

Abbreviations

3R - NEMA 3R, Raintight

(E) - Existing

(N) - New

A - Ampere

AWG - American Wire Gauge

EGC - Equipment Grounding Conductor

EV - Electric Vehicle

EVCS - Electric Vehicle Charging Station

NEC - National Electric Code

V - Volt

Electrical Notes

1. Each ungrounded conductor of the multiwire branch circuit will be identified by phase and system per Art. 210.5
2. A Nationally-Recognized Testing Laboratory shall list all equipment in compliance with Art. 110.3
3. All wires shall be provided with strain relief at all entry into boxes as required by UL Listing
4. All exposed metal parts shall be grounded
5. All work shall comply with the AHJ or State adopted Electrical Code

Scope Of Work

of Powerwalls: 2

Total Storage Capacity: 27 kWh

MPU: No

New Main Service Panel Size: N/A

License

C-10, CA # 888104

 Ashton Thurneyssen
C-10

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Labels & Cutsheets

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Energy Storage System at 15 Baynes Road, Plainfield, NH 03770, US

Mark Walker

JB-037118-00

Evan Miller

TESLA

Cover Page

4/27/2020




YOUR HOME POWERED BY TESLA

Aerial View



* Satellite imagery of house is blocked by trees

Legend

-  Main Panel
-  Powerwall and Equipment
-  AC Disconnect

We are excited to design your home of the future and for you to join our mission to accelerate the world's transition to sustainable energy.

The day of your installation, our team of two to three people will install your Powerwall. If you also have solar, an additional four installers could be on site.

To ensure a quick and efficient installation, clear the ground, wall space, and any key access points. Extra space is great since we may use a small dolly to move Powerwall around.

We look forward to getting started.

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Energy Storage System 15 Baynes Road, Plainfield, NH 03770, US

Mark Walker

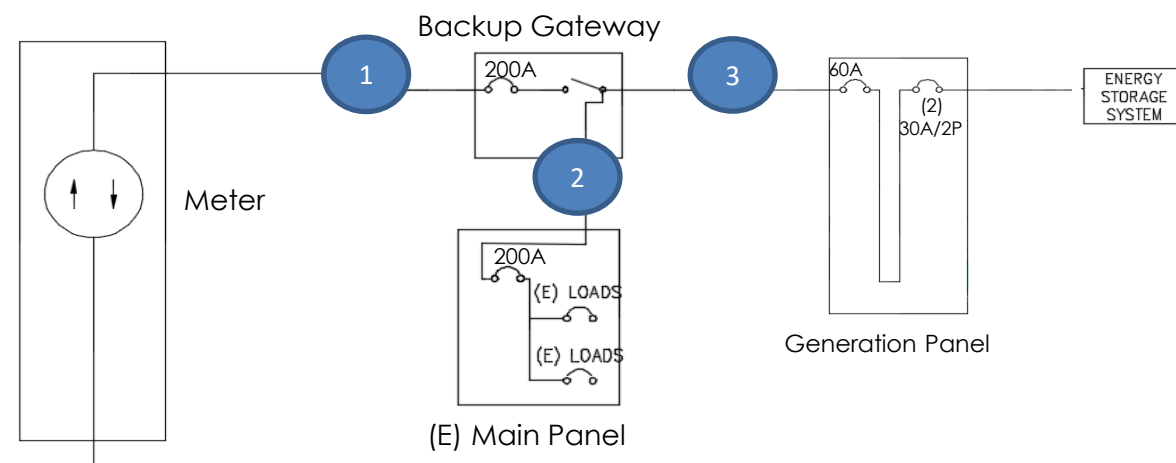
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Site Plan

4/27/2020



New Powerwall: (2) AC Powerwall 2; 5.8kVA
 Tesla 2012170-03-D
 30A Breaker Tie in
 AWG #10, THWN-2, Black, Red, White
 AWG #10, THWN-2, Green
 3/4" EMT

Main Panel: (E) 200A

Service Disconnect: (E) 200A

- 1 AWG #2/0 Black, Red, White THWN-2
 AWG #6 Green THWN-2
 2" Conduit
- 2 AWG #2/0 Black, Red, White THWN-2
 AWG #6 Green THWN-2
 2" Conduit
- 3 AWG #6 Black, Red, White THWN-2
 AWG #6 Green THWN-2
 1" Conduit

Backup Gateway: (1) (N) Backup Gateway
 Tesla 1118431-00-L

Backup Loads Panel: (1) (E) A Load Center

Generation Panel: (1) (N) HOM1224L125PRB Load Cente
 (N) 60A Main Breaker

All new equipment to be located adjacent to Main Panel

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Single Line

4/27/2020

BACKUP LOAD CENTER

Label Location:
(BLC)
Per Code:
NEC 408.4

CAUTION
TRI POWER SOURCE
SECOND SOURCE IS PHOTOVOLTAIC SYSTEM
THIRD SOURCE IS ENERGY STORAGE SYSTEM

Label Location:
(MP)
Per Code:
NEC 705.12.B.3

CAUTION
DO NOT ADD NEW LOADS

Label Location:
(BLC)
Per Code:
NEC 220

WARNING

THIS EQUIPMENT FED BY
MULTIPLE SOURCES. TOTAL
RATING OF ALL OVER CURRENT
DEVICES, EXCLUDING MAIN
SUPPLY OVERCURRENT DEVICE,
SHALL NOT EXCEED AMPACITY
OF BUSBAR.

