

# 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 continually measures up to 15 days of shock (impact/drop), vibration, temperature, and humidity conditions. It also works seamlessly with various AGM supplied GPS hardware options.

## Saver 3D15 –Applications



### **Field Applications:**

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

### **Measurement & 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



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# Saver 3D15 - Technical Specifications

PHYSICAL	
Envelope Size:	3.74 x 2.90 x 1.70 in. (95 x 74 x 43 mm)
Volume:	18.4 in <sup>3</sup> (302 cm <sup>3</sup> )
Case Material:	6061-T6 aluminum
Weight:	16.7 oz. (473 g)
Mounting:	Four holes for #6 screws Mounting bars recommended
Environmental:	Weather-resistant
Power:	2 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 5,000 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
Date 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 & 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 & 500 Hz
3 dB Frequency Response:	0.0 Hz to filter maximum
Measurement Accuracy:	±5% with nominal variations in temperature and frequency



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