
2	A-	Green
3	B+	Blue
4	B-	Purple
5	I+	Brown
6	I-	Yellow
7	GND	Orange
8	VCC	Black



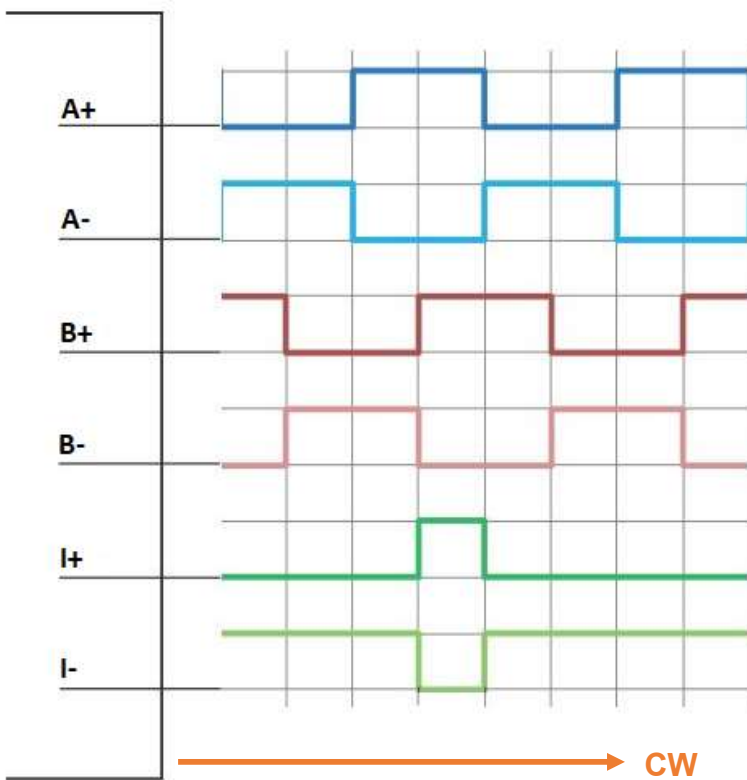
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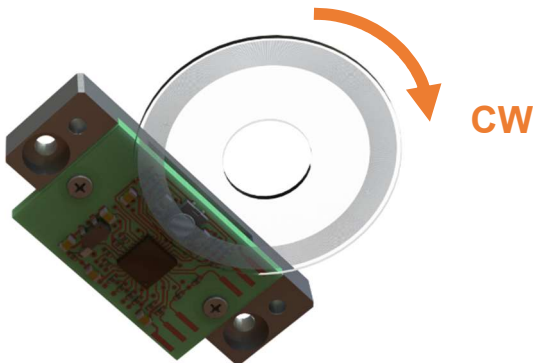
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Interface

