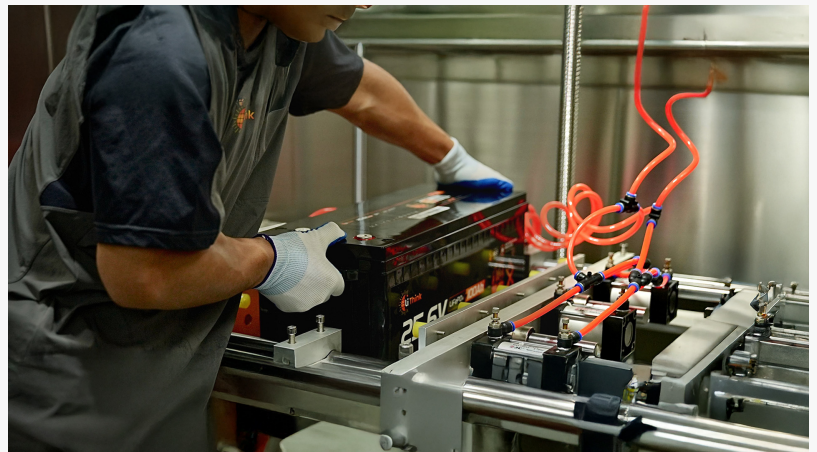


LiThink Publishes an 11-Point In-House Lab Protocol for LiFePO₄ Batteries Used in RV, Marine and Off-Grid Systems

Checklist summarises 11 in-house lab checks and links to compliance files (IEC 62619, CE EMC/RED, UN38.3, RoHS, REACH, BattG).

BERLIN, GERMANY, January 6, 2026 /EINPresswire.com/ -- LiThink today published a public overview of its internal "11-Point Lab Protocol" used to validate LiFePO₄ batteries designed for RV, marine and off-grid applications in Europe. The company said the checklist is intended to address a common buyer concern: battery specifications are often easy to compare, but verification practices are rarely visible.



A LiThink technician conducts verification checks as part of the company's "11-Point Lab Protocol." This rigorous process ensures the safety and durability of LiFePO₄ batteries designed for RV, marine, and off-grid use.

"Long service life is not only a chemistry question. It is also about repeatable verification, and about designing for real European use cases—winter storage, salt air, deep cycling, and mobile installations," a LiThink spokesperson said. "We are publishing our protocol so customers and installers can see what we check before products ship."

The protocol is organised into two sections: environmental & mechanical resilience, and electrical safety & long-duration validation.

11-Point Lab Protocol (public overview)

A. Environmental & Mechanical Resilience (6 checks)

1. Salt Spray Exposure: evaluates corrosion resistance for casing hardware and external connection areas in marine and coastal conditions.
2. Temperature & Humidity Exposure: checks sealing integrity and functional stability under high humidity and temperature variation.
3. Vibration Test: simulates continuous multi-axis vibration typical of RV and trailer operation to

verify retention and connection stability.

4. Drop Test: evaluates structural robustness after controlled drops to confirm the enclosure and internal fixation remain intact.

5. Impact Test: assesses resistance to sudden external shocks that can occur during transport or handling.

6. Transport Simulation: reproduces logistics stresses (shock/vibration/temperature changes) to help ensure the battery arrives in usable condition.

B. Electrical Safety & Long-Duration Validation (5 checks)

7. Charge/Discharge Cycling (Cycle & Aging): long-duration cycling used to evaluate consistency over time and to support warranty planning.

8. Short-Circuit Response: verifies protective cut-off behaviour of the battery protection system during electrical fault scenarios.

9. Thermal Abuse Screening: evaluates behaviour under abnormal high-temperature stress conditions to confirm stability under misuse scenarios.

10. Low-Temperature Behaviour: verifies protection logic and cold-weather usability; models with heating functions are evaluated for cold-condition readiness.

11. Crush Resistance Screening: evaluates safety behaviour under severe mechanical deformation scenarios.

LiThink added that the protocol is paired with product design measures intended to improve long-term mechanical stability in prismatic-cell packs, including rigid internal retention and comprehensive insulation practices, where applicable across the product lineup.

Certifications and Compliance Documentation (downloadable)

LiThink publishes compliance documents and test reports on its certification page. Documents available on that page include:

- IEC 62619 test reports (battery models)
- UN38.3 transport documentation (as stated on the certification page)
- CE documentation (including CE-EMC and CE-RED for battery models where applicable)
- RoHS
- REACH
- Batteriegelgesetz (BattG) documentation (Germany)
- Charger certifications listed for LiThink charger models on the same page, including CE, RoHS and FCC files

Links

- [Certification downloads page.](#)
- [LiThink Lab overview.](#)

About LiThink

LiThink develops LiFePO₄ energy storage solutions for RV, marine and off-grid users in Europe.

The company focuses on engineering-led design, in-house verification and transparent documentation to reduce uncertainty for end users and installers.

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