

Preliminary Datasheet

General description

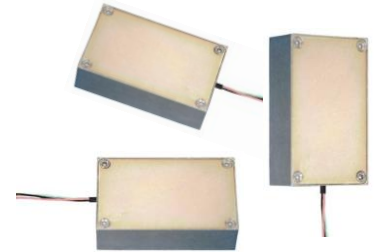
The **INNLABS' INN-105 Quartz Gyroscopes** are single-axis angular rate analog sensors which utilize vibrating quartz technology where the Coriolis Effect is used to measure angular rotation rate. The use of piezoelectric quartz material ensures exceptional performance and long product life.

Applications

- Antenna & Platform Stabilization
- Navigation Systems
- Instrumentation
- Robotics & Vehicles
- Precision Farming
- Factory Automation
- Medical/Orthopedic

Features

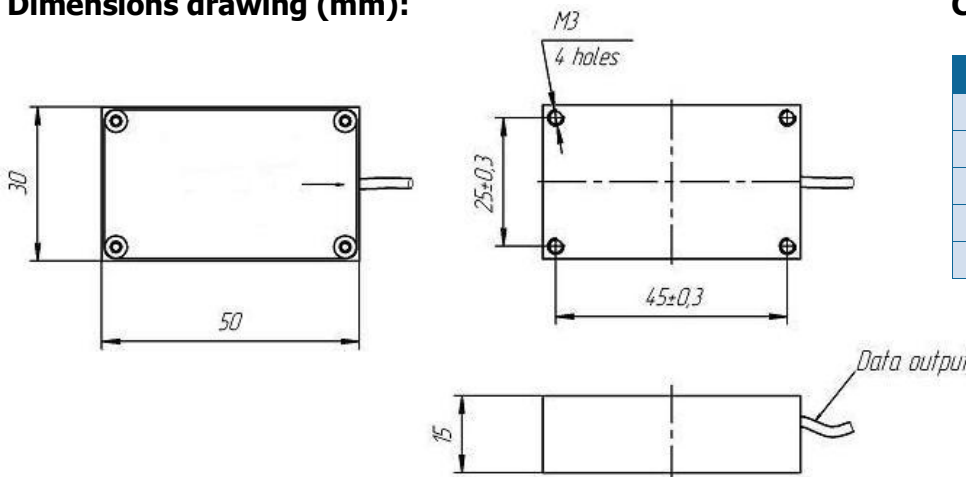
- Compact Design & Low Cost
- Wide Measurement Range, up to ± 3000 deg/sec
- Fast Start-Up
- Internal Power Regulation



Technical parameters

Parameters	Units	Values					
INN-105 Version		1.1	1.2	2.1	2.2	3.1	3.2
Measurement range	deg/sec	± 50	± 200	± 50	± 500	± 100	± 3000
Bias stability at const. temperature, 10 sec averaging time	deg/sec	≤ 0.02	≤ 0.4	≤ 0.04	≤ 0.06	≤ 0.06	≤ 0.3
Sensitivity	deg/sec	≤ 0.01	≤ 0.02	≤ 0.015	≤ 0.1	≤ 0.02	≤ 0.2
Scale Factor nonlinearity	%FS	≤ 0.05		≤ 0.05		≤ 0.08	≤ 0.2
Full Scale Output	V	0 ... 5 or 5					
Bias Calibration (at normal temperature)	V	2.5 ± 0.05 or 0 ± 0.05					
Angle Random Walk	deg/ \sqrt{h}	1 ... 1.5					
G Sensitivity	deg/sec/g	≤ 0.05					
Start up time	sec	1					
Bandwidth	Hz	60					
Operating temperature	$^{\circ}\text{C}$	-40 ... +70					
Storage temperature	$^{\circ}\text{C}$	-55 ... +85					
Vibration	g, RMS	2,20 Hz ... 2 kHz random					
Shock	g	500 g, 5 ms					
Data interface		Analog					
Input Voltages	V	+8 ... +12 or ± 8 ... ± 12					
Input Current	mA	10 or 20					
Dimensions (L x W x H)	mm	50 x 30 x 15					
Weight	grams	60					

Dimensions drawing (mm):



Connection description:

Wire	Signal
Red	+8 ... +12
Green	-8 ... -12
Black	Power ground
Gray	Signal Ground
Yellow	X Output

Disclaimer: the document is subject to change without notice. INNLABS reserves the right to make changes to any product or technology herein. INNLABS does not assume any liability arising out of the application or use of the product.