



PRO GYRO® Professional Grade Gyro

Description:

Pro Gyro® is made for accuracy.

Watson Industries has been designing and manufacturing solid-state gyros since 1980. Our latest series of rate gyros is the Pro Gyro®. This breakthrough new gyro is built to be a VSG replacement and much more. Based on proven technology, this gyro is built under the latest ISO 9001 quality standards with new features including built-in test and enhanced EMI/RFI protection.



The Pro Gyro® has excellent performance for stability, acceleration insensitivity, low mounting sensitivity and vibration rejection. This is achieved by having a sensing element that is finely tuned and temperature compensated. The advanced tuning methods allow better relative tolerances and better signal to noise performance. Special internal mounting holds the gyro sensing element in a stable alignment while rejecting linear vibration.

Upgrades that are standard for the Pro Gyro® include available rate ranges up to 475 degrees per second, internal power regulation for power input between 8 volts and 45 volts, and a case mounted connector.

Watson Pro Gyro® features:

- Accurate in severe environments
- Excellent performance (time, temperature, vibration)
- Rugged
- Wide bandwidth
- Low drift
- Low noise
- CE Certified
- High reliability
- Two-year warranty

Applications:

- Aircraft flight instrumentation and control
- Platform stabilization (antenna, camera, etc.)
- Robotics
- Short-term navigation
- Vehicle test instrumentation
- Train tilt controls



Watson Industries Pro Gyro® Models*

<u>Model</u>	<u>Range</u>	<u>Output</u>	<u>Zero Ref (0°/sec)</u>	<u>Scale Factor</u>	<u>Resolution</u>
PRO-122-2A	±50°/sec	0 to 5 VDC	2.5 VDC	50mV/°/sec	0.025°/sec
PRO-122-3A	±50°/sec	±5 VDC	0.0 VDC	100mV/°/sec	0.013°/sec
PRO-132-2A	±100°/sec	0 to 5 VDC	2.5 VDC	25mV/°/sec	0.05°/sec
PRO-132-3A	±100°/sec	±5 VDC	0.0 VDC	50mV/°/sec	0.025°/sec
PRO-142-2A	±200°/sec	0 to 5 VDC	2.5 VDC	12.5mV/°/sec	0.01°/sec
PRO-142-3A	±200°/sec	±5 VDC	0.0 VDC	25mV/°/sec	0.05°/sec

*Custom ranges are available



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Watson Pro Gyro® Specifications

Angular Rate

Range:	±100°/sec (Typical)	See table above
Resolution:	0.025°/sec (Typical)	See table above
Analog Scale Factor:	50mV/°/sec (Typical)	See table above
Scale Factor Accuracy:	0.2%	At constant room temperature
Scale Factor Temp Coefficient:	0.5%	Over temperature range
Bias:	±0.1°/sec	At room temp
Bias: Over Temp Range	±0.5°/sec	
Warmup Drift:	±0.1°/sec	
Non-Linearity:	< 0.15%	Full scale range
Bandwidth:	70 Hz	
Noise:	< 0.1°/sec rms	1 Hz to 100 Hz

Environmental

Temperature: Operating	-40°C to +85°C	
Temperature: Storage	-55°C to +85°C	
Vibration: Operating	5g rms	20 Hz to 2 KHz
Vibration: Survival	10g rms	20 Hz to 2 KHz
Shock: Survival	500g	10mS ½ sine wave

