



The New **PRO GYRO™** Professional Grade Gyro

Description:

Watson Industries has been designing and making solid-state gyros since 1980. They have now produced a new series of rate gyros, 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 AS9100 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
- 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>Bandwidth</u>
PRO-122-2A	±50°/sec	0 to 5 VDC	2.5 VDC	50mV/°/sec	70 Hz
PRO-122-3A	±50°/sec	±5 VDC	0.0 VDC	100mV/°/sec	70 Hz
PRO-132-2A	±100°/sec	0 to 5 VDC	2.5 VDC	25mV/°/sec	70 Hz
PRO-132-3A	±100°/sec	±5 VDC	0.0 VDC	50mV/°/sec	70 Hz
PRO-142-2A	±200°/sec	0 to 5 VDC	2.5 VDC	12.5mV/°/sec	70 Hz
PRO-142-3A	±200°/sec	±5 VDC	0.0 VDC	25mV/°/sec	70 Hz
PRO-152-2A	±400°/sec	0 to 5 VDC	2.5 VDC	6.25mV/°/sec	40 Hz
PRO-152-3A	±400°/sec	±5 VDC	0.0 VDC	12.5mV/°/sec	40 Hz

*Custom ranges are available



Watson Industries, Inc.

3041 Melby Road Eau Claire, Wisconsin 54703 U.S.A
Phone: +1 (715) 839-0628 Fax: +1 (715) 839-8248
e-mail: support@watson-gyro.com Website: www.watson-gyro.com

Watson Pro Gyro™ Specifications

Angular Rate

Range:	±100°/sec (Typical)	See table on front page
Resolution:	0.025°/sec	
Analog Scale Factor:	50mV/°/sec (Typical)	See table on front page
Scale Factor Accuracy:	0.2%	At constant room temperature
Scale Factor Temp Coefficient:	0.5%	Over temperature range
Bias: At room temp	±0.1°/sec	
Bias: Zero Bias	±0.1°/sec	Run-To-Run variation
Bias: Over Temp Range	±0.5°/sec	
Warmup Drift:	±0.6°/sec	
Non-Linearity:	< 0.03%	Full scale range
Bandwidth:	70 Hz (Typical)	See table on front page
Noise:	< 0.07°/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	20Hz to 2kHz
Vibration: Survival	10g rms	20Hz to 2kHz
Shock: Survival	500g	10ms ½ sine wave

Electrical

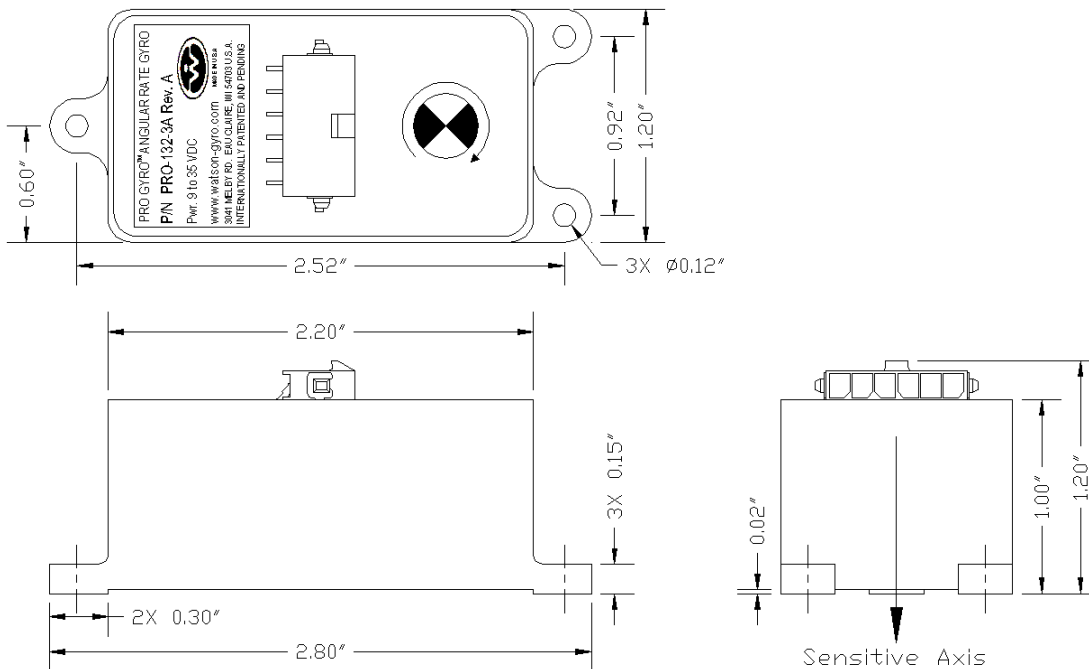
Input Power:	8 to 45 VDC	Reverse Protected
Input Current:	60mA at 12V	0.7W
Analog Output	±5VDC (Typical)	See table on front page
Output Impedance:	1000 Ohm	5%

Physical

Size: Including Mounting Flanges	1.2"W x 2.8"L x 1.2"H	30 x 71 x 30 (mm)
Weight:	2.2 oz	60g
Connection:	Amp 1445057-6 Connector	Wire bundle optional
Life:	> 100,000 Hours MTBF	20 years shelf life

- Specifications are subject to change without notice.
- This product may be subject to export restrictions. Please consult the factory.

Single Axis Watson Pro Gyro™ (Actual Size)



Watson Industries, Inc.

3041 Melby Road Eau Claire, Wisconsin 54703 U.S.A
 Phone: +1 (715) 839-0628 Fax: +1 (715) 839-8248
 e-mail: support@watson-gyro.com Website: www.watson-gyro.com

07/10 DAO