

IXARC HOLLOW SHAFT KIT ENCODER DATASHEET

IXARC Hollow Shaft Kit Encoder

CCD-BC00B-1618-TE3S-JRA



- ▶ Kit Encoder for Integration to Motors, Robot Joints.
- ▶ 30mm Hollow Shaft Diameter
- ▶ 80mm Outer Diameter
- ▶ Energy-Harvesting-System Based on Wiegand Effect
- ▶ No Battery – No Maintenance
- ▶ Large Axial (0.1mm) and Radial Mounting tolerance (0.2mm)
- ▶ Easy Installation with No Calibration Required

1. Interface

Interface	BiSS C
Min Interface Cycle Time	50 μ s

2. Electrical Data

Supply Voltage	4.5-26.4 VDC
Current Consumption	180mA @ 5V
Start-up time	Max 1 s
Clock Input	RS 422
Clock Frequency	100 kHz – 10 MHz
Reverse Polarity Protection	Yes
Short Circuit Protection	Yes

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3. Sensor

Shaft Diameter	30 mm
Housing Diameter	80 mm
Height	17.8 mm
Singleturn Technology	Capacitive
Electrical Resolution Singleturn	18 bit
Multiturn Technology	Self-powered magnetic pulse counter (no battery, no gear)
Multiturn Range	16 bit
Accuracy (INL)	$\pm 0.02^\circ$
Counting Direction	Clockwise shaft movement (front view on stator)

4. Environmental Specifications

Operating Temperature	-40 °C (-40 °F) – +105 °C (221 °F)
Humidity	90% RH, no condensation
Shock Resistance	≤ 200 g (half sine 6 ms, EN 60068-2-27)
Permanent Shock Resistance	≤ 20 g (half sine 16 ms, EN 60068-2-29)
Vibration Resistance	≤ 20 g (10 Hz – 2000 Hz, EN 60068-2-6)

5. Mechanical Data

Housing Material	Steel
Max. Permissible Speed	6000 RPM
Stator-Rotor Air Gap	0.7mm

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Maximum Axial / Radial Misalignment	±0.1mm / ±0.2 mm
Max. Permissible Mechanical Speed during Start-up	2 rpm
Mass	110g
Rotor Inertia	60,000 gr·mm ²

6. Electrical Connection

Connection Orientation	Radial
Connector	JST SM10B-GHS-TB

7. Connection Plan

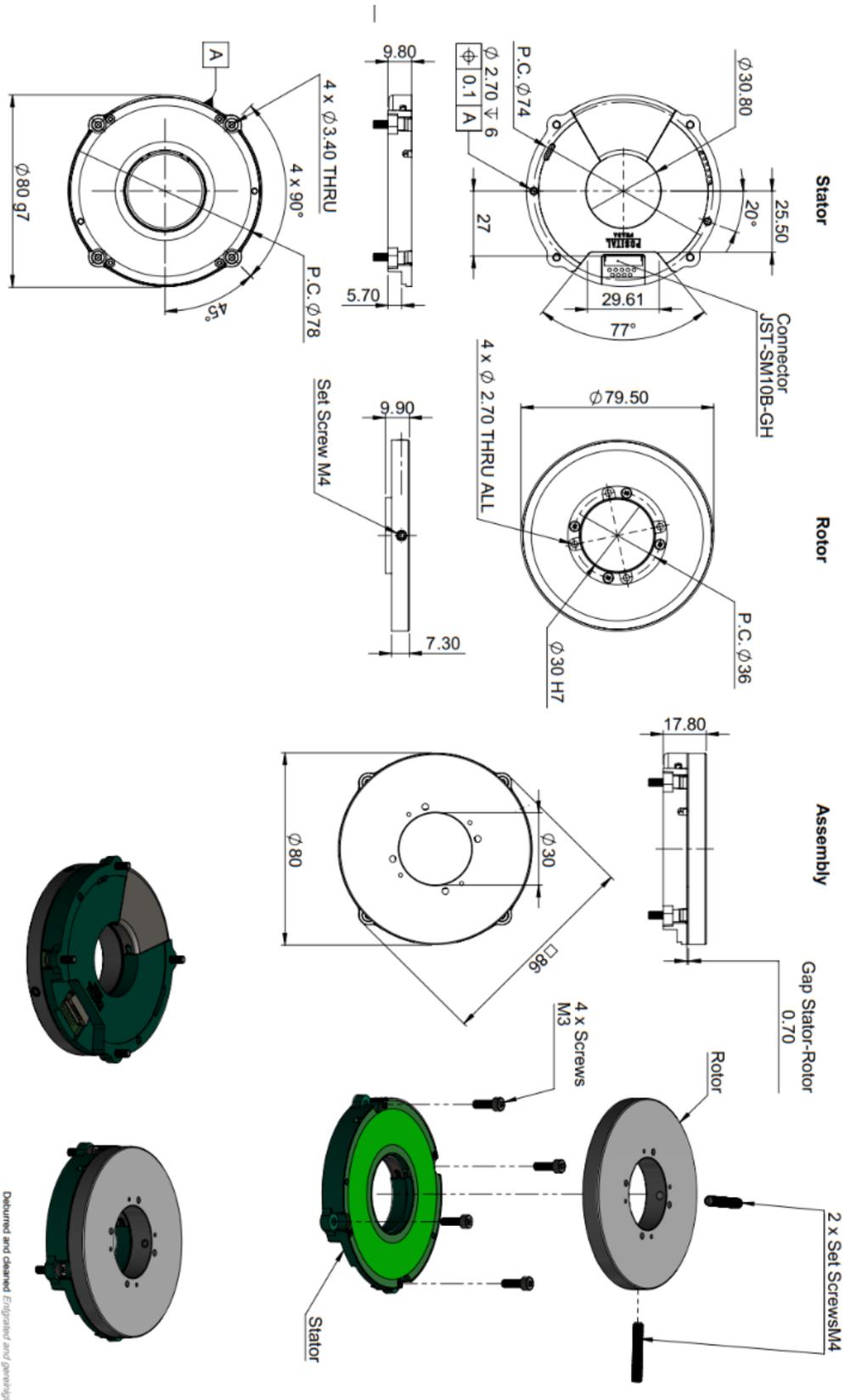
Pin	Signal	Cable Color
1	Data- (SLO-)	Yellow
2	Data+ (SLO+)	Green
3	GND for PE Connection	Grey with Eyelet
4	Preset	Pink
5	CLK+ (MA+)	Brown
6	CLK- (MA-)	White
7	VCC	Red
8	GND	Blue
9	Config	Black
10	DIAGNOSTIC	Violet

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8. Dimensional Drawing



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9. Version Space

CCD-BC00B-1618-TE3S-JRA	2-part assembly, PCB connector exit
CCD-BC00B-1618-TE3S-2RW	2-part assembly, PCB connector and accessory 2m PVC cable

Contact

FRABA Americas
T +1 609 750-8705
info@posital.com

FRABA EMEA
T +49 221 96213-0
info@posital.eu

FRABA Asia
T +65 6514 8880
info@posital.sg