lunar energy

Lunar System

Specifications



2025-10-06

lunarenergy.com

Lunar Battery

System

	15 kWh	20 kWh
Model Number	LE-ESS-15KWH	LE-ESS-20KWH
Rated Energy	15 kWh	20 kWh
Max Load Start Capability	134 LRA[1]	
Solar Configuration	DC-Coupled and AC-Coupled	
Warranty	12.5 Years 56 MWh AC throughput	12.5 Years 75 MWh AC throughput
Customer Interface	Customer App, Installer App, Fleet Web Portal, APIs, LED	
Operating Modes	Lunar AI, Solar Self-Consumption, Time-of-use, Backup	
Advanced Software Features	Weather Watch, VPP enabled, load control	
Communication	Wi-Fi (2.4 GHz), 4G/LTE (CAT M1), Ethernet	

Inverter Block

	15 kWh	20 kWh
Model Number	10-005025	
Nominal Voltage	120/240 Vac Split Phase	
Output Voltage Range	210 Vac - 264 Vac	
Grid Frequency	60 Hz	
Max Continuous AC Power	9.6 kW full sun 7.2 kW no sun	9.6 kW full sun and no sun
Peak AC Power, off-grid	15 kW for 5s	
Max Continuous AC Current	40 A	
Overcurrent Protection Device	50 A Breaker	
Operating Input Voltage	380 - 450 Vdc	
Max DC Input Current	37.5 A (PV), 30 A (battery)	
Max 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

Model Number	10-005203 or 10-06532A
Rated Energy	5 kWh
Operating Voltage Range	190 Vdc - 225 Vdc
Max Continuous Charge Power	1.67 kW
Max Continuous Discharge Power	2.5 kW (on grid and off-grid)
Peak Discharge Power, off-grid	3.75 kW (5s)
Chemistry	Lithium-ion (NMC)

[1] Subject to base load and SOC at time of motor start.

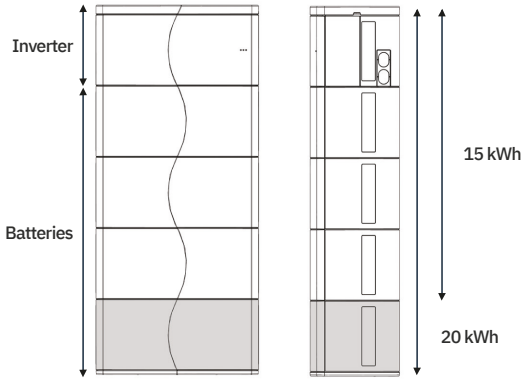
[2] Performance may be de-rated at operating temperatures below 0°C (32°F) or greater than 45°C (113°F).

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)[2]
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

	15 kWh	20 kWh
Dimensions (L x W x D)	**Inverter Block:** 10.6" x 24.4" x 13.5" (270 x 619 x 344 mm)	
	Battery Block: 10.6" x 24.4" x 13.5" (270 x 619 x 344 mm)	
	System 45.5"x 24.4" x 13.5" (1156 x 619 x 344 mm)	**System** 56.1"x 24.4" x 13.5" (1425 x 619 x 344 mm)
Mass	**Inverter Block:** 42 lb (19 kg)	
	Battery Block: 95 lb (43 kg)	
	System 391 lb (177 kg) total assembly + brackets	**System** 499 lb (226 kg) 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), UL 1741 CRD PCS, UL 3141 (Issue 1)
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

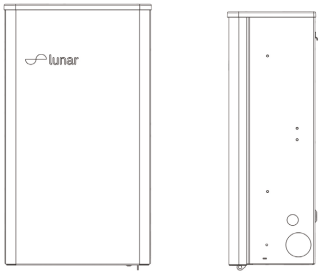
Model Number	90-06801A
Current Rating	200 A
Busbar Rating	200 A
Off-Grid Switchover Time	< 0.03s
Overcurrent Protection Device	Up to 200 A
Number of Panelboard Spaces	20 Spaces / 40 Circuits
AC Meter	**Integral:** +/- 0.2% **External (Rogowski Coil):** +/- 5%
Warranty	12.5 Years

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 x 358 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

Model Number	10-00522D
Rated Input DC Power	650 W
Maximum Input Open Circuit Voltage (Voc)	75 Vdc[3]
MPPT Operating Voltage	20 Vdc - 60 Vdc
Maximum Input Short Circuit Current (Isc)	20 A
Maximum Output Current	16 A
PV String Length	9-24 Modules
Parallel Strings of Different Lengths or Orientations	3 Strings
Warranty	25 Years

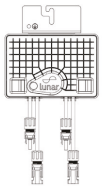
Environmental

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

[3] A PV module is compatible if its nameplate specification, adjusted for site-specific cold temperature, is less than the Maximizer input rating

Mechanical

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

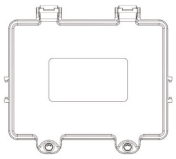
Part Number	90-004034
Operating Voltage	25 - 450 Vdc
DC Inputs	3 DC PV strings (3+ & 3- wire terminals + 1 ground terminal)
Maximum Current Per Terminal	50 A
Terminal Wire Size Range	8 AWG - 20 AWG (Red / Black) 6 AWG - 16 AWG (Ground)
Internal Communications	Mesh Wi-Fi to Maximizers, PLC to Inverter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

Environmental

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

Mechanical

Dimension (L x W x D)	11”x 12” x 4” (280 x 305 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.

