Rapid Deployment

DC Fast Charging

Dynamic Capacity Expansion

INTEGRATED PV-ESS-EV CHARGING SYSTEM

LES-241L120-PSC
LES-482L240-PSC

Product Introduction

This system is a highly integrated, all-in-one "PV-Storage-EV Charging" solution, specifically designed for grid-constrained sites. By synergizing PV direct charging, intelligent energy storage, and high-power charging, it dynamically expands a site's power capacity without the need for grid upgrades. The system features automatic on/off-grid switching, ensuring uninterrupted operation under various grid conditions. Coupled with the Energy Management System (EMS), it enables highly efficient load leveling and revenue optimization. Its skid-mounted and modular design allows for rapid deployment and flexible configuration even in complex sites. It is ideally suited for a wide range of applications, including: commercial centers, highway service areas, car dealership parking lots, charging hubs, and vehicle charging in off-grid or power-scarce areas.

Product Topology

Product Advantages

Superior Grid Compatibility

It features automatic grid-tie and off-grid switching with seamless backup power, ensuring uninterrupted charging service at all times. Even in areas with a weak electrical grid, it consistently delivers a stable and reliable charging experience.

Renewable Energy Integration

A single module supports the direct connection of up to 180kW of photovoltaic power, enabling charging without reliance on the grid. This not only allows the charging station to achieve a high degree of energy self-sufficiency using clean energy but also directly facilitates a high proportion of green power utilization and enables carbon-neutral operation.

Peak Shaving, Valley Filling, and Intelligent Dynamic Load Management

It supports two-way interaction with the power grid. The Energy Management System (EMS) monitors in real-time and intelligently dispatches charging and discharging. By participating in peak-valley arbitrage and demand management, it effectively reduces electricity costs, smooths the load curve, and ensures the stability of the user-side power grid.

Flexible Configuration and Easy Installation

Adopting an integrated skid-mounted and modular design, it supports rapid transportation and installation of the system, enabling one-stop rapid delivery. The system capacity can be flexibly configured according to actual needs, significantly shortening the project cycle and enabling rapid revenue generation.

Dual-Mode Emergency Backup Power

Three-phase four-wire design with on/off-grid support for stable and reliable power supply to critical loads. (220V single phase & 380V three phase).

Technical Parameters

Model	LES-241L120-PSC	LES-482L240-PSC
Mains Power Parameters		
Rated Grid Voltage [V]	3W/N/PE, 230/400	
Rated Grid Frequency [V]	50	
PV Grid		
Input Power Range [kW]	60~240	60~480
Input Voltage Range [V]	200~660	
Access Method	DC Direct Connection	
Energy Storage System		
Rated Energy [kWh]	241	482
Battery Configuration	1P240S	2P240S
Battery Type	Lithium	
Charge/Discharge Rate	0.5C	
Cooling System	Intelligent Liquid Cooling	
DC Charging System		
No. of Charging Guns	2	4
Rated Charging Power [kW]	120	240
Max. Output Power (On-Grid) [kW]	120	240
Max. Output Power (Off-Grid) [kW]	120	240
Charging Gun Max. Output Current [A]	400	
Cooling Method	Battery Compartment (liquid cooling)/Electrical Compartment (air cooling)/Charging System (natural convection)	
Charging Gun Output Voltage Range [V]	150~1000	
Charging Gun Output Constant Power Voltage Range [V]	300~1000	
Fire Protection System	Aerosol + Water-based Fire Protection	
Payment Methods	RFID/Credit Card/POS Terminal	
Communication Interface	MODBUS TCP/MODBUS RTU	
Communication Protocol	OCPP	
Environmental Parameters		
Ambient Temperature [℃]	-20~55 (derated above 45)	
Ambient Humidity	0~95%, Non-consendation	
Operating Altitude [m]	4000 (derated above 2000)	
EMC Standard	Class A	
Noise Level [dB]	≤75	
Appearance Parameter		
Weight [T]	≈3.5	≈6.5
Dimension (W*D*H) [mm]	2300*1500*2700	6000*1600*2700
Safety		
Protection Level	IP55	
Protection	Input protection, overcurrent protection, surge protection, overtemperature protection, output overvoltage protection, fan protection, short circuit protection, emergency stop button, water immersion protection, grounding protection.	
Compliance Certification		
Charging Station	EN 300328 V 2.2.2:2019 EN 300330 V 2 1.1:2017 EN 301489-1 V 2.2 3:2019 EN 301489-3 V 2 1 1:2019 EN 301489-17 V 3.2.4:2020 EC 61851-1:2017 EN IEC 61000-6-2:2019 EN IEC 61000-6-4:2019 EN IEC 61851-21-2:2021 EN IEC 62311:2020 IEC 61851-1:2017 DIN SPEC 70121/12.14 DIN SPEC 70122/11.18	
Energy Storage Systems	EN IEC 61000-6-4:2019 EN 50549-1/10:2022 EN 50549-10:2022 (Czech Republic) EN 50549-10:2022 (Germany) EN 50549-10:2022 (Netherlands) EN 50549-10:2022 (Poland) EN 50549-10:2022 (Belgium) EN 50549-10:2022 (Italy) EN 50549-10:2022 (Bulgaria) EN 50549-10:2022 (Sweden) TOR (Austria) Nf50549-10 (France) G99 (United Kingdom) UN38.3	

* Friendly Reminder: Product specifications may be updated. To ensure accuracy, we recommend referring to the official technical agreement.
* Please note that specifications may change with technological advancements; the final specifications will be based on the technical agreement you sign.

Application Scenario Configuration Recommendations

Private Villas

·Recommended System Configuration Quantity: 1 set

·Number of Charging Bays: 2

·Number of Charging Guns: 2*120kW

Gas Stations

·Recommended System Configuration Quantity: 2 set

·Number of Charging Bays: 4~8

·Number of Charging Guns: 4*120kW

EV Charging Hub

·Recommended System Configuration Quantity: 4+

·Number of Charging Bays: 8+

·Number of Charging Guns: 8*120kW

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