ABI

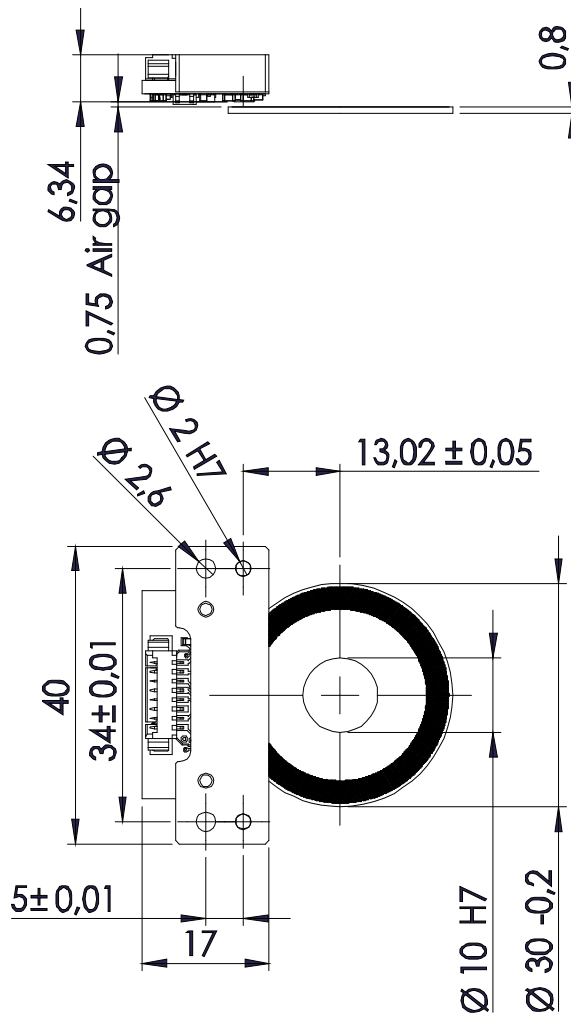


Direction of rotation



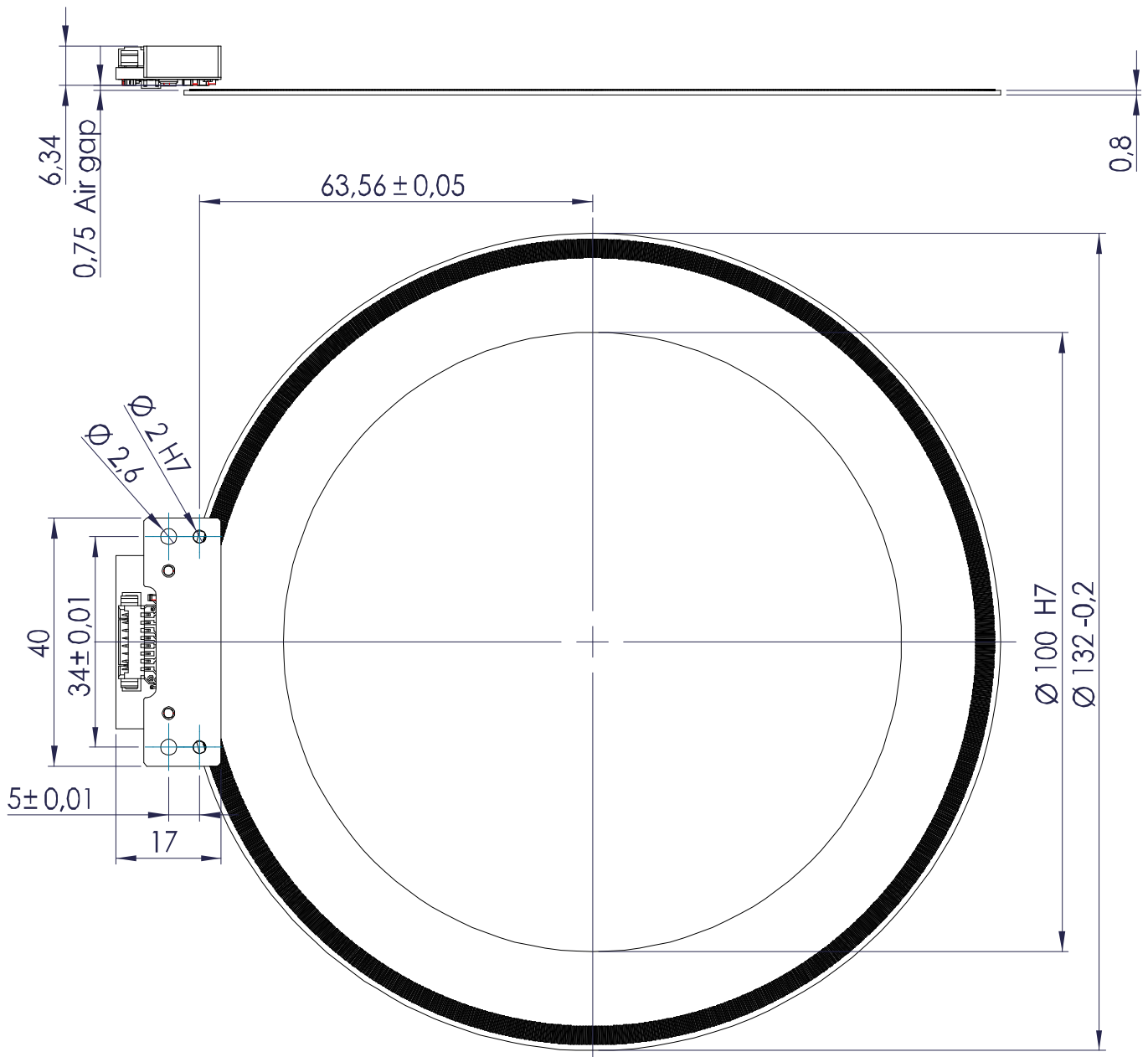
Mechanical Dimensions: Type 30

10mm shaft diameter



Mechanical Dimensions: Type 132

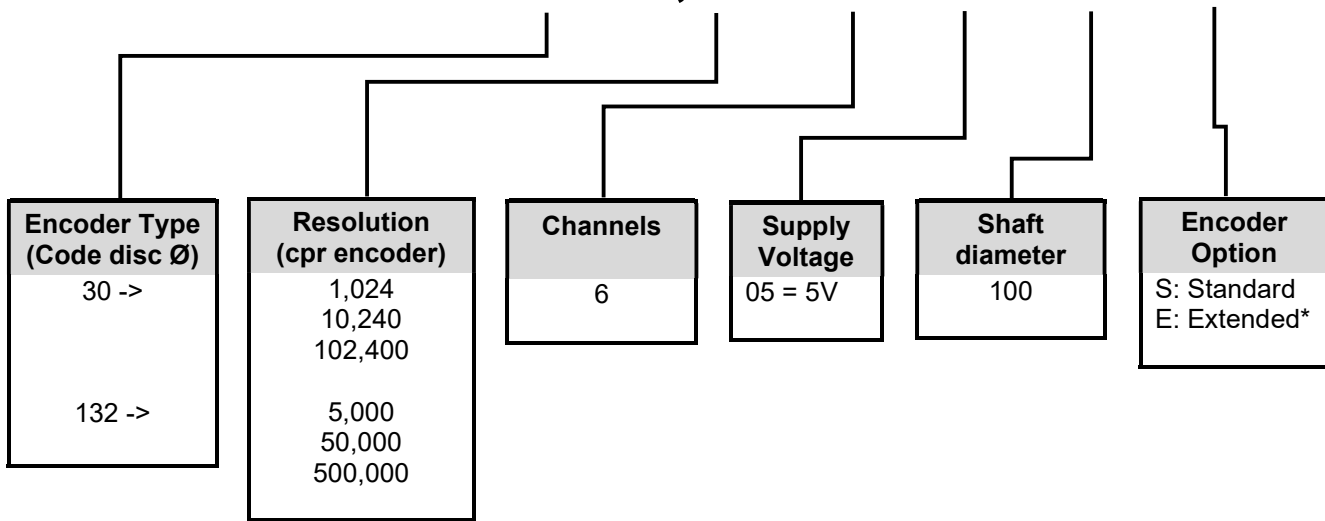
100mm shaft diameter



Ordering Information


Ordering Code:

EBG Head 132 – 5,000 – 6 – 05 – 100 – S



*Customer specific version – feel free to ask us for special solution.

Necessary accessories

Description	Picture	Item number
Accessory-Set: Cable 300mm, 2 screws M2,5x8, 2 cylindrical pins 2x6 (DIN 6325)	 Pin 1	108546