

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.

TSR 3DXP & TSR 6DXP

Shock Recorders with Internal Triaxial Accelerometer, Pressure Sensor, Plus Triaxial Angular Rate Sensors



The TSR 3DXP and TSR 6DXP shock recorders are capable of recording up to 75000 samples per second per channel. Packaged in the same rugged enclosure, both feature an internal triax accelerometer and pressure sensor, while the TSR 6DXP also includes a triax angular rate sensor.

Features

- Simple, easy-to-use software
- Compact size allows the TSR DXP to discretely attach or embed in test article
- Memory: 1 GB Flash
>15 minutes of data storage time at max sampling rate
- Records up to 75 ksp/s/channel
- Acceleration range: options for ± 1250 or 6000 g
- Angular rate range: ± 20000 deg/sec
- Pressure range: 100 psia
- Logs temperature and time stamp for each event. Synchronizes time sequence for event reporting.
- USB-rechargeable Lithium battery operates up to 12 months

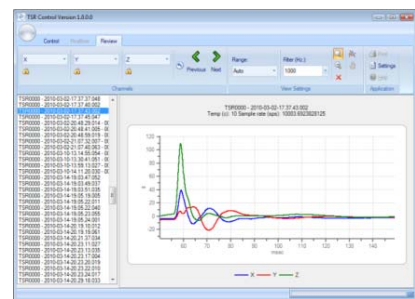
The TSR DXP from DTS is a self-powered shock recorder with 3 internal accelerometers, a pressure sensor and up to 3 angular rate sensors (ARS). Small size and rugged packaging make it ideal for unattended monitoring of acceleration including blast, vibration and multi-event impacts.

Simple and reliable, the TSR is always on and ready to record for up to 12 months unattended. An advanced sleep mode "wakes" for an event trigger, collects data to flash memory and then automatically re-arms and returns to ready mode to capture the next event. A detailed time history for thousands of events can be stored in 1 GB of data memory.

Available in 2 models: TSR 3DXP and TSR 6DXP

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.



SERVICES

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

TECH CENTERS

Seal Beach, California USA
 Novi, Michigan USA
 Sydney, Australia
 Shanghai, China
 Zorge, Germany
 Tokyo, Japan

Specifications

MODEL:	TSR 3DXP	TSR 6DXP
Internal Accelerometer	±1250 or 6000 g full scale Piezo-Electric Triaxial	±1250 or 6000 g full scale Piezo-Electric Triaxial
Internal Angular Rate Sensor	NA	±20000 deg/sec Triaxial
Internal Pressure Sensor	100 psia full scale	100 psia full scale
Frequency Response	Accel: 0.3 Hz – 5 kHz ARS: NA Pressure: 0-300 Hz	Accel: 0.3 Hz – 5 kHz ARS: 0-300 Hz Pressure: 0-300 Hz
Sampling Rate	Accel: 75 kspcs/channel ARS: NA Pressure: 5 kspcs/channel	Accel: 75 kspcs/channel ARS: 5 kspcs/channel Pressure: 5 kspcs/channel
Battery*	Lithium Rechargeable (900 mAh) Active/Record Mode ~3 days typ. Low Power/Sleep Mode ~12 months typ.	Lithium Rechargeable (900 mAh) Active/Record Mode ~24 hours typ. Low Power/Sleep Mode ~12 months typ.

*NOTE: Battery life will vary based on application, activity and sampling rate. Please contact a DTS sales engineer to help determine the best product and estimated battery life for your specific application.

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 Options:	TSR 3DXP, 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 ch/module, internal accelerometer
Angular Rate:	3 ch/module, internal angular rate sensor
Pressure:	1 ch/module, pressure sensor
Additional Features:	Logs temperature and time stamp per event

DATA CONVERSION	
Resolution:	12 bits
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	
Control:	TSR Control
Operating Systems:	Windows® XP/Vista/7
Communication:	USB



The TSR 3DXP and TSR 6DXP run up to 12 months on a rechargeable lithium battery.

Authorized DTS Representative:



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Specifications subject to change without notice.