Label Location:
(MP)
Per Code:
NEC 705.12.B.2.3.c

CAUTION
THIS PANEL HAS SPLICED FEED-
THROUGH CONDUCTORS.
LOCATION OF DISCONNECT AT ENERGY
STORAGE BACKUP LOAD PANEL

Label Location:
(MP)
Per Code: NEC
312.8.A.3

CAUTION
DUAL POWER SOURCE
SECOND SOURCE IS
ENERGY STORAGE SYSTEM

Label Location:
(MP)
Per Code: NEC
705.12.B.3

NOMINAL ESS VOLTAGE: 120/240V
MAX AVAILABLE SHORT-
CIRCUIT FROM ESS: 32A
ARC FAULT CLEARING
TIME FROM ESS: 67ms
DATE OF
CALCULATION:

Label Location:
(MP)
Per Code:
NEC 706.7.D

ENERGY STORAGE SYSTEM ON SITE
LOCATED WITHIN LINE OF SIGHT

Label Location:
(MP)
Per Code:

ENERGY STORAGE SYSTEM ON SITE
LOCATED ON ADJACENT WALL

Label Location:
(MP)
Per Code:

ENERGY STORAGE SYSTEM ON SITE
LOCATED ON OPPOSITE WALL

Label Location:
(MP)
Per Code:

ENERGY STORAGE SYSTEM ON SITE
LOCATED INSIDE

Label Location:
(MP)
Per Code:

(AC): AC Disconnect
(BLC): Backup Load Center
(MP): Main Panel

Label Set

POWERWALL

Tesla Powerwall is a fully-integrated AC battery system for residential or light commercial use. Its rechargeable lithium-ion battery pack provides energy storage for solar self-consumption, time-based control, and backup.

Powerwall's electrical interface provides a simple connection to any home or building. 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

AC Voltage (Nominal)	120/240 V
Feed-In Type	Split Phase
Grid Frequency	60 Hz
Total Energy ¹	14 kWh
Usable Energy ¹	13.5 kWh
Real Power, max continuous ²	5 kW (charge and discharge)
Real Power, peak (10s, off-grid/backup) ²	7 kW (charge and discharge)
Apparent Power, max continuous	5.8 kVA (charge and discharge)
Apparent Power, peak (10s, off-grid/backup)	7.2 kVA (charge and discharge)
Maximum Supply Fault Current	10 kA
Maximum Output Fault Current	32 A
Overcurrent Protection Device	30 A
Imbalance for Split-Phase Loads	100%
Power Factor Output Range	+/- 1.0 adjustable
Power Factor Range (full-rated power)	+/- 0.85
Internal Battery DC Voltage	50 V
Round Trip Efficiency ^{1,3}	90%
Warranty	10 years

¹Values provided for 25°C (77°F), 3.3 kW charge/discharge power.

²In Backup mode, grid charge power is limited to 3.3 kW.

³AC to battery to AC, at beginning of life.

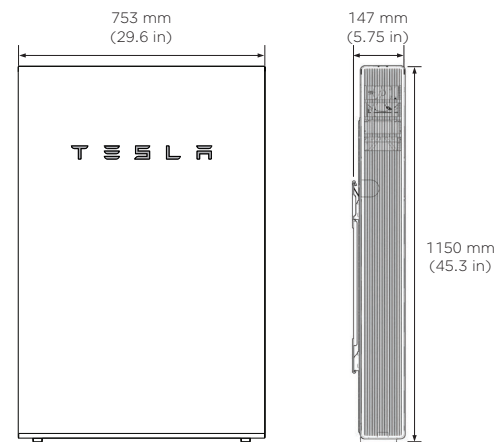
COMPLIANCE INFORMATION

Certifications	UL 1642, UL 1741, UL 1973, UL 9540, IEEE 1547, UN 38.3
Grid Connection	Worldwide Compatibility
Emissions	FCC Part 15 Class B, ICES 003
Environmental	RoHS Directive 2011/65/EU
Seismic	AC156, IEEE 693-2005 (high)

MECHANICAL SPECIFICATIONS

Dimensions ¹	1150 mm x 753 mm x 147 mm (45.3 in x 29.6 in x 5.75 in)
Weight ¹	114 kg (251.3 lbs)
Mounting options	Floor or wall mount

¹Dimensions and weight differ slightly if manufactured before March 2019. Contact Tesla for additional information.



ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-20°C to 50°C (-4°F to 122°F)
Recommended Temperature	0°C to 30°C (32°F to 86°F)
Operating Humidity (RH)	Up to 100%, condensing
Storage Conditions	-20°C to 30°C (-4°F to 86°F) Up to 95% RH, non-condensing State of Energy (SoE): 25% initial
Maximum Elevation	3000 m (9843 ft)
Environment	Indoor and outdoor rated
Enclosure Type	NEMA 3R
Ingress Rating	IP67 (Battery & Power Electronics) IP56 (Wiring Compartment)
Wet Location Rating	Yes
Noise Level @ 1m	< 40 dBA at 30°C (86°F)

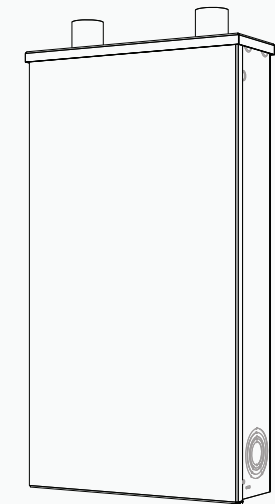
POWERWALL

Backup Gateway

The Backup Gateway for Tesla Powerwall provides energy management and monitoring for solar self-consumption, time-based control, and backup.

The Backup Gateway controls connection to the grid, automatically detecting outages and providing a seamless transition to backup power. When equipped with a circuit breaker, the Backup Gateway can be installed at the service entrance.

The Backup Gateway communicates directly with Powerwall, allowing you to monitor energy use and manage backup energy reserves from any mobile device with the Tesla app.



PERFORMANCE SPECIFICATIONS

AC Voltage (Nominal)	230 V, 120/240 V
Feed-In Type	Single & Split Phase
Grid Frequency	50 and 60 Hz
Disconnect Current	200 A
Maximum Input Short Circuit Current	10 kA
Overcurrent Protection Device ¹	100–200 A; Service Entrance Rated
Overvoltage Category	Category IV
AC Meter	Revenue grade (+/- 1%)
Connectivity	Ethernet, Cellular (3G) ² , Wi-Fi
User Interface	Tesla App
Operating Modes	Support for solar self-consumption, time-based control, and backup
Backup Operation	Automatic disconnect for seamless backup transition
Modularity	Supports up to 10 AC-coupled Powerwalls
Warranty	10 years

¹Circuit breaker required for installation at service entrance.

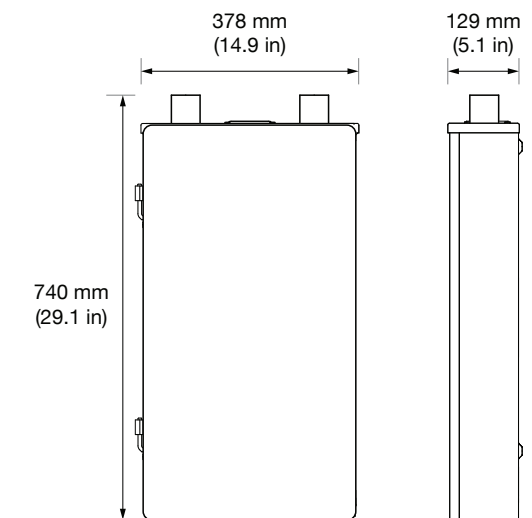
²Cellular connectivity subject to network operator service coverage and signal strength.

COMPLIANCE INFORMATION

Certifications	UL 1642, UL 1741, IEC 62109-1, CSA C22.2.107.1
Grid Connection	Worldwide Compatibility
Emissions	FCC Part 15 Class B, ICES 003, IEC 61000-6-3, EN 55024, EN 301489-1, EN 301489-7, EN 301489-17
Environmental	RoHS Directive 2011/65/EU, WEEE Directive 2012/19/EU, Battery Directive 2006/66/EC REACH Regulation
Seismic	AC156, IEEE 693-2005 (high)

MECHANICAL SPECIFICATIONS

Dimensions	740 mm x 378 mm x 129 mm (29.1 in x 14.9 in x 5.1 in)
Weight	16.4 kg (36 lbs)
Mounting options	Wall mount



ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-20°C to 50°C (-4°F to 122°F)
Operating Humidity (RH)	Up to 100%, condensing
Maximum Elevation	3000 m (9843 ft)
Environment	Indoor and outdoor rated
Enclosure Type	NEMA 3R
Ingress Rating	IP44