Rogowski Coil CT

Rogowski Coils are flexible, air-core sensors that provide accurate, non-intrusive AC current measurements. These current transformers (CTs) seamlessly transmit telemetry to the Lunar System to enable partial home backup monitoring.

Specifications

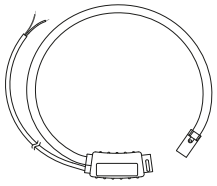
Magnelab Part Number	RCT-180L-Coil
Rated Primary Current	Up to 5000 Amp
Accuracy	0.5 Class per IEC 61869-2 Accuracy from 100 Amps to 15, 000 Amps
Phase Displacement	< 0.5°
Power Supply	9-36 VDC required (Not included)
UL Max Voltage	600 V on bare conductor BIL 10 kV
RMS Voltage	10,000 V for AC insulation Test (1 min)
Rated Frequency	30-1,000 Hz
Minimum Impendance	75 kOhms

Environmental

UL Rated Ambient	55°C
Operating Temperature	-15°C to 65°C
Storage Temperature	-45°C to 80°C
UL Relative Humidity Rating	85%

Mechanical

Coil Diameter	6.0”
Insulated Leads	Length: 8 ft, 24 AWG gray cable Rating: 600 V
Mass	0.40 lbs (0.18kg)



Compliance

Certifications	UL 2808, CAN.CSA C22.2 No. 61010-1-12, IP64

ConnectDER

Lunar Partner

Lunar and ConnectDER make installations faster and simpler. Using ConnectDER's IslandDER™ Meter Socket Adapter together with the Lunar Meter Socket Adapter Controller, installers can integrate the Lunar System quickly and efficiently.

System

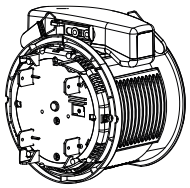
Part Number	V-1-A-6[4]
Voltage	208V, 240V
Maximum Continuous Current	200A
Short Circuit Rating	22k AIC
Power	12V DC bus to/from Lunar MSAC, Max 5W power supply available to 3rd party system from grid side of MID (load side of meter)
Current Sensing	ANSI 0.2 Accuracy Class CTs for Revenue Grade Sensing, Additional line and load side (of MID) Rogowski Coils at < 5% accuracy
Voltage Sensing	Line and Load side (of MID) - 0.4% Accuracy at Ambient, 1% Across Temperature Range
MID Control	Discrete open/close signals with 1ms input noise rejection, Actuation time < 15 ms
MID Rated Cycles	10,000
Warranty	12 years

Environmental

Ingress Rating	NEMA 3R
Enclosure Type	UL 94 5VA flame rating
Ambient Operating Temperature	-22 F to 149 F (-30°C to 65°C)

Mechanical

Dimension (L x W x D)	7.8" x 6.7" x 4.9" (198 × 170 × 124 mm) With pluggable Connection Module
Mass	5.55 lbs. / 2.52 kg With Connection Module and 6 ft analog cable
Mounting	Blade interface with 4-jaw or 5 jaw meter socket
Electric Meter Compatibility	Type 2S, and 12S
Meter Socket Compatibility	Ringless, Ring-type, Lever, Horn Bypass
Manual MID Override	Externally Accessible Switch, Protected by (Dry Contact) Interlocked Tool-Access Cover
Thermal Management	Passive Cooling, Heat Sinks
Cable Connection	Factory-Wired Pluggable Connection, Weathertight, Reversible at Top of MSA, Pre-attached connector to Lunar MSAC



Compliance

Certifications	UL 414 SA, SB, SC – Meter Sockets, UL 1741 / 3141 / 9741 system ready
Emissions	FCC CFR Part 15 Class B, ANSI C12 / IEC 61000
ETL File Number	5028888

[4] V-1-A-# (# denotes length up to 25 ft.) 6 ft. cable is standard length.

Lunar Meter Socket Adapter Controller (MSAC)

System

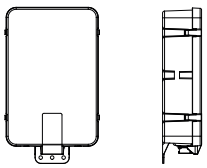
Model Number	LE-MSAC-01
MSAC Connection Voltage	12 VDC
MSAC Connection Rating	0.35 A
Inverter Connection Voltage	13 VDC
Warranty	12.5 years

Environmental

Operating Temperature	–40°F (–40°C) to 140°F (60°C)
Storage Temperature	–40°F (–40°C) to 140°F (60°C)
Environment	Indoor and outdoor
Ingress Rating	Type 3R
Humidity	100%
Maximum Elevation	9,843 ft (3000m)

Mechanical

Dimension (L x W x D)	11.9 in x 7.02 in x 2.99 in (303 x 178.4 x 76 mm)
Mass	2.2 lb (1 kg)
Mounting	Wall



Compliance

Certifications	UL 