**PRODUCT DATASHEET**
**SERIES 7576A ANALOG 6DOF ACCELEROMETER**

**APPLICATIONS:**
- Large machinery including industrial off road
- Transportation environment roll, pitch and yaw
- Robotics/machine motion studies
- Platform stabilization
- Aircraft flight dynamics
- Automotive testing
- Ride and handling
- Aerospace testing
- Rollover

**SENSOR SNAPSHOT**
- 6 Degrees of Freedom, DC Response
- Dimensions: 1.42 L X 1.05 W X 1.05 H
- Titanium housing, 55 grams
- Rugged, Hermetically Sealed

**WHAT THIS SENSOR DOES FOR YOU:**
Series 7576A is an analog six degrees of freedom (6DOF) motion sensor containing a MEMS-based triaxial accelerometer and three MEMS-based gyro's to monitor the translational and rotational components of motion at the same physical point. This is used to determine the location of the center of rotation of a rigid body inside space. This compact, high performance, cost effective, titanium sealed sensor fits your most challenging real-world 6DOF application needs, including laboratory weather-exposed test track and laboratory environmental simulation conditions. Series 7576A is offered in a wide variety of ranges to accommodate any motion application.

**DEVICE FEATURES:**
- Compatible with most ADC with 0 to 5 Volts input
- 6DOF from one sensor at one central location
- Survives harsh environments
- Great bias stability
- Removable cable
- Compact design
- Non-ITAR

**LEARN MORE**
818-700-7818
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Since its founding, Dytran has built a solid 35+ year industry reputation for trusted, field proven experience in the design and manufacture of sensors for dynamic testing.
PRODUCT SPECIFICATIONS

PHYSICAL
Weight, Max
Connector Type
Material

ACCELEROMETER PERFORMANCE
Input Range
Frequency Response (±5%)
Frequency Response (±3dB)
Scale Factor, Nom. [1]
Output Noise, Typ.
Non-Linearity, Typ. [2]
Temperature Range
Scale Factor Temperature Coefficient [3]
Axis misalignment, Max.
Shock Survivability
Resonant Frequency
Cross Axis Sensitivity, Max.

GYRO PERFORMANCE
Input Range
Frequency Response
Sensitivity ±10% [1]
Rate noise density, Typ.
Non-Linearity, Typ. [2]
Temperature Range
Resonant Frequency
Cross Axis Sensitivity, Max.

ELECTRICAL
Output Impedance, Nom
Operating Voltage
Output Bias Voltage ±0.5 VDC
Operating Current, Typ.
Power Supply Rejection Ratio

This family also includes:

<table>
<thead>
<tr>
<th>Model</th>
<th>Input Range (EU) Accel/Gyro</th>
<th>Frequency response (Hz) Accel/Gyro</th>
<th>Sensitivity, ±10% (mV/EU) Accel/Gyro</th>
<th>Max. Shock (0.1ms), g</th>
<th>Noise (EU/Hz) Accel/Gyro</th>
</tr>
</thead>
<tbody>
<tr>
<td>7576A2</td>
<td>±10 / ±150</td>
<td>0-2500 / 1-3000</td>
<td>235 / 12.5</td>
<td>6000</td>
<td>0.00004 / 0.04</td>
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<tr>
<td>7576A3</td>
<td>±30 / ±250</td>
<td>0-3000 / 0.01-2500</td>
<td>78.333 / 7</td>
<td>6000</td>
<td>0.000089 / 0.06</td>
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<tr>
<td>7576A4</td>
<td>±200 / ±2000</td>
<td>0-3800 / 0.0-2000</td>
<td>11.75 / 0.1</td>
<td>6000</td>
<td>0.0009 / 0.25</td>
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<tr>
<td>7576A5</td>
<td>±2 / ±50</td>
<td>0-1150 / 1-1000</td>
<td>1175 / 25</td>
<td>6000</td>
<td>0.0000088 / 0.04</td>
</tr>
</tbody>
</table>

TYPICAL RESPONSE GRAPHS

7576A2 Frequency Response

7576A2 Phase Response