



# Lunar System Specifications



**Beauty.  
And Beast.**

Powerful performance  
that's wall-worthy.

# Meet the Lunar System

Brilliantly-Designed  
**End-to-End** Battery System



# Lunar Battery

The Lunar Battery is a fully-integrated solar battery system. It contains a hybrid inverter that efficiently converts both solar and battery energy to power homes, and directly stores excess solar in battery to maximize solar usage. The Lunar battery comes in modular, compact blocks, bringing 24/7 reliable clean energy to homes of all sizes. Powered by intelligent software, Lunar's long-lasting batteries work in concert with your solar system to maximize self-consumption, save utility bills, and deliver a true whole-home backup experience.

## Inverter Block

Part Number	90-003540 <sup>1</sup>
Nominal Voltage	120/240 Vac Split Phase
Output Voltage Range	210 Vac - 264 Vac
Grid Frequency	60 Hz
Maximum Continuous AC Power, on-grid	9.6 kVA full sun / 6.6 kVA no sun
Maximum Continuous AC Power, off-grid	9.6 kW (full sun and no sun)
Peak AC Power, off-grid	15 kW for 5s
Maximum Continuous AC Current	40 A
Overcurrent Protection Device	50 A Breaker
Operating Input Voltage	380 - 450 Vdc
Maximum DC Input Current	37.5 A (PV), 30 A (battery)
Maximum PV Input Power	15 kWdc
Total Harmonic Distortion	<5%
Power Factor	0.85 lagging to 0.85 leading
PV Rapid Shutdown Switch and System Disconnect	Yes, lockable
CEC Solar to Home/Grid Efficiency	95.5%

## Battery Block

Part Number	90-002802
Rated Energy	5 kWh
Operating Voltage Range	190 Vdc - 225 Vdc
Maximum Continuous Charge Power	1.6 kW
Maximum Continuous Discharge Power, on-grid	1.6 kW
Maximum Continuous Discharge Power, off-grid	2.5 kW
Peak Discharge Power, off-grid	3.75 kW (5s)

## System

Model Number	LE-ESS-20KWH
Rated Energy	20 kWh (4 Battery Blocks x 5 kWh)
Max Load Start Capability	134 LRA <sup>2</sup>
Warranty	12.5 Years / 75 MWh AC throughput
Customer Interface	Customer App, Installer App, Fleet Web Portal, APIs, LED
Operating Modes	Lunar Mode, Solar Self-Consumption, Time-of-use, Backup
Advanced Software Features	Weather Watch, Virtual Power Plant enabled
Communication	Wi-Fi, 4G/LTE (CAT M1), Ethernet

<sup>1</sup> Please refer to Model Number 10-005025 for inverter certifications

<sup>2</sup> Subject to base load at the time of motor start

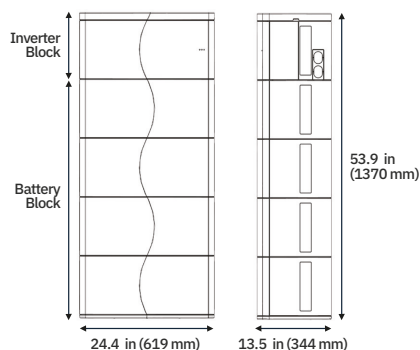
<sup>3</sup> Performance may be de-rated at operating temperatures below 0°C (32°F) or greater than 45°C (113°F).

## Environmental

Ingress Rating	ESS: NEMA 3R Inverter Block: NEMA 3R Battery Block: NEMA 3R, IP68
Operating Temperature	-4°F to 122°F (-20°C to 50°C) <sup>3</sup>
Storage Conditions	Absolute Limits: -4°F to 140°F (-20°C to 60°C) < 95% RH 1 month: -4°F to 113°F (-20°C to 45°C) < 60%RH 2 months: 32°F to 95°F (0°C to 35°C) < 60%RH Up to 24 months: 65°F to 82°F (18°C to 28°C) < 60%RH
Altitude	Up to 9843 ft (3000 m)

## Mechanical

Dimension (L x W x D)	Inverter Block: 10.6" x 24.4" x 13.5" (270 mm x 619 mm x 344 mm) Battery Block: 10.6" x 24.4" x 13.5" (270 mm x 619 mm x 344 mm) System: 53.9" x 24.4" x 13.5" (1370 mm x 619 mm x 344 mm)
Mass	Inverter Block: 42 lb (19 kg) Battery Block: 95 lb (43 kg) System: 499 lb (226 kg) for total assembly + brackets
Mounting	Wall or floor mount



