

# Powerwall 3 Technical Specifications

## System Technical Specifications

Part Number	1707000-xx-y		
Nominal Grid Voltage (Input & Output)	230 VAC		
Grid Type	Single phase		
Frequency	50 Hz		
Nominal Battery Energy	13.5 kWh AC <sup>1</sup>		
Model Number	1707000 - 5 kVA	1707000 - 10 kVA	1707000 - 11.04 kVA
Nominal Output Power (AC)	5 kW	10 kW	11.04 kW
Maximum Apparent Power	5,000 VA	10,000 VA	11,040 VA
Maximum Continuous Current	48 A		
Overcurrent Protection Device	63 A		
Maximum Continuous Charge Current / Power (Powerwall 3 only)	21.7 A AC / 5 kW		
Output Power Factor Rating	0 - 1 (Grid Code configurable)		
Maximum Output Fault Current	160 A		
Maximum Short-Circuit Current Rating	10 kA		
Load Start Capability	185 locked rotor amps (LRA)		
Power Scalability	Up to 4 Powerwall 3 units supported <sup>2</sup>		
Solar to Battery to Home/Grid Efficiency	89% <sup>1,3</sup>		
Solar to Home/Grid Efficiency	97.5%		
Supported Islanding Device	Backup Gateway 2		
Connectivity	Wi-Fi (2.4 and 5 GHz), Ethernet, Cellular (LTE/4G <sup>4</sup> )		
Hardware Interface	Dry contact relay, Dynamic Response Mode Interface, RS-485 for meters		
AC Metering	Revenue Grade (+/- 0.5%)		
Protections	Integrated arc fault circuit interrupter (AFCI), Isolation Monitor Interrupter (IMI), Integrated DC Isolator		
Customer Interface	Tesla Mobile App		
Warranty	10 years		

## Solar Technical Specifications

Maximum Solar STC Input	20 kW
Withstand Voltage	600 V DC
PV DC Input Voltage Range	60 — 550 V DC
PV DC MPPT Voltage Range	60 — 480 V DC
MPPTs	3
Maximum Current per MPPT ( $I_{mp}$ )	30 A <sup>5</sup>
Maximum Short Circuit Current per MPPT ( $I_{sc}$ )	38 A

<sup>1</sup> Values provided for 25°C (77°F), at beginning of life. 3.3 kW charge/discharge power.

<sup>2</sup> The maximum number of Powerwall 3 units per installation may vary by market.

<sup>3</sup> Typical solar shifting use case.

<sup>4</sup> The customer is expected to provide internet connectivity for Powerwall 3; cellular should not be used as the primary mode of connectivity. Cellular connectivity subject to network operator service coverage and signal strength.

<sup>5</sup> Only applicable to Powerwall 3 units with 30 A IMP on the product label. Otherwise, Powerwall 3 has an IMP of 26 A.

# Powerwall 3 Technical Specifications

## Environmental Specifications

Operating Temperature	-20°C to 50°C <sup>6</sup>
Operating Humidity (RH)	Up to 100%, condensing
Storage Temperature	-20°C to 30°C, up to 95% RH, non-condensing, State of Energy (SOE): 25% initial
Maximum Elevation	3000 m
Environment	Indoor and outdoor rated
Enclosure Rating	IP55
Ingress Rating	IP67 (Battery & Power Electronics) IP55 (Wiring Compartment)
Pollution Rating	PD3
Operating Noise @ 1 m	< 50 db(A) typical, < 62 db(A) maximum

<sup>6</sup>Powerwall 3 is designed to operate in all climates, from temperatures of -20°C to 50°C. Performance may be de-rated at operating temperatures above 40°C.

