

Preliminary Datasheet

General description

The INNALABS' INN-108 Quartz Gyroscopes are compact, high reliability, solid-state single-axis angular rotation sensors designed for use by original equipment manufacturers (OEM). It is based on monolithic quartz sensing element, and features internal power regulation, and DC input/high-level DC output operation. There are two versions of INN-108 Quartz Gyros. The first one provides a high-level 0 to +5.0 Vdc output, and the second version provides a high-level bipolar output of ± 5 Vdc, and is designed for use with conventional double-sided power supplies.

Applications

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



Features

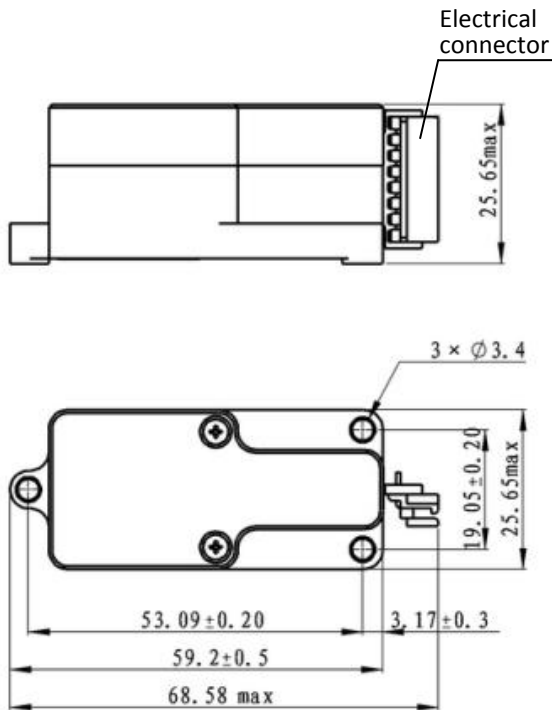
- Micromachined Sensor
- DC Input, DC Output Operation
- Compact Design & Low Cost
- Internal Power Regulation
- Wide Temperature Range
- Shock Resistant
- Fast Start-Up

Technical parameters

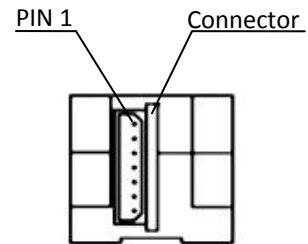
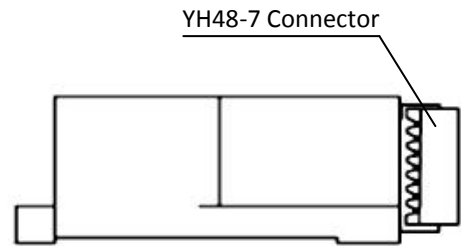
#	Parameters	Units	Values
1	Measurement range	deg/sec	$\pm 50, \pm 100, \pm 200, \pm 500$
2	Input Voltages	V	+8 ... +18 or ± 8 ... ± 18
3	Full Scale Output	V	0 ... 5 or ± 5
4	Short Term Bias stability at normal temp., 100 sec	deg/sec	$\leq 0.05^*$
5	Bias Variation over Temperature	deg/sec	≤ 3
6	G Sensitivity (Typical)	deg/sec/g	≤ 0.06
7	Scale Factor temperature sensitivity	%/°C	0.06
8	Scale Factor nonlinearity	%FS	≤ 0.05
9	Start up time (Typical)	sec	≤ 1
10	Bandwidth	Hz	>50
11	Threshold/Resolution	deg/sec	$\leq 0.01^*$
12	Output Noise	deg/sec/ $\sqrt{\text{Hz}}$	$\leq 0.02^*$
13	Operating temperature	°C	-40 ... +85
14	Storage temperature	°C	-55 ... +100
15	Vibration operational	g RMS, Hz	5, 20 ... 2000
16	Vibration survival	g RMS, Hz	10, 20 ... 2000
17	Shock	g	200
18	Weight	grams	≤ 50

* Values indicated for ± 100 deg/sec range

Dimensions drawing (mm):



Connection description:



YH48-7 Connector is designed for
Quartz Gyros INN-108

Interface description:

PIN	Signal
1	Negative Power Supply
2	Positive Power Supply
3	Power Ground
4	Signal Ground
5	Output Signal
6	NC
7	NC

Note: power ground and signal ground are connected together inside the product.

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