

TRIAXIAL GYROSCOPES

DYN-G-7000 SERIES

DynaLabs

Dynalabs MEMS based gyroscopes are designed by micro-mechanical silicon structures.



Gyroscopes are insensitive to external impacts and vibrations. For harsh environmental conditions Dynalabs gyroscopes are preferred. 7000 Series Triaxial Gyroscopes feature a lightweight, reliable aluminum housing and they have an integrated cable with configurable length. They offer angular velocity ranges of ± 75 , ± 150 , ± 300 and $\pm 900^\circ/\text{s}$, ensuring versatile performance. Additionally, their IP68 protection class allows them to operate reliably in challenging environments.



Features

- Proven and robust silicon MEMS gyro
- Analog voltage output
- High shock and vibration rejection
- Class-leading bias and noise over temperature
- Low noise - high resolution



Applications

- Automotive in-car navigation
- GPS vehicle and personal navigation aiding
- Vehicle yaw, pitch and roll rate sensing
- Antenna stabilization
- Motion control

| | | DYN-G-7075 | DYN-G-7150 | DYN-G-7300 | DYN-G-7900 |
|------------------------------|----------------------------------------|------------|------------|------------|------------|
| Full-scale angular velocity | ($^\circ/\text{s}$) | ± 75 | ± 150 | ± 300 | ± 900 |
| Frequency range | (Hz) | 0-150 | 0-150 | 0-150 | 0-150 |
| Non-linearity (full scale) | (%) | 0.06 | 0.06 | 0.06 | 0.06 |
| Noise (in band) | ($^\circ/\text{s}/\sqrt{\text{Hz}}$) | 0.0075 | 0.0075 | 0.0075 | 0.0075 |
| Scale factor (nominal) | ($\text{V}/^\circ/\text{s}$) | 0.012 | 0.006 | 0.003 | 0.001 |
| Scale factor var. over temp. | (%) | 0.5 | 0.5 | 0.5 | 0.5 |
| Bias variation with temp. | ($^\circ/\text{s}$) | ± 1 | ± 2 | ± 3 | ± 4 |
| Shock survivability | (g) | 10,000 | 10,000 | 10,000 | 10,000 |



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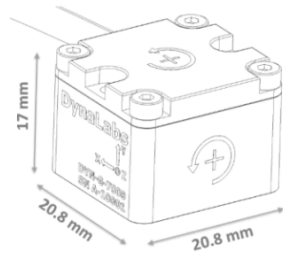
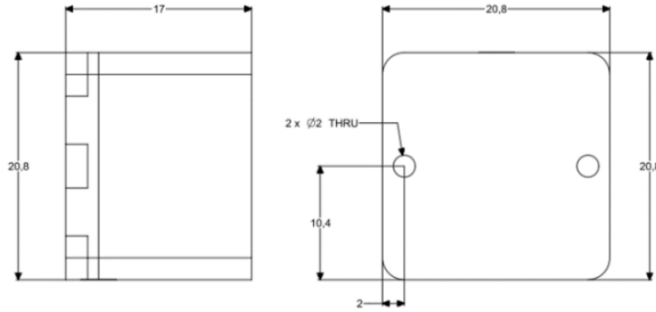
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DynaLabs TRIAxIAL GYROSCOPES

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OPTIONS:

- Custom Cable Length (5m standard cable)
- Custom Housing Material
- Custom Connector

CABLE CODE/PIN CONFIGURATION:

- Red : V+ Supply voltage 6V to 35V
- Black : Ground Power GND
- RX : Yellow : Gyro Signal X-Axis: Analog output voltage signal for single-ended mode
- RY : Blue : Gyro Signal Y-Axis: Analog output voltage signal for single-ended mode
- RZ : White : Gyro Signal Z -Axis: Analog output voltage signal for single-ended mode

Cable: 5x #28 AWG Conductors PFA Insulated, Braided Shield, TPE Jacket

| Protection Level | Operating Voltage | Operating Temperature | Weight (without cable) | Housing Material |
|------------------|-------------------|-----------------------|---------------------------------|-------------------|
| IP 68 | 6V - 35V DC | -40 °C to +100 °C | 18 g (aluminum) 35 g (steel) | Aluminum or Steel |



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