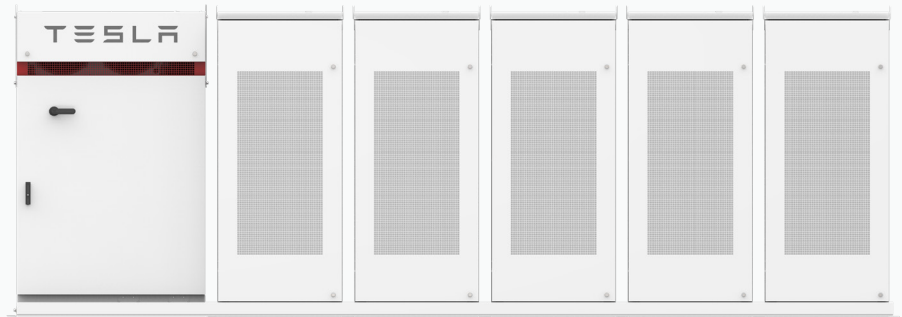


POWERPACK SYSTEM

Tesla has been building integrated battery systems in cars for over 10 years. The same degree of expertise, quality control, and technological innovation has informed our process of developing high-performance energy storage systems.

The Powerpack System scales to the space, power and energy requirements of any site from 100 kWh+ to 100 MWh+.

Tesla includes a 10-year warranty at no additional cost. Extensions are also available under certain conditions.



Powerpack System includes an Inverter and DC Battery Packs

FULLY INTEGRATED SYSTEM

A complete energy storage system including DC batteries, bi-directional inverter, and a Tesla Site Controller with intelligent software. This turnkey system is designed to maximize savings and prolong battery life.

OPTIMIZATION SOFTWARE

Powerpack Systems have the most advanced battery technology and dispatch optimization software to quickly learn and predict a facility's energy patterns. Tesla's proprietary storage dispatch software can charge and discharge autonomously to maximize customer value.

ENHANCED SYSTEM SAFETY

Powerpack's battery architecture consists of a low voltage battery with a DC/DC converter for added electrical isolation and safety. It also has an integrated liquid cooling and heating system for thermal safety and enhanced performance and reliability.

APPLICATIONS



PEAK SHAVING

Discharge at times of peak demand to reduce expensive demand charges



EMERGENCY BACKUP

Powers a facility when the grid goes down



CAPACITY FIRING

Smooth out the intermittency of renewables by storing and dispatching when needed



LOAD SHIFTING

Shift energy consumption from one point in time to another



MICROGRID

Build a localized grid that can disconnect from the main power grid



TRANSMISSION AND DISTRIBUTION SUPPORT

Supply power at a distributed location to defer the need to upgrade aging infrastructure



DEMAND RESPONSE

Discharge or charge in response to signals from a demand response administrator



ANCILLARY SERVICES

Provide service to the grid in response to signals sent

POWERPACK SPECIFICATIONS

- One Powerpack Unit includes 16 battery Pods
- Each Pod has an isolated DC/DC converter and sensors to monitor cell level performance in real time
- Standard configurations:
 - 4-hour discharge duration
 - 2-hour discharge duration
 - High Power Mode*
 - Frequency Regulation Mode*
 - Peak Power Mode*

*Available under certain conditions



INVERTER RATINGS

AC Voltage	400–480 VAC 3-phase
Nominal Frequency	50 or 60 Hz
Inverter Size (at 480 V)	Scalable up to 700 kVA

POWERPACK RATINGS

Part Number	Configuration	Power/Energy ¹	Roundtrip ¹ System
1083932-00-F	Peak Power ²	130 kW / 160 kWh	84.5%
	High Power	109 kW / 174 kWh	86.0%
	2 hr	90 kW / 180 kWh	87.5%
1083931-00-E	4 hr	55 kW / 220 kWh	89.5%
	Peak Power ²	130 kW / 166 kWh	83.5%
1490027-XX-Y ³	High Power	118 kW / 169 kWh	85.5%
	2 hr	90 kW / 174 kWh	88.0%
1490026-XX-Y ³	2 hr	111.5 kW / 223 kWh	85.5%
1490025-XX-Y ³	4 hr	58 kW / 232 kWh	89.5%

Note: All ratings provided are AC and factor in all parasitic loads.

¹ Net energy delivered at 25°C (77°F) including thermal control

² Represents frequency regulation and peak power options, available under certain conditions

³ Where X is a digit between 0 and 9, and Y is a letter

COMMUNICATIONS

Protocol	Modbus TCP DNP3 Rest API
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MECHANICAL AND MOUNTING

Enclosure	IP67 (Pod) NEMA 3R / IP35 (Powerpack) NEMA 4 / IP66 (Inverter)
Powerpack Unit Dimensions	L: 1317 mm (51.9 in) W: 968 mm (38.1 in) H: 2187 mm (86.1 in)
Powerpack Unit Max Shipped Weight	2199 kg (4847 lbs)
Inverter Dimensions	L: 1044 mm (41.1 in) W: 1390 mm (54.7 in) H: 2189 mm (86.2 in)
Inverter Max Shipped Weight	1120 kg (2470 lbs)
Operating Ambient Temperature	–30°C to 50°C (–22°F to 122°F)

REGULATORY

Lithium-Ion Cells	NRTL listed to UL 1642
System	NRTL listed to UL 1973, 9540, 1741 SA IEEE 1547 Compliant to grid codes and safety standards of all major markets. Full list provided upon request.