Electrical

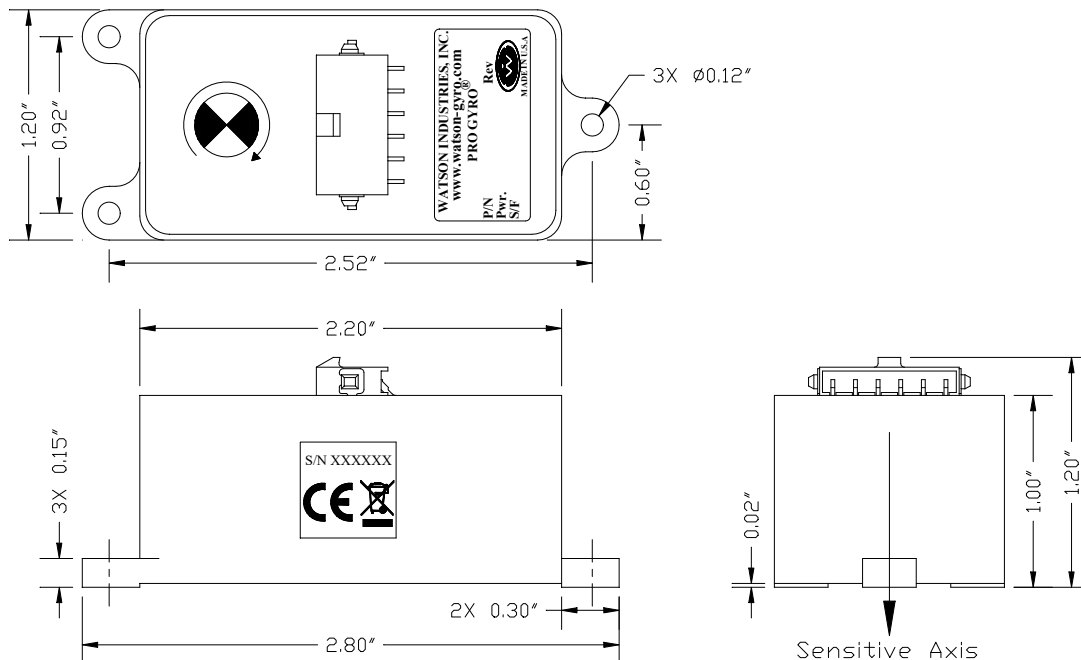
Input Power:	8 to 45VDC	Reverse protected
Input Current:	25mA @ 12VDC	0.3W
Analog Output:	±5VDC (Typical)	See table above
Analog Output Impedance:	1000 Ohm	5%

Physical

Size: Including Mounting Flanges	1.2"W x 2.8"L x 1.2"H	3.0 x 7.1 x 3.0 (cm)
Weight:	2 oz	56 grams
Connection:	Amp 1445057-6 Connector (6 pin)	Mating Connector Incl. 12" Wire bundle optional
Life:	> 100,000 Hrs MTBF	20 years shelf life

- Specifications are subject to change without notice.
- This product may be subject to export restrictions. Export Classification ECCN EAR99.

Single Axis Watson Pro Gyro® (Actual Size)



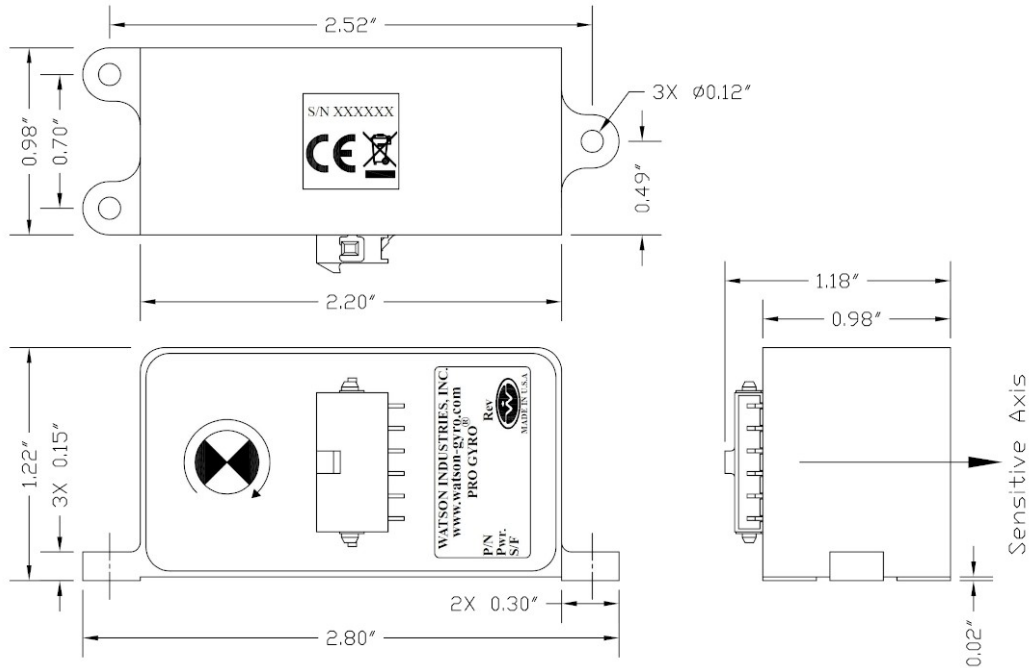
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Alternate Orientation Pro Gyro®

To mount a Pro Gyro® so that its sensitive axis is parallel with the mounting surface, you can order the gyro with an alternate enclosure. To order this gyro instead involves changing one number in the gyros part number. For example: The part number for a PRO-122-3A with an alternate enclosure would be a PRO-123-3A.



Alternate orientation gyro dimensions (Actual Size)

10/21 DAO



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