## Compliance

Certifications	Inverter Block: UL 1741, UL 1741 SB, UL 1699B, CSA C22.2. No. 107.1 Battery Block: CAN/UL 1973, UN 38.3 System: CAN/UL 9540, UL 9450A (indoor and outdoor)
Grid Connection	IEEE 1547.1-2020, IEEE 1547.1-2018 SunSpec IEEE 2030.5 / CSIP CA Rule 21
Emissions	FCC Part 15 Class B
Seismic	IEEE 693 (High)

# Lunar Bridge

Lunar Bridge is a Microgrid Interconnection Device that automatically detects outages and seamlessly transitions between grid and island. It supports all home circuits with a service entrance rated load center.

## System

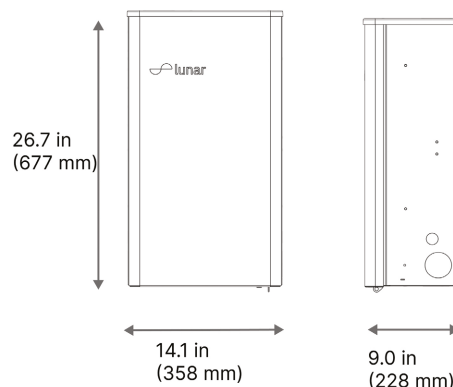
Part Number	90-001221
Current Rating	200 A
Busbar Rating	200 A
Off-Grid Switchover Time	< 0.03s
Overcurrent Protection Device	Up to 175 A
Number of Panelboard Spaces	20 Spaces / 40 Circuits
AC Meter	Integral: +/- 0.2% External (Rogowski Coil): +/- 5%
Warranty	12.5 Years

## Environmental

Operating Temperature	-40°F to 140°F (-40°C to 60°C)
Ingress Rating	NEMA 3R

## Mechanical

Dimension (L x W x D)	26.7" x 14.1" x 9" (677 mm x 358 mm x 228 mm)
Mass	44 lbs (20 kg)
Mounting	Wall or semi-flush mount

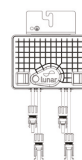


## Compliance

Certifications	UL 1741, UL 67, UL 869A
Emissions	FCC Part 15 Class B

# Lunar Maximizer

The Lunar Maximizer is a DC-to-DC charge controller that connects to individual solar panel. It optimizes solar output via tracking the maximum power point, with real-time monitoring and rapid shutdown capability.



## System

Part Number	90-002878
Rated Input DC Power	420 W
Maximum Input Open Circuit Voltage (Voc)	60 Vdc at cold temperature
MPPT Operating Voltage	20 Vdc - 60 Vdc
Maximum Input Short Circuit Current (Isc)	15 A
Maximum Output Current	16 A
PV String Length	10 - 20 Modules
Parallel Strings of Different Lengths or Orientations	2 Strings
Warranty	25 Years

## Environmental

Operating Temperature	-40°F to 185 °F (-40°C to 85°C)
Ingress Rating	NEMA 4X, IP68

## Mechanical

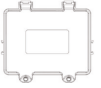
Dimension (L x W x D)	6.9" x 6.7" x 1.7" (176 mm x 169 mm x 43 mm)
Mass	2 lb (936 g)
Mounting	Rack or panel mount
PV Connector	MC4

## Compliance

Certifications	UL 1741, CSA C22.2.107
Emissions	FCC Part 15 Class B

# Lunar Maximizer Hub

The Lunar Maximizer Hub is a junction box that combines PV strings and ensure reliable, instantaneous coordination between Lunar Maximizers and the inverter.



## System

Part Number	90-004034
Operating Voltage	25 - 450 Vdc
DC Inputs	3 DC PV strings (3+ & 3- wire terminals + 1 ground terminal)
Maximum Current Per Terminal	50 A
Terminal Wire Size Range	8 AWG - 20 AWG (Red / Black) 6 AWG - 16 AWG (Ground)
Internal Communications	Mesh Wi-Fi to Maximizers, PLC to Inverter
Warranty	25 Years

## Mechanical

Dimensions	11" x 12" x 4" (280 mm x 305 mm x 102 mm)
Mass	2.3 lbs (1050 g)
Mounting	Rail mounting or comp shingle flashing

