TSR 6DXP

Rugged Data Logger, Built-in Sensors Measure Acceleration, Angular Rate & Pressure

APPLICATIONS

- Aerospace analysis
- Automotive safety
- Biomechanics
- Blast testing
- Helicopter & aircraft
- Impact testing
- Parachute deployment
- Package testing: truck, air, ship & rail
- Ride & handling
- Sports & safety equipment
- Vibration testing
- Vehicle black box

PRODUCTS

Diversified Technical Systems designs and manufactures data acquisition systems and sensors for the experienced testing professional.

Fielded by the U.S. Army as a vehicle blast event recorder

The TSR 6DXP high performance data logger is designed for high shock and vibration testing in harsh environments. The TSR 6DXP captures transient shock events or can be used as a continuous data recorder.

The TSR 6DXP is a rugged data logger featuring built-in triaxial accelerometer, triaxial angular rate sensors and a pressure sensor. Compact and self-powered, the rugged system is designed for unattended monitoring of acceleration in blast and multi-event impacts. Simple and reliable, the TSR is always on and ready to record. An advanced sleep mode "wakes" for an event trigger, collects data which is stored in 1 GB flash memory and then automatically re-arms and returns to ready mode to capture the next event.

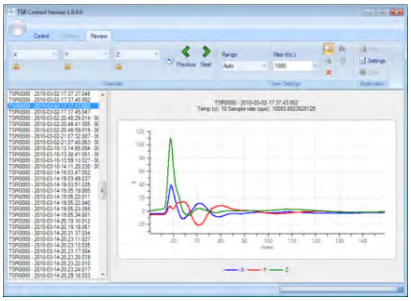
The TSR 6DXP features an advanced deep sleep mode, which allows the USB-rechargeable Lithium battery to operate up to six months.

Features

- Compact size, easily mounts to test article or can be discretely embedded inside a test device
- Built-in sensors: triaxial accelerometer, triaxial angular rate and pressure sensor
- Data writes directly to 1 GB flash memory, up to 2,000 events
- Fixed sampling rates
- Logs temperature, date and time for each event Synchronizes time sequence for event reporting
- USB-rechargeable Lithium battery operates up to 6 months
- Simple, intuitive software for arming, downloading and viewing data, data files can be viewed in Excel

Software

TSR Control software provides fast, easy-to-use tools for controlling the recorder and viewing the stored events. With a focus on speed and simplicity, TSR Control provides the tools to configure the recorder, view real-time sensor output and review your time-history data.



DTS

www.dtsweb.com

Specifications

MODEL	TSR 6DXP
Internal Accelerometer	± 6000 g full scale Piezo-Electric Triaxial
Internal Angular Rate Sensor	±18000 deg/sec Triaxial
Internal Pressure Sensor	100 psia full scale
Frequency Response	Accel: 0.3 Hz – 5 kHz ARS: 0-1650 Hz Pressure: 0-300 Hz
Sampling Rate	Accel: 75000 samples/sec /channel ARS: 5000 samples/sec /channel Pressure: 5000 samples/sec /channel 12-bit ADC
Battery*	Lithium Rechargeable (900 mAh) Active/Record Mode ~24 hours typical Low Power/Sleep Mode ~6 months typical
	*NOTE: Battery life will vary based on type, application, duty-cycle and sampling rate. Contact a DTS sales engineer to determine the best product and estimated battery life for your specific application. See TSR Battery Life article available on DTS Help Center.

PHYSICAL

Size:	57.1 x 57.1 x 25.4 mm (2.25 x 2.25 x 1.00")
Weight:	200 g (7.1 oz.)
Model:	TSR 6DXP

ENVIRONMENTAL

Operating Temp.:	-30 to 60°C (-22 to 140°F) Rechargeable
Humidity:	20 to 95%
Shock:	10000 g survivable
IP Rating:	IP67

INPUT CHANNELS

Acceleration:	3 channels, internal triaxial accelerometer
Angular Rate:	3 channels, internal triaxial angular rate sensor
Pressure:	1 channel, internal pressure sensor
Additional Features:	Logs temperature and time stamp per event

DATA CONVERSION

Resolution:	12-bit ADC
Memory Capacity:	1 GB flash
Sleep:	Advanced motion detection for power savings
Trigger:	When armed in low power mode, data collection starts <100 µsec after trigger
Data Collection Modes:	
Active:	Loops in memory waiting for trigger
Low power:	No pre-trigger data

TRIGGERING

Software Trigger:	Programmable level trigger from acceleration

POWER

Internal Battery:	USB-rechargeable lithium polymer

SOFTWARE

Product Name:	TSR Control
Data Management:	Date/Time/Temp recorded for each event
Post-Processing:	SAE Filters, View multiple channels/tests, HIC Head Injury Criteria
Operating Systems:	Windows® 7/8/10 (32- and 64-bit)
Communication:	USB

Additional DTS data logger models are available with a variety of sensor options, shock ratings, sampling rates and more.

SERVICES

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

WORLDWIDE SUPPORT

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

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