

Enerlution

LOW-VOLTAGE RESIDENTIAL
SYSTEM

3-6 kW / 5-10 kWh Low-Voltage ESS

Low-voltage hybrid inverter +
LFPWall-5000 / LFPWall-10K-V2

Integrated 230 V single-phase energy
storage for residential applications, with
backup capability and EMS supervision.

3-6 kW

Hybrid inverter

5-10 kWh

Battery options

48 V

Low voltage



Compact low-voltage residential ESS architecture

3-6 kW hybrid inverter with 5.12 or 10.44 kWh LFPWall battery and EMS monitoring.

3-6 kW

Low-voltage single-phase hybrid inverter

5 / 10 kWh

LFPWall LiFePO4 battery options

IP65

Inverter and battery protection class

EMS / App

Status, alarms and energy data



Inverter platform 3-6 kW LV Hybrid

230 Vac single phase / 48 V battery



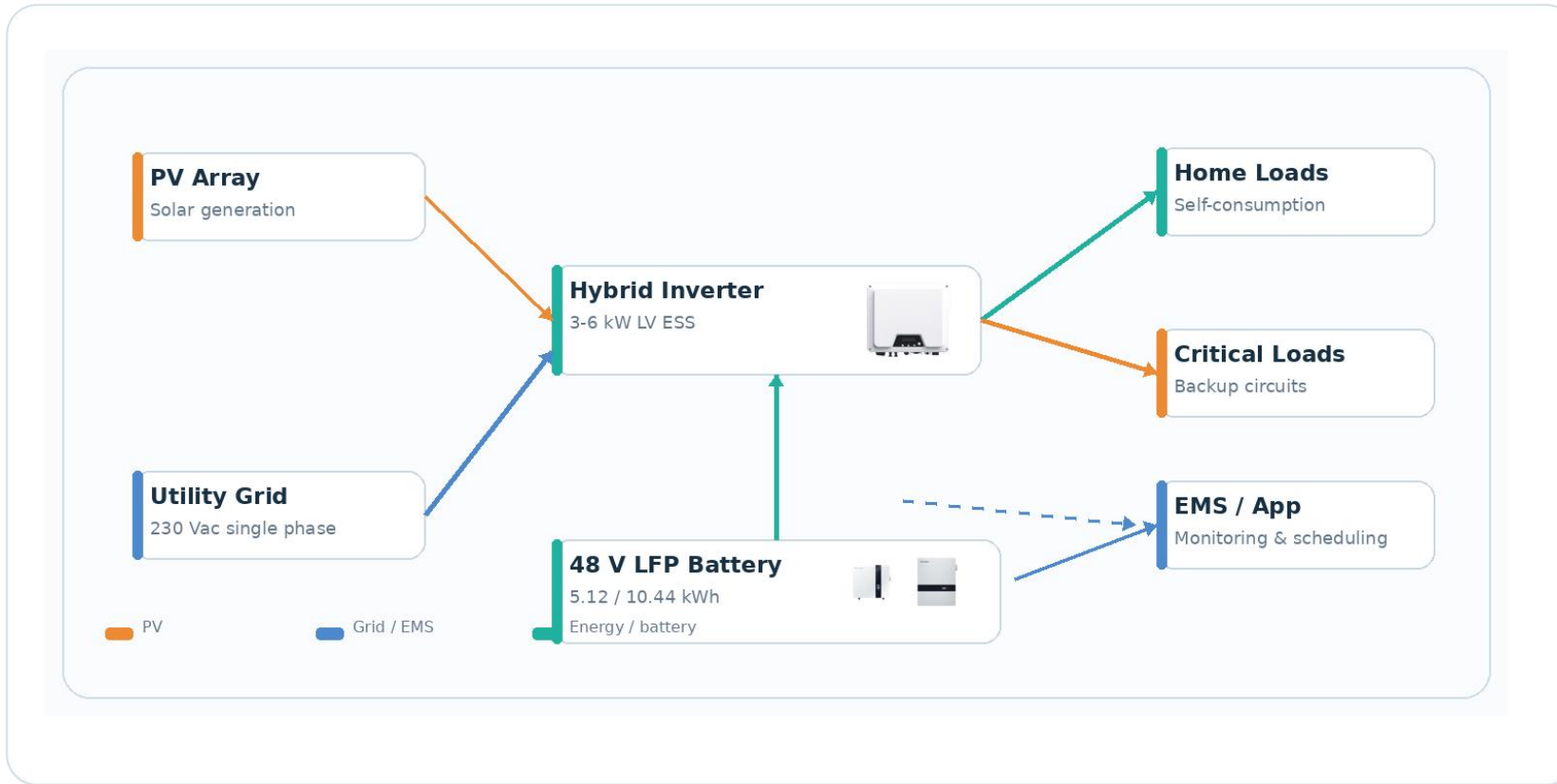
Battery platform LFPWall 5K / 10K-V2

5.12 / 10.44 kWh wall-mounted LiFePO4 battery



Low-voltage single-phase system architecture and energy flow

PV generation, utility grid, battery storage and household loads are coordinated through the hybrid inverter and EMS.



Single-phase AC

230 V architecture for residential loads and backup circuits.

48 V LFP storage

5.12 or 10.44 kWh LiFePO₄ capacity with low-voltage battery management.

Energy scheduling

Coordinates self-consumption, tariff schedules, backup reserve and critical loads.

Core product specifications

