POWERWALL 2 DC

The Tesla Powerwall is a DC battery system for residential or light commercial use. Its rechargeable lithium-ion battery pack provides energy storage for solar self-consumption, load shifting and backup power.

Powerwall's electrical interface is provided by an internal isolated bi-directional DC/DC converter that controls the charge and discharge of the battery for integration with grid-tied solar inverters. Its revolutionary compact design achieves market-leading energy density and is easy to install, enabling owners to quickly realize the benefits of reliable, clean power.

PERFORMANCE SPECIFICATIONS

DC Energy[1]	13.5 kWh
Power, continuous	5 kW (charge and discharge)
Power, peak (10 s)	7 kW (discharge only)
DC Voltage Range	350–550 V
DC Current, continuous	14.3 A
DC Current, peak (10 s)	20 A
Depth of Discharge	100%
Internal Battery DC Voltage	50 V
Round Trip Efficiency[1,2]	91.8%
Warranty	10 years

[1]Values provided for 25°C (77°F), 3.3 kW charge/discharge power.
[2]DC to battery to DC, at beginning of life.

INTERFACE SPECIFICATIONS

Communication Protocols	Modbus (RS485), CAN
Modularity	Multi-Powerwall capability with compatible inverters
User Interface	Tesla App

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	–20°C to 50°C (–4°F to 122°F)
Storage Temperature	–30°C to 60°C (–22°F to 140°F)
Operating Humidity (RH)	Up to 100%, condensing
Maximum Altitude	3000 m (9843 ft)
Environment	Indoor and outdoor rated
Enclosure Type	NEMA 3R
Ingress Rating	IP67 (Battery & Power Electronics) IP56 (Wiring)
Noise Level @ 1m	<40 dBA at 30°C (86°F)

MECHANICAL SPECIFICATIONS

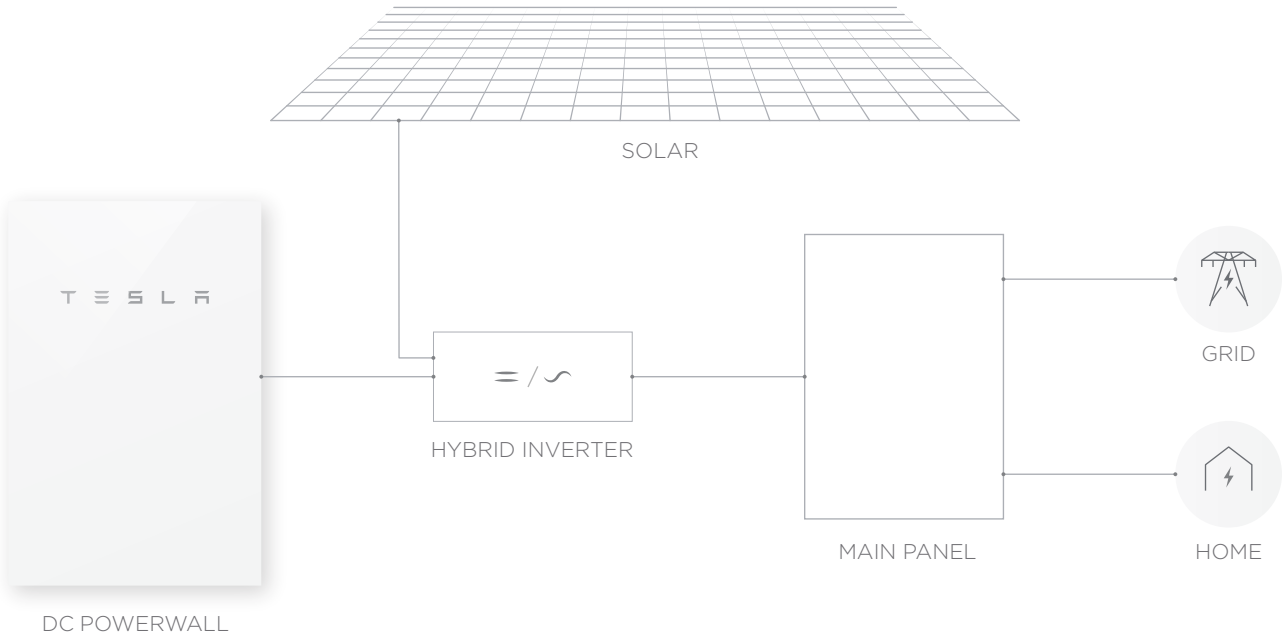
Dimensions	1150 mm x 755 mm x 155 mm (45.3 in x 29.7 in x 6.1 in)
Weight	120 kg (264.5 lbs)
Mounting options	Floor or wall mount

COMPLIANCE INFORMATION

Safety	UL 1642, UL 1741, UL 1973, UL 9540, UN 38.3, IEC 62109-1, IEC 62619, CSA C22.2.107.1
Emissions	FCC Part 15 Class B, ICES 003, EN 61000 Class B
Environmental	RoHS Directive 2011/65/EU, WEEE Directive 2012/19/EU, 2006/66/EC
Seismic	AC156, IEEE 693-2005 (high)

TYPICAL SYSTEM LAYOUTS

DC-COUPLED POWERWALL SYSTEM WITH SOLAR



AC-COUPLED POWERWALL SYSTEM WITH SOLAR