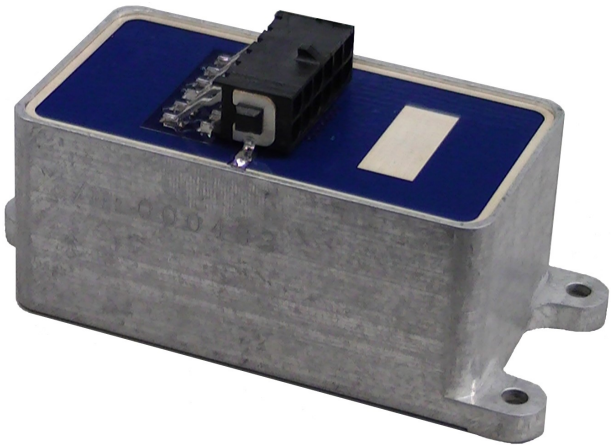
Solid State Angular Rate Gyro
ARS-G152 Specifications

Description:

The ARS-G152 is Watson's newest addition to its line of rate gyro sensors.



Watson Industries has been designing and manufacturing solid-state gyros since 1980. The ARS-G152 Rate gyro has many of the features from our Pro Gyro® line but includes many exciting new capabilities including digital output and several analog output ranges. Users can still take advantage of this gyro's built-in test feature and enhanced EMI/RFI protection.

The ARS-G152 has excellent performance for stability, acceleration insensitivity, and vibration rejection. This is achieved by having a sensing element that is finely tuned and temperature compensated. Other significant advancements have been made on the ARS-G152. A menu system allows for adjustable sensor bandwidth. The analog rate output can also be toggled between unipolar and bipolar using menu adjustments.

ARS-G152 features:

- High reliability
- Wide bandwidth (Adjustable!)
- Low drift
- Digital RS-232 Serial output
- Four Analog outputs present:
  50, 100, 200, and 400°/s ranges
- Accurate in severe environments
- Low noise
- 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 ARS-G152 Selectable Analog Output Ranges

Output	Format	Range	Output	Zero Ref (0°/sec)	Scale Factor		Resolution
50	Unipolar	±50°/sec	0 to 5 VDC	2.5 VDC	20°/sec/Volt	50mV/°/s	0.006°/sec
	Bipolar	±50°/sec	±5 VDC	0.0 VDC	10°/sec/Volt	100mV/°/s	0.006°/sec
100	Unipolar	±100°/sec	0 to 5 VDC	2.5 VDC	40°/sec/Volt	25mV/°/s	0.012°/sec
	Bipolar	±100°/sec	±5 VDC	0.0 VDC	20°/sec/Volt	50mV/°/s	0.012°/sec
200	Unipolar	±200°/sec	0 to 5 VDC	2.5 VDC	80°/sec/Volt	12.5mV/°/s	0.024°/sec
	Bipolar	±200°/sec	±5 VDC	0.0 VDC	40°/sec/Volt	25mV/°/s	0.024°/sec
400	Unipolar	±400°/sec	0 to 5 VDC	2.5 VDC	160°/sec/Volt	6.25mV/°/s	0.05°/sec
	Bipolar	±400°/sec	±5 VDC	0.0 VDC	80°/sec/Volt	12.5mV/°/s	0.05°/sec

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Watson ARS-G152 Specifications

Angular Rate

Ranges:	±100°/sec (Selectable)	See table above
Resolution:	0.012°/s (Based on range selected)	See table above
Analog Scale Factor:	50mV/°/s (Based on range selected)	See table above
Scale Factor Accuracy:	0.2%	At constant room temperature
Scale Factor Temp Coefficient:	0.1%	Over temperature range
Bias:	±0.1°/sec	At room temp
Bias: Over Temp Range	±0.2°/sec	
Warmup Drift:	±0.25°/sec	
Non-Linearity:	< 0.15%	Full scale range
Bandwidth:	70 Hz	User selectable 5 to 200 Hz
Noise:	< 0.05°/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

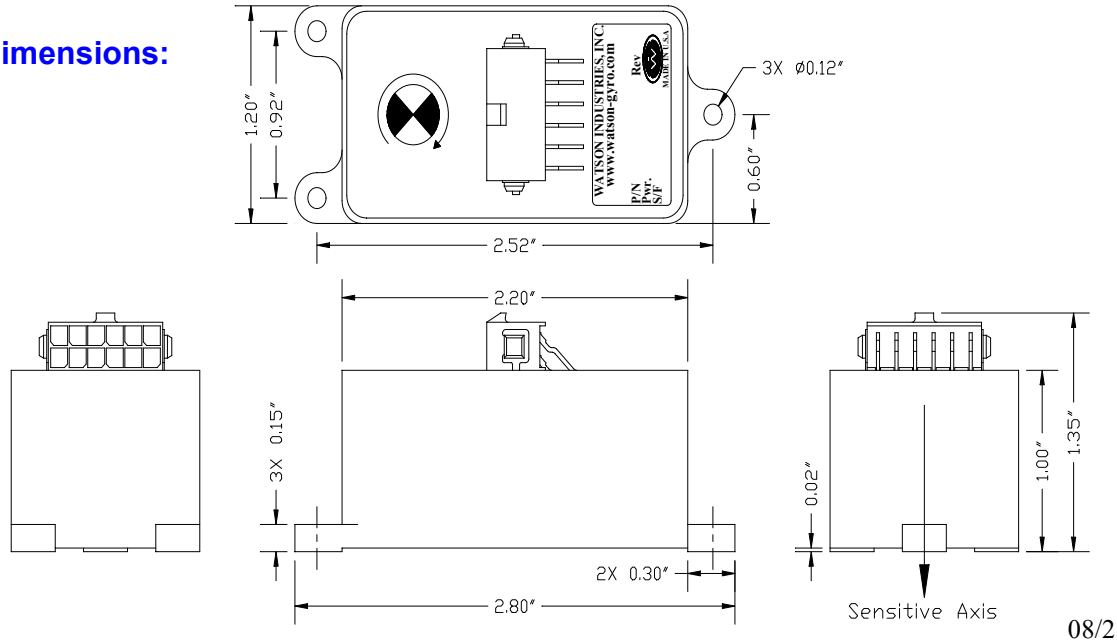
Frame Rate:	800 Hz	Maximum
Startup Time: Data	5 sec	
Startup Time: Fully operational	10 sec	
Input Power:	8 to 45VDC	0.7W
Input Current:	45mA @ 12VDC	20mA @ 24VDC
Digital Output:	RS-232	±399.99°/s Range
Analog Output:	User Selectable	±5VDC Bipolar; 0-5VDC Unipolar
Analog Output Impedance:	300 Ohm	Per line

Physical

Size: Including Mounting Flanges	1.2"W x 2.8"L x 1.35"H	3.0 x 7.1 x 3.4 (cm)
Weight:	2.1 oz	60 grams
Connection:	Amp 4-794627-2 (12 pin)	Mating Connector Incl.

- Specifications are subject to change without notice.
- This product may be subject to export restrictions. Export Classification ECCN 7A994

Dimensions:



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