Selected electrical, environmental and communication parameters for the proposed system configuration.



3-6 kW LV Hybrid

Low-voltage single-phase hybrid inverter

Rated AC power
3-6 kW

AC output
230 V

PV input	2 MPPTs; model-dependent PV sizing
Battery input	48 V nominal, 40-60 Vdc
AC current	Model-dependent; up to 28.6 A
Grid / backup	230 Vac, on-grid + off-grid
Protection	IP65; RS485/CAN/USB; Wi-Fi/GPRS



LFPWall 5K / 10K-V2

Low-voltage wall-mounted LiFePO4 battery options

Energy (kWh)
5.12 / 10.44

Voltage
45-57.6 V

Chemistry	LiFePO4, 90% DOD
Current	5K 45/75 A 10K 90/140 A
Cycle life	≥6000 cycles @25°C, 0.5C
Installation	Wall / floor; parallel expansion
Protection	IP65; discharge -10~55°C

Battery data: user-supplied LFPWall datasheets | Inverter reference: Enerlution LV single-phase platform



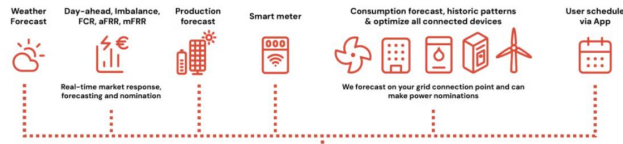
Energy Market Access & Forecast Integration

Integrates market signals and forecasts for locally informed operation.



Local Optimization Algorithm

Schedules assets using tariffs, weather data and operating history.



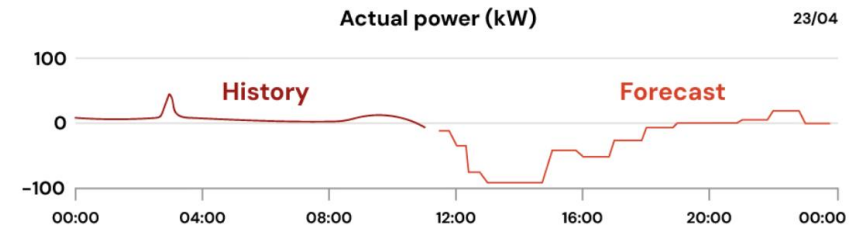
Backup Power & Load Prioritization

Maintains reserve SOC and prioritizes critical loads during grid outages.



Consumption & Production Forecasting

Anticipates demand and PV output to improve dispatch and self-consumption.



Curtailement Management

Limits PV export during negative-price or imbalance-risk periods.

