

Saver 3x90



SAVER™ 3X90 is a self-powered field data recorder with an internal tri-axial accelerometer, temperature and humidity sensors, and USB connectivity. Powered with 9V lithium batteries, the instrument will operate continuously for up to 90 days. 16-bit resolution electronics allow you to take precise measurements of your dynamic environment.

Features

- » **Field-to-Lab®**
Use SaverXware™ software to analyze data captured with SAVER™ instruments, and seamlessly create random vibration test profiles that can be easily imported into Lansmont TouchTest Vibration Controllers for immediate use. Only Lansmont offers this crossplatform integration.
- » **90 Day battery Life**
SAVER™ 3X90 is powered by two 9V batteries located on either side of the unit. The unit will run for 90 days on lithium batteries (45 days on alkaline batteries). Step-by-step instructions are provided in SaverXware™ for replacing the batteries.
- » **T/RH sensor:**
In addition to dynamic measurements, your SAVER™ 3X90 will also capture temperature and relative humidity conditions. Internal sensors mounted to the back side of the SAVER™ 3X90 measure and record environmental conditions per the user-defined setup.

Options

- » **External battery Pack**
For some recording applications, 90 days may not be enough recording time. Not a problem. Lansmont offers an External Battery Pack that extends the continuous operation time from 90 to 250 days.
- » **Mounting kits**
Mounting kits can make it easier to fix SAVER™ 3X90's to vehicles or structures. Kits include mounting plates and attachment hardware. If you are attaching to a ferrous surface, magnetic mounting kits are available.
- » **Data analysis center**
Trust Lansmont data specialists to interpret your data and provide you with even greater confidence. Lansmont data specialist are experts at acquiring, analyzing and summarizing data; if you need help defining parameters or protocols, we can help.

SaverXware™

Each SAVER™ purchase includes Lansmont's SaverXware™, the easy-to-use software that communicates with the SAVER™3Xgo for setup prior to recording — as well as data analysis once you've collected some data. Data analysis features include drop heights, impacts, vehicle motion, vibration, as well as temperature and humidity cycles.

- » **Measurement Setup**
Users are provided with simple, standard setup gateways for common measurement applications. Advanced setup options provide complete control over all setup parameters, providing unparalleled capability for instrument users.
- » **Data Analysis**
Powerful individual and multi-event summary analyses providing time-history, frequency domain, and vector visualizer playback and review.
- » **Summary Reporting and Export**
Generate user-defined project summary reports and print to document measurement results. Additionally, export the project data itself to ASCII files or analysis and reporting using universally available software applications.
- » **Event Table and History**
Multi-data files can be viewed in single, common project databases. The data file's measured events are chronologically presented in event tables, which are positioned underneath measurement Quick Histories. The Quick Histories display the captured data from the project beginning to end in one view. Corresponding event thumbnails are updated as different events are highlighted in the table.
- » **Summary Event Selection**
Extremely useful event selection options based upon acceleration and Grms levels, time occurrence, type of event and even impact type and orientation. A quick history zoom-to-summary option with user-defined range cursors is provided as an alternative summary selector.

Specifications

PHYSICAL

- » Size: 3.74 x 2.90 x 1.7 in. (95 x 74 x 43 mm)
- » Volume: 18.4 in.³ (302 cm³)
- » Chassis Material: 6061-T6 anodized aluminum
- » Weight: 16.7 oz. (473 grams)
- » Environmental: Weather Resistant
- » Mounting: 4 thru holes for #6 screws

DATA ACQUISITION

- » Sampling Rates: 50, 100, 200, 250, 500, 1000, 2500, and 5000 samples per second
- » A/D Conversion: 16 bit
- » Accelerometer Type: Tri-axial piezoelectric
- » Acceleration Ranges: 5, 10, 20, 50, 100, and 200 g (full-scale)
- » Anti-Alias Filter: 4-pole, low-pass Butterworth filter
- » 10, 20, 50, 100, 200, 250, and 500 Hz (cut-off frequency)
- » Software Filters: 1 or 2-pole, low-pass RC post-process filters 0 to 10 kHz (cut-off frequency)
- » 3-dB Frequency Response: 0.4 Hz to filter setting
- » Instrument Noise Floor: 0.02 Grms typical at 500 Hz bandwidth
- » Dynamic Range: 80 dB typical
- » Measurement Accuracy: ±5% with nominal variations in temperature and frequency

DATA RECORDING

- » Signal Trigger: User programmable acceleration (g) threshold
- » Timer Trigger: User programmable "wake-up" interval
- » Pre-Trigger: User-programmable signal event pre-trigger recorded for each event
- » Data Retention Modes: Max. overwrite, Fill/stop, Wrap/overwrite
- » Temperature/Humidity: Temperature and RH readings recorded for each event

MEMORY

- » Memory Size: 128 MB
- » Memory Type: Non-volatile FLASH
- » Memory Retention: Retains data even when batteries are exhausted or removed

ENVIRONMENTAL

- » Operating Temperature:
 - » -40° to +60°C (-40° to +140°F) using lithium batteries
 - » -20° to +54°C (-4° to +130°F) using alkaline batteries
- » Communication Temperature: 0° to +60°C (32° to +140°F)
- » Temperature Measurement/accuracy
 - » ±1.0°C from +5° to +40°C;
 - » ±1.5°C from -40° to +60°C
- » Humidity Measurement/accuracy
 - » ±2% from 10% to 90% RH @ 25°C;
 - » ±3% from 5% to 95% RH @ 25°C

POWER

- » Internal: 2 lithium or alkaline 9V batteries
- » External: 4-D Cell battery pack
- » Continuous Run Times: 90 days using lithium batteries
- » 45 days using alkaline batteries
- » 180 days using 4-D cell battery pack (option)

SOFTWARE / COMMUNICATIONS

- » User Interface: SaverXware™ software
- » Compatibility: Microsoft Windows® XP (SP3), Vista, 7
- » COM Interface: USB 1.1 or 2.0 compatible
- » Data Rate: 400 kB/s (Typical)

CONTROLS AND INDICATORS

- » Controls: Run / Stop button
- » LED Indicators:
 - » Green: Run
 - » Red: Alarm
 - » Yellow: Stop
 - » Green: USB cable connected