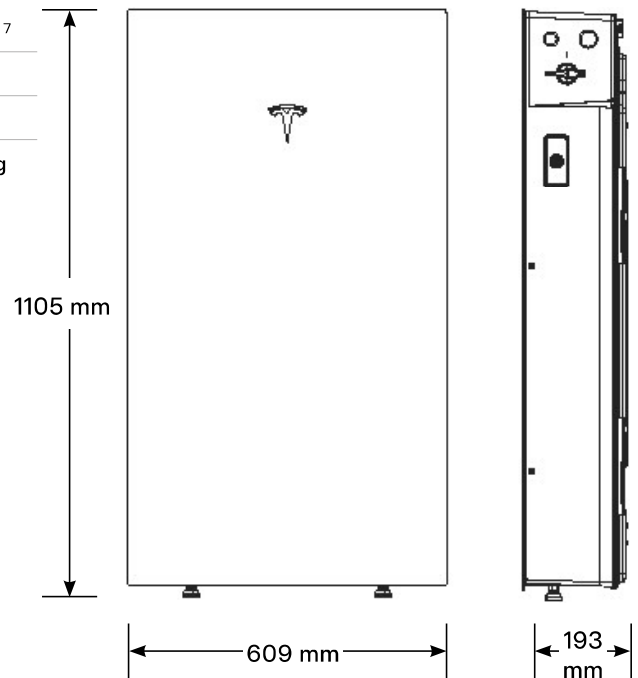
## Compliance Information

Certifications	IEC 61000-6-1: 2016, IEC 61000-6-3: 2020, IEC 62477-1: 2022, IEC 62109-1: 2010, IEC 62109-2: 2011, IEC 62933-5-2: 2020, IEC 62619: 2022, UL 1973, UL 9540A, AS/NZS 4777.2
Grid Connection	Australia and New Zealand
Emissions	FCC Part 15 Class B, ICES 003
Environmental	RoHS Directive 2011/65/EU REACH Regulation EC 1907/2006
Seismic	AC156, IEEE 693-2005 (high)
Fire Testing	Meets the unit level performance criteria of UL 9540A
Country of Manufacture	USA

## Mechanical Specifications

Dimensions	1105 x 609 x 193 mm <sup>7</sup>
Weight	130 kg
Mounting Options	Floor or wall mount

<sup>7</sup>These dimensions include the glass front cover being installed on Powerwall 3.



# Backup Gateway 2 Specifications

Backup Gateway 2 provides energy management and monitoring for solar self-consumption, time-based control, and backup operation. When Powerwall 3 is in Backup mode, Backup Gateway 2 controls connection to the grid, detects outage, and provides backup power.

## Electrical Specifications

<b>AC Voltage (Nominal)</b>	230 V (Line-to-Neutral) 400 V (Line-to-Line)	<b>Maximum Input Short Circuit Current</b>	10 kA
<b>Feed-In Type</b>	Single Phase, Three Phase	<b>Overvoltage Category</b>	Category III
<b>Grid Frequency</b>	50 Hz	<b>AC Meter</b>	Revenue accurate (+/- 0.2%) <sup>8</sup>
<b>Maximum Overcurrent Protection Device</b>	100 A (single-phase service) 80 A (2- or 3-phase service)	<b>Warranty</b>	10 years

<sup>8</sup> Revenue accurate when using Gateway internal site meter.

## Environmental Specifications

<b>Operating Temperature</b>	-20°C to 50°C <sup>9</sup>	<b>Ingress Rating</b>	IP55
<b>Operating Humidity (RH)</b>	Up to 100%, condensing	<b>Environmental Category</b>	Indoor and outdoor rated
<b>Maximum Altitude</b>	3000 m	<b>Wet Location Rating</b>	Yes
		<b>Pollution Degree</b>	PD2

<sup>9</sup> Performance may be de-rated in extreme ambient temperatures.

## Compliance Information

<b>Safety</b>	IEC 62109-1, IEC 62053-22, IEC 61439-1, IEC 61439-3
<b>EMC and Radio Equipment</b>	EMC Directive 2014/30/EU, Radio Equipment Directive 2014/53/EU, IEC 61000-6-1, IEC 61000-6-3, EN 55024, EN 300 328, EN 300 440, EN 301 489-1, EN 301 489-17, EN 301 489-52, EN 301 511, EN 301 893, EN 301 908-1
<b>Environmental</b>	RoHS Directive 2011/65/EU, WEEE Directive 2012/19/EU, Battery Directive 2006/66/EC REACH Regulation EC 1907/2006
<b>Seismic</b>	AC156, IEEE 693-2005 (high)

## Mechanical Specifications

<b>Dimensions</b>	584 x 380 x 127 mm
<b>Weight</b>	11.4 kg
<b>Breaker Space (DIN rail)</b>	Main breaker: 1-, 2- or 3-pole Generation/Load breakers: 6 spaces
<b>Mounting Options</b>	Wall mount