## Compliance

Certifications	UL 1741 CAN/CSA C22.2 No. 107.1. CSA C22.2 No. 290.
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## Environmental

Operating Temperature	-40°F to 185 °F (-40°C to 85°C)
Ingress Rating	NEMA 3R

# Accessories

## Accessory Item

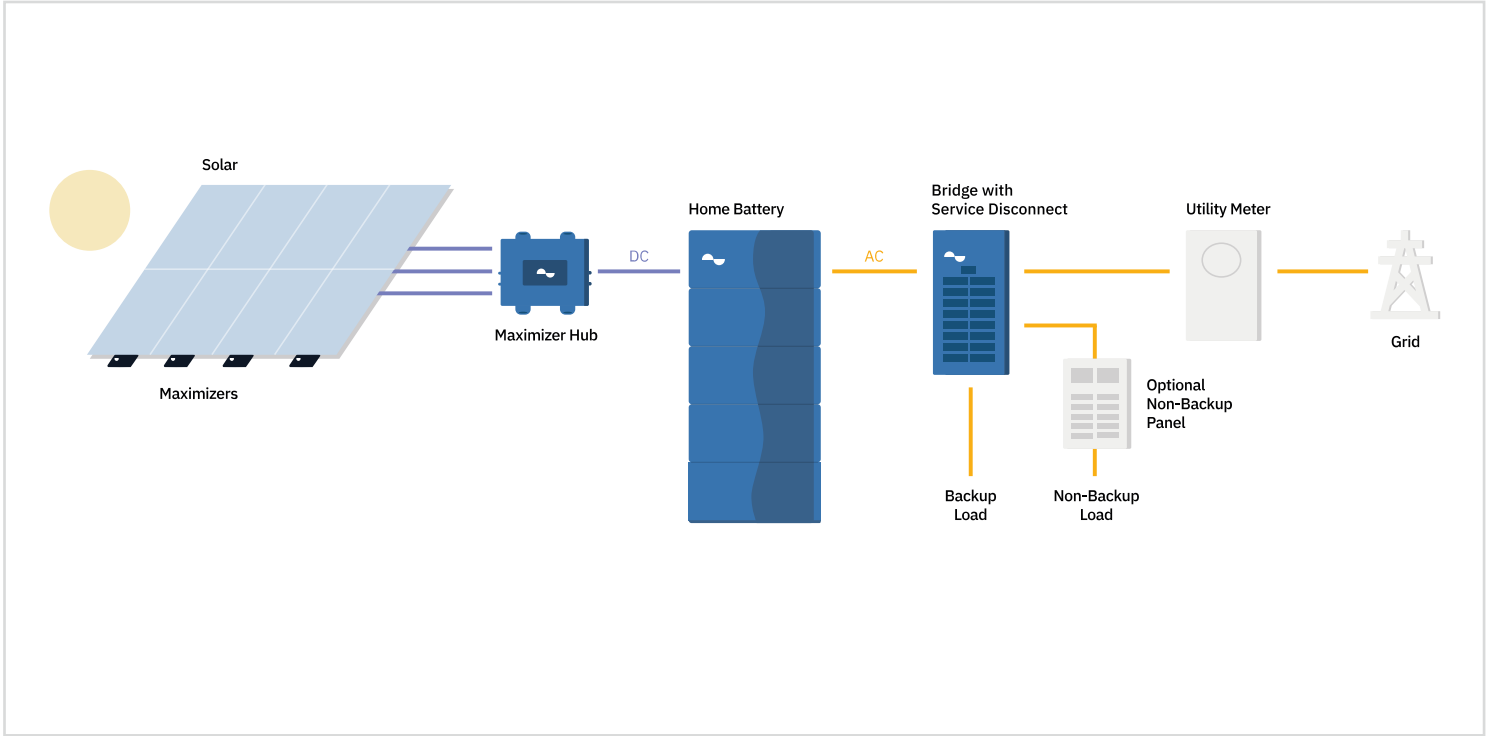
## Part Number

## Description

Accessory Item	Part Number	Description
Installation Kit (4 Battery Blocks, 20 kWh)	90-001223	Includes trunk harness, foot bracket and accessories for the 20 kWh configuration
Battery Lifting Tool	90-005336	Reusable Lifting Handle for Lunar Battery Blocks

# System Layout

## Lunar System with Service Disconnect at Lunar Bridge



## Lunar System with Service Disconnect at Utility Meter

