

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

TSR 3DXC & TSR 6DXC

Data Loggers for Acceleration & Angular Velocity, CAN Bus or USB Interface



Designed for high shock testing, these rugged loggers offer options for a built-in triaxial accelerometer and triaxial angular rate sensors. The TSR features mil-standard connectors that can be daisy-chained for synchronized communication, trigger and more.

Features

- Simple, intuitive software for arming, downloading and viewing data. Simple data files can be viewed in Excel.
- Compact size: Easily mounts to test article or can be discretely embedded inside a test device.
- Data writes directly to 1 GB flash memory, up to 2,000 events.
- Built-in triaxial accelerometer and angular rate sensors
- High sampling rates and bandwidth
- Logs temperature, date and time for each event. Synchronizes time sequence for event reporting.
- USB-rechargeable Lithium battery operates up to 6 months or external power (6-36 VDC).
- CAN Bus or USB communications interface.
- Modules can be daisy-chained for power, communication and trigger synchronization.

The TSR 3DXC and 6DXC are high performance data loggers with built-in sensors that make collecting shock and vibration data easy, especially in harsh test environments. Compact and self-powered, the system is designed for unattended monitoring of acceleration in blast and multi-event impacts. Different from other DTS loggers, multiple modules can be daisy-chained, plus communication is via a CAN Bus or USB interface.

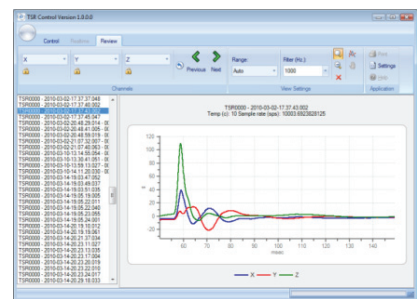
Simple and reliable, the TSR is always on and ready to record. An advanced sleep mode “wakes” for an event trigger, collects data which is stored in 1 GB flash memory and then automatically re-arms and returns to ready mode to capture the next event.

Available in two models:
TSR 6DXC and TSR 3DXC



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.



PRODUCTS

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

SERVICES

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

TECH CENTERS

Novi, Michigan USA
United Kingdom
France
Japan
Asia-Pacific

HEADQUARTERS

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CONTACT US

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Specifications

MODEL	TSR 3DXC	TSR 6DXC
Internal Accelerometer	± 6000 g full scale Piezo-Electric Triaxial	± 6000 g full scale Piezo-Electric Triaxial
Internal Angular Rate Sensor	NA – Not Applicable	±18000 deg/sec Triaxial
Frequency Response	Accel: 0.3 Hz – 5 kHz ARS: NA Pressure: NA	Accel: 0.3 Hz – 5 kHz ARS: 0-300 Hz Pressure: NA
Sampling Rate	Accel: 75000 samples/sec/channel ARS: NA Pressure: NA 12-bit ADC	Accel: 75000 samples/sec/channel ARS: 5000 samples/sec/channel Pressure: NA 12-bit ADC
Battery*	Lithium Rechargeable (900 mAh) Active/Record Mode ~3 days typical Low Power/Sleep Mode ~6 months typical	Lithium Rechargeable (900 mAh) Active/Record Mode ~24 hours typical Low Power/Sleep Mode ~6 months typical
<p>*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.</p>		

PHYSICAL

Size: 83 x 83 x 32 mm (3.25 x 3.25 x 1.25")
Weight: 420 g (15 oz.)
Model Options: TSR 3DXC, TSR 6DXC

ENVIRONMENTAL

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

INPUT CHANNELS

Acceleration: 3 channels, internal accelerometer
Angular Rate: 3 channels, internal angular rate 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

COMMUNICATIONS

Communication: USB or CAN Bus

CONNECTORS

Mil-Std 38999: Dual, chainable for Power, CAN Bus, Trigger and Status.

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® XP/Vista/7/8

The TSR 3DXC and TSR 6DXC shock recorders can be daisy-chained for power, communication, status distribution and trigger synchronization.



Authorized DTS Representative:


DTS
www.dtsweb.com

Specifications subject to change without notice.
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