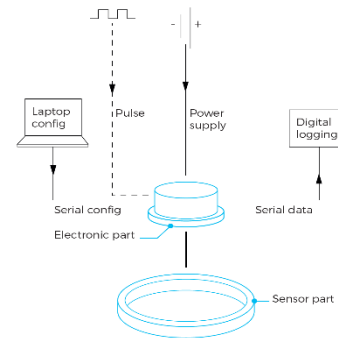


# iX-1B

## High-grade 1-component gyroscope

iX-1B is a high-grade one-component gyroscope with low-noise, great stability, and wide dynamic range, featuring absolute digital rotation rate in  $\text{mrad/s}$ . A specific benefit of this product is its compactness which allows its integration in complex systems.

iX-1B is a highly versatile sensor thanks to limited power consumption, simple configuration of the factory-calibrated digital output, which make it the perfect ally to develop innovative solutions in many applications: calibration, dynamic motion feedback, close-loop operation actuation...



### FEATURES

- Interferometric Fiber Optic Gyroscope
- Absolute rotation rate measurement
- Serial output at user defined frequency
- High dynamic range
- Digital output factory-calibrated (no need for user calibration)
- Flat frequency response on a large frequency band  $10^{-3}$  – 50 Hz

### BENEFITS

- Low power consumption (USB power driven)
- Best performance per volume ratio
- Must have : TTL mode: integrated angle since last pulse

### APPLICATIONS

- Calibration
- Metrology
- Dynamic motion feedback
- Closed-loop operation actuation

## SPECIFICATIONS

### Performances

	iX-1B	iX-1B+
Sensor self-noise Typical (maximum)	=< 450 (600) nrad/s/√Hz =< 1.1 (1.5) m°/√h Flat on frequency band 10-2 Hz to 50 Hz	=< 290 (370) nrad/s/√Hz =< 0.7 (0.9) m°/√h Flat on frequency band 10-2 Hz to 50 Hz)
Passband	DC to 50 Hz	
DC rotation rate accuracy at stabilized temperature in operating T°C range	=< 2.4 μrad/s (=0.5 °/h) maximum	
Scale factor stability (in full perf T°C range and ON-OFF)	< 100 ppm	
Bias stability (=lowest point reached by Allan variance)	=< 0.002 °/h = 10 nrad/s	=< 0.001 °/h = 5 nrad/s

### Operating range / environment

Operating / storage temperature	-20 °C to 60 °C / -40 to 80 °C
Dynamic range	± 180 °/s = ± π rad/s
Vacuum compatible	Yes
Pressure susceptibility	None
MTBF	100,000 hours
Ingress protection	IP65

### Physical characteristics

Dimensions	External diameter-φ-150 mm Height 75 mm
Weight	1.4 kg
Mounting	holes 4.5∅ and 3 holes threaded M4

### Interfaces

Communication	Serial RS232 1 bit start, 8 bits data, parity odd, 1 stopbit, 230.4 kBit/s
Operating Mode	TTL mode : integrated angle since last pulse Continuous mode : at 1 / 10 / 100 / 250 / 500 Hz
Data output rate	
Power supply / consumption	5 V, +/-5%, 3 W, 200 mVp-p ripple and noise Can be powered by USB >2.0 connection
Sensor control loop mode	Closed loop mode Open loop mode
Connectors	Micro D 15 Female