

## APPLICATIONS

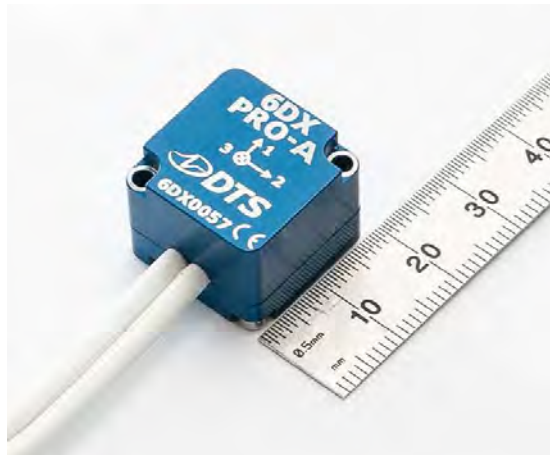
- Aerospace analysis
- Amusement ride testing
- Automotive safety
- Biomechanics
- Blast testing
- PMHS (cadaveric) testing
- Embedded monitoring
- Helicopter & aircraft
- Impact testing
- In-dummy
- Injury investigation
- Parachute deployment
- Package testing: truck, air, ship & rail
- Pedestrian head & leg form
- Ride & handling
- Sports & safety equipment
- Vibration testing

## PRODUCTS

Diversified Technical Systems designs and manufactures data acquisition systems and sensors for experienced test professionals.

# DTS 6DX PRO-A

## Ultra-Small, Rugged Six Degrees of Freedom (6DOF) Sensor Package



Designed for applications measuring high rates of acceleration and angular velocity, the 6DX PRO-A packages three accelerometers and three angular rate sensors in a compact 19 x 19 x 17.4 mm package.

## Features

- Ultra-compact and lightweight
- Ideal for high acceleration and high angular rate measurements
- Available in several range options:

6DX PRO	ACCELEROMETER RANGES	ANGULAR RATE RANGES
500-300	±500 g, triaxial	±300 deg/sec, triaxial
500-1500	±500 g, triaxial	±1500 deg/sec, triaxial
500-8K	±500 g, triaxial	±8000 deg/sec, triaxial
500-18K	±500 g, triaxial	±18000 deg/sec, triaxial
500-50K	±500 g, triaxial	±50000 deg/sec, triaxial

- IP67 Rated for dust protection and water immersion  
Sealed enclosure is also ideal for PMHS work
- Factory repair of sensor channels available
- DTS re-calibration services available, NIST traceable
- Complies with NHTSA, FAA, ISO 6487 and SAE J211 recommended practices

The DTS 6DX PRO-A features three linear accelerometers and three angular rate sensors conveniently packaged in a compact, high-shock enclosure.

Designed to meet the rigorous demands of dynamic test environments, the 6DX PRO-A is available in several range options. The 6DX PRO-A is ideal for in-manikin, PMHS, structural and blast testing applications.



Each sensor cable is 7 meters (23 feet) long and terminates to a single triaxial connector. Pigtail or adapter cables are available to support a variety of termination options.



## Specifications

### PHYSICAL

Size:	19 x 19 x 17.4 mm (0.75 x 0.75 x 0.68")
Mass:	14 g (0.49 oz.) without cables
Enclosure:	Anodized aluminum
Mounting Holes:	Thru-holes for two 2-56 or M2 bolts

### ENVIRONMENTAL

Operating Temp.:	-40 to +85°C (-40 to +185°F)
Humidity:	99%, non-condensing, sealed
Shock:	10000 g, any direction
IP Rating:	IP67

### SENSORS: ACCELEROMETER

Range:	±500 g
Bandwidth:	0-5000 Hz, DC response
Linearity - % FS:	< 1%
Transverse Sensitivity:	3% (max), 2% (typical)
Damping Ratio:	0.7 nominal
Noise Density:	125 µg/√Hz
Nominal Sensitivity:	3.75 mV/g
Zero Output:	±3% FS (max)
Thermal Zero Shift:	±0.01% FS/°C (-40 to +85°C)
Thermal Sens. Shift:	±0.1 %/°C typ (-40 to +85°C)
Shunt Check:	3000 Ω equivalent bridge resistance
Excitation Voltage:	4.9-14 V, not proportional to excitation
Current:	2 mA nominal per axis

### CONNECTORS

Type:	Standard: two triax 16-pin Omnetics connectors with Dallas ID (23 ft). Optional: Adapter cable with pigtails or connectors of choice (2 ft).
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### CALIBRATION

Acceleration:	NIST traceable shock, half-sine
Angular Rate:	NIST traceable rate table with stepper motor and encoder
Calibration:	Re-calibration services available

### SENSORS: ANGULAR RATE

Range Options:	Triaxial, ±300, 1500, 8K, 18K or 50K deg/sec
Bandwidth:	0-2000 Hz, DC response
Excitation Voltage:	4.9-14 V, not proportional to excitation
Linearity:	<1%
Transverse Sensitivity:	±5% (max)
Current:	4 mA nominal per axis
Full Scale Output:	±2 V nominal
Zero Output:	±200 mV

## SERVICES

24/7 Worldwide Tech Support  
ISO 17025 (A2LA) Calibration  
On-site Calibration & Training  
Application Support  
Software Integration  
OEM/Embedded Applications

## WORLDWIDE SUPPORT

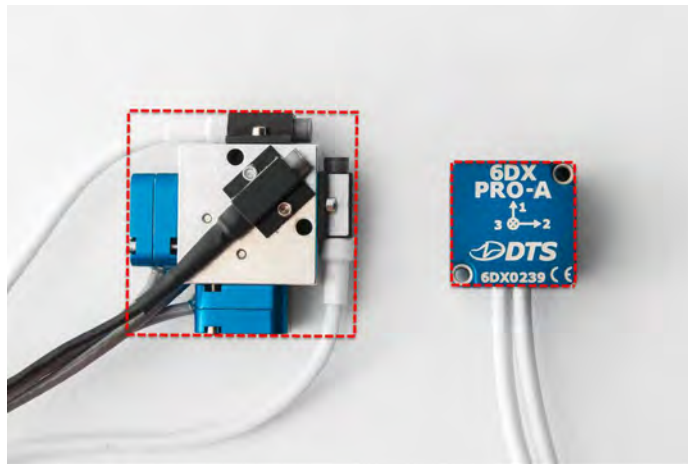
HELP CENTER (24/7/365 Access)  
DTS Technical Centers  
Global Sales Partners

## HEADQUARTERS

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The 6DX PRO-A is 70% SMALLER and 50% LIGHTER than a triaxial block with six individual sensors.

  
[www.dtswb.com](http://www.dtswb.com)

Specifications subject to change without notice.  
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