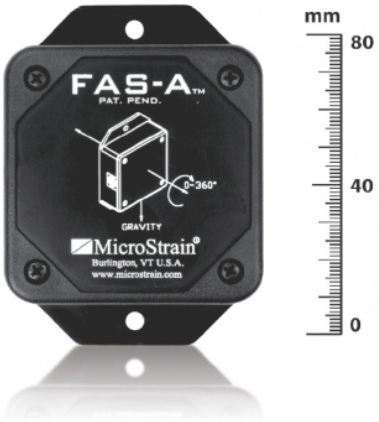
# FAS-A®

## Inclinometer

The FAS-A® Inclinometer is designed to provide 1 and 2-axis static and quasi-dynamic orientation measurements. It incorporates 3 accelerometers together with an on-board microprocessor, embedded software algorithm, non-volatile memory for configuration, and serial communication interface. Its form-factor, rated temperature range and power supply requirements are optimized for a broad array of applications. The FAS-A® outputs either one 360° roll axis or two +/-70° pitch and roll axes.




## Features & Benefits

***Best in Class***

- high-speed sample rate & flexible data outputs
- extended use, low-power data logging

**Easiest to Use**

- out-of-the-box pitch and roll

**Cost Effective**

- reduced cost and rapid time to market for customer's applications
- aggressive volume discount schedule

## Applications

- Antenna and Camera Pointing
- Robotic Control
- Health and Usage Monitoring of Vehicles
- Motion Tracking

## System Overview

The FAS-A® Inclinometer is initially sold as a starter kit with orientation module, RS-232 communication and power cable, universal wall transformer power supply, software CD, user manual and quick start guide.

The FAS-A® Inclinometer is factory calibrated and ready for use with power-up. The FAS-A® ships with easy-to-use Microsoft Windows software which allows the user to initialize, configure and operate the instrument, view real-time measurements graphically, and write data to file for post-processing. For those users, integrators or OEMs who develop their own applications, the FAS-A® is shipped with a complete Data Communications Protocol guide that provides the developer with a complete instrument command set. Applications of your own design can readily be developed in any coding language and on any computing platform including microprocessors.

When outputting in single axis mode, the FAS-A® provides measurement of 360° about its roll axis. When outputting in dual axis mode, the FAS-A® provides measurement of +/-70° about both its pitch and roll axes.

The FAS-A® requires +5.2 to +12.0 volts DC to operate and can be powered by wall transformer, batteries, or any other capable power source. The enclosure provides a 2 hole mounting boss. Custom communication and power cables can be user fabricated or purchased from the factory.

# Specifications

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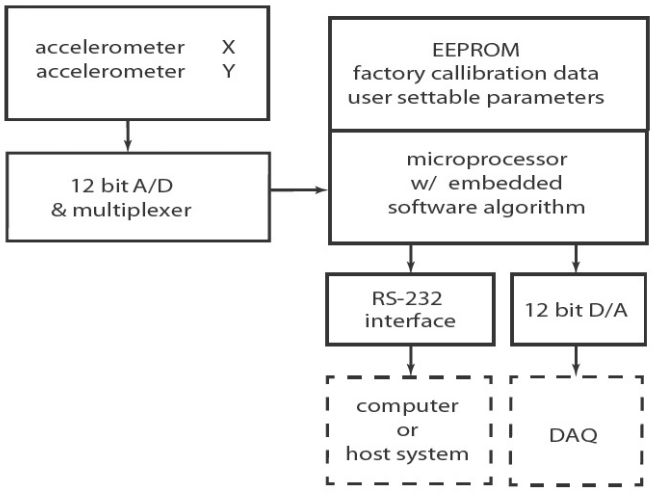
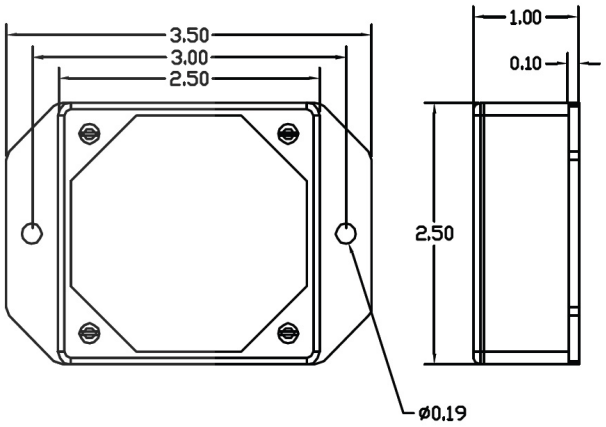
|---|---|
| Application | static/quasi-dynamic measurements |
| Sensor suite | accelerometers |
| Orientation range | 360° in single axis mode; +/-70° in dual axis mode |
| Accelerometer range | +/-1.7g |
| Accelerometer bias stability | 0.003g |
| Accelerometer nonlinearity | 0.2% |
| A/D resolution | 12 bits |
| Orientation accuracy | +/-0.7° typical |
| Orientation resolution | <0.1° at most aggressive setting |
| Repeatability | pitch and roll 0.7° typical |
| Output modes | pitch and roll |
| Analog output | included cable provides voltage linearly proportional to inclination; 0-4.096 volts full scale |
| Communication interface | RS-232 |
| Communication/power connector | 8 pin DIN type |
| Data rate | 40 Hz |
| Filtering | infinite impulse response (IIR); user programmable weighted moving average |
| Baud rate | 9600 |
| Power supply voltage | +5.2 to +12.0 VDC |
| Power consumption | 40 mA |
| Operating temperature | -25°C to +70°C |
| Dimensions | 64mm x 89mm x 25mm |
| Weight | 62 grams |
| Shock limit | 500g |
| Software | XP/Vista/Win7 |



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**LORD Corporation**
**MicroStrain® Sensing Systems**
459 Hurricane Lane,
Suite 102
Williston, VT 05495 USA
www.microstrain.com
ph: 800-449-3878
fax: 802-863-4093
sales@microstrain.com
Patent(s) or Patent(s) Pending