

APPLICATIONS

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

PRODUCTS

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

TSR PRO

Shock Recorder with Internal Triaxial Accelerometer



The TSR PRO features an internal triaxial accelerometer and can record up to 10 ksp/s/channel.

The TSR PRO from DTS is a self-powered shock recorder with three internal accelerometers. High sampling rates, small size and rugged packaging make the TSR PRO ideal for unattended monitoring of acceleration including vibration, blast, package testing and multi-event impacts.

Simple and reliable, the TSR PRO is always armed and ready to record for up to 6 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.

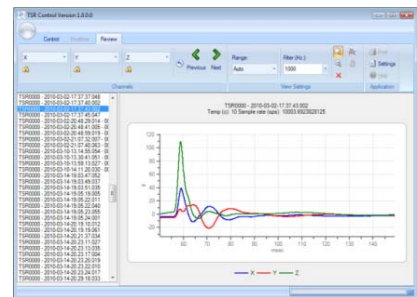
Available in 2 models: TSR PRO and TSR PRO-HB.

Features

- Simple, easy-to-use software
- Compact size allows the TSR PRO to discretely attach to or embed in test article
- Memory: 1 GB Flash
Over 2 hours of data storage at maximum sampling rate
- Lithium battery options:
USB rechargeable or non-rechargeable
- Standard range options: ± 50 , 250, 500 g
- Records up to 10 ksp/s/channel
- Logs temperature and time stamp for each event. Synchronizes time sequence for event reporting.

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.



Advanced Measurement Solutions
www.dtsweb.com

SERVICES

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TECH CENTERS

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

Specifications

MODEL	TSR PRO	TSR PRO-HB
Internal Accelerometer	MEMS Triaxial (DC response)	MEMS Triaxial (DC response)
Sensor Range Options	±50 <u>or</u> 250 g	±500 g
Frequency Response	DC to 300 Hz 4-pole Butterworth SAE/ISO Class 180	DC to 1650 Hz 4-pole Butterworth SAE/ISO Class 1000
Sampling Rate	1-10 ksp/s/channel 16-bit ADC	1-10 ksp/s/channel 16-bit ADC
Battery Options*	Lithium Rechargeable (900 mAh) Battery Life: Up to 3 months <u>or</u> Lithium Non-Rechargeable (2400 mAh) Battery Life: Up to 6 months	Lithium Rechargeable (900 mAh) Battery Life: Up to 3 months <u>or</u> Lithium Non-Rechargeable (2400 mAh) Battery Life: Up to 6 months
*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: 72 x 72 x 22 mm (2.83 x 2.83 x 0.87")
 Weight: ~237 g (8.37 oz)
 Model Options: TSR PRO, TSR PRO-HB

ENVIRONMENTAL

Operating Temp.: 0-60°C (32-140°F) Rechargeable
 0-85°C (32-185°F) Non-Rechargeable
 Humidity: 95% RH non-condensing
 Shock: 500 g operating; 2000 g survivable
 IP Rating: IP67

INPUT CHANNELS

Number: 3 ch/module, internal triaxial accelerometer
 Features: Logs temperature and time stamp per event

DATA CONVERSION

Sampling Rate: 10 ksp/s/channel maximum
 Memory Capacity: 1 GB flash
 Sleep Mode: Advanced motion detection for power savings
 Ready Mode: Data collection starts ~100 µsec after trigger
 Slope of input signal will affect trigger response

Data Collection Modes:
 Recorder mode: Start/stop or set specific timer duration
 Circular Buffer mode: Loops in memory waiting for trigger
 Dynamic Level mode: Starts/stops based on accelerometer

TRIGGERING

Software Trigger: Programmable level trigger
 Hardware Trigger: Voltage input
 Voltage or contact-closure output
 Status: Voltage or contact-closure output

POWER

External: External power input available
 6-36 VDC
 Internal Battery: USB rechargeable lithium polymer -or-
 Options: non-rechargeable lithium primary

SOFTWARE

Control: TSR Control
 Operating Systems: Windows® XP/Vista/7
 Communication: USB



All models are available with either a USB-rechargeable or a non-rechargeable lithium battery.

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Specifications subject to change without notice.