

## 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  $\pm 5$  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

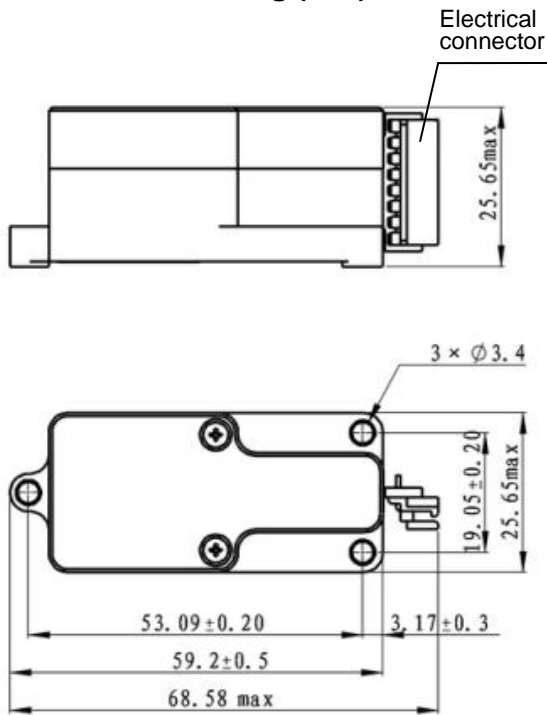


### Technical parameters

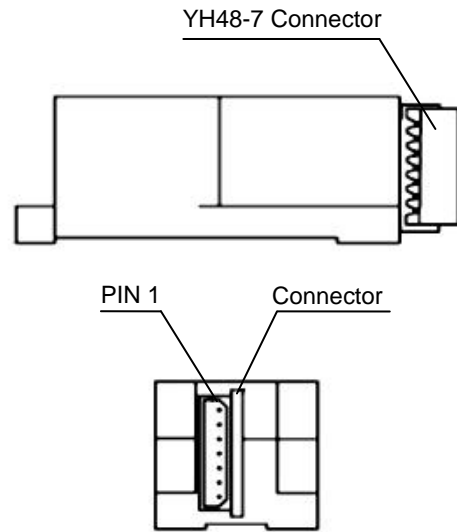
#	Parameters	Units	Values
1	Measurement range	deg/sec	$\pm 50, \pm 100, \pm 200, \pm 500$
2	Input Voltages	V	+8 ... +18 or $\pm 8$ ... $\pm 18$
3	Full Scale Output	V	0 ... 5 or $\pm 5$
4	Short Term Bias stability at normal temp., 100 sec	deg/sec	$\leq 0.05^*$
5	Bias Variation over Temperature	deg/sec	$\leq 3$
6	G Sensitivity (Typical)	deg/sec/g	$\leq 0.06$
7	Scale Factor temperature sensitivity	$\%^{\circ}\text{C}$	0.06
8	Scale Factor nonlinearity	%FS	$\leq 0.05$
9	Start up time (Typical)	sec	$\leq 1$
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	$^{\circ}\text{C}$	-40 ... +85
14	Storage temperature	$^{\circ}\text{C}$	-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	$\leq 50$

\* Values indicated for  $\pm 100$  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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