

SAVER™ 3D15

The SAVER™ 3D15 is a self-powered field instrument equipped with a MEMS tri-axial accelerometer, offering DC response (excellent low frequency response) for a wide variety of applications.

The 3D15 continuously measures up to fifteen days of shock (impact/drop), vibration, temperature, and humidity conditions. It also works seamlessly with various Lansmont supplied GPS hardware options.



SAVER™ 3D15 field applications:

- Rail impact recording.
- Rollercoaster measurements.
- Aerospace dynamic analysis.
- Crash recording.
- Brake testing.
- Seismic measurements.

Measurement and analysis applications:

- Define product's in-use environmental characteristics.
- Capture time history and frequency data to replicate in a laboratory.
- Verify existing and create new test standards based on actual measurements.
- Define a packaged product's transportation hazards and characteristics.
- Improve package performance.
- Maximize risk management procedures.
- Define "normal" and "abnormal" shipping conditions.
- Audit transit environments to identify carrier handling practices.
- Assess transport liability.



PHYSICAL

Envelope Size:	3.74 x 2.90 x 1.70 in (95 x 74 x 43 mm).
Volume:	18.4 in ³ (302 cm ³).
Case Material:	6061-T6 aluminum.
Weight:	16.7 ounces (473 grams).
Mounting:	Four holes for #6 screws. Mounting bars recommended.
Environmental:	Weather-resistant.
Power:	Two lithium or alkaline 9V batteries.

DATA RECORDING

A/D Resolution:	16 bits.
Instrument Noise Floor:	0.03 Grms typical at 500 Hz bandwidth.
Dynamic Range:	80 dB typical.
Sample Rates:	50 to 5000 samples per second per channel.
Triggering:	Signal threshold and/or timer based recording.
Continuous Record Time:	Up to 15 days using lithium batteries. Up to 7.5 days using alkaline batteries.

MEMORY

Memory Size:	128 MB.
Memory Type:	FLASH.
Data Retention:	Retains data even when batteries are exhausted.

COMMUNICATIONS

Interface:	USB 1.1 and 2.0 compatible.
Data Rate:	400 KB per second typical.

TEMPERATURE

Measurement Range:	-40 to +60°C (-40 to +140°F).
Measurement Accuracy:	±0.5°C from +5 to +40°C. ±1.5°C from -40 to +60°C.
Communication Temperature Range:	0 to +60°C.
Operating Temperature:	Using lithium batteries: -40 to +60°C (-40 to +140°F) Using alkaline batteries: -20 to +54°C (-4 to +130°F)

HUMIDITY

Measurement Range:	5% to 95% RH, non-condensing.
Measurement Accuracy:	±2% from 10% to 90% RH at 25°C. ±3% from 5% to 95% RH at 25°C.

CONTROLS AND INDICATORS

Controls:	Run / Stop button.
LED Indicators:	Green: Run. Red: Alarm condition. Yellow: Stop. Green: USB cable attached.

INTERNAL CHANNELS

Accelerometer Type:	Tri-axial MEMS.
Acceleration Ranges:	5, 10, 20, 50 g full scale.
Channel Filter Type:	4-pole, low-pass.
Filter Frequencies:	10, 20, 25, 50, 100, 200, 250 and 500 Hz.
3 dB Frequency Response:	0.0 Hz to filter maximum.
Measurement Accuracy:	±5% with nominal variations in temperature and frequency.