

Saver™ 3X90

The SAVER™ 3X90 is a state-of-the-art, self-powered field instrument equipped with an on-board tri-axial piezoelectric accelerometer, as well as an internal temperature and humidity sensor. The 3X90 continually measures up to 90 days of shock (impact/drop), vibration, temperature, and humidity conditions. It also works seamlessly with various AGM supplied GPS hardware options.

Saver 3X90 – 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 3X90 - Technical Specifications

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 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:	0.02 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 90 days using lithium batteries Up to 45 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 piezoelectric
Acceleration Ranges:	5, 10, 20, 50, 100 & 200 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:	0.4 Hz to filter maximum
Measurement Accuracy:	±5% with nominal variations in temperature and frequency



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