New Release

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Home Storage Battery: Tesla Storage Battery POWERWALL3 Teardown Report

Appearance: https://nakedsolar.co.uk/storage/tesla-powerwall-3/

TESLA PowerWall3 exterior & inside

Product Key Features

Tesla Powerwall 3 is a next-generation home energy storage system that significantly improves on its predecessor, the Powerwall 2. It maintains a 13.5 kWh energy storage capacity but delivers a much higher continuous power output of **11.5 kW**, allowing homeowners to run more appliances simultaneously — including heavy loads like air conditioners and electric ovens. Its peak output reaches **13.5 kW**, and backup power during outages is boosted to **7 kW**, supporting whole-home backup instead of just essential loads. A major upgrade is its integrated solar inverter, supporting up to six solar inputs with **97.5% efficiency**, which simplifies installation and improves overall system performance. The Powerwall 3 also adopts **Lithium Iron Phosphate (LFP) battery** , known for superior safety, thermal stability, and longevity compared to traditional lithium-ion batteries. Up to **four units** can be connected, offering a combined storage capacity of 54 kWh for larger homes or increased energy independence.

https://energylibrary.tesla.com/docs/Public/EnergyStorage/Powerwall/3/Datasheet/en-us/Powerwall-3-Datasheet.pdf

Manufacturing process: Building Powerwall 3 | Tesla - YouTube

Report Contents

This product utilizes Tesla's leading-edge technologies, including planar transformers for reduced thickness, an air-cooled structure, and a long rigid FPC (1200 mm) for battery-to-battery connection and battery controller integration. It combines photovoltaic input, energy storage, and output on a single board. This teardown report (31 pages) includes

- Product teardown, component identification and size measurement
- Identification of key ICs (including datasheet which we found)
- Connection among PCBs and Modules

Report Price and lead-time

Please contact us for report pricing.

Deliver one week after official order

Note: LTEC is planning to create detail circuit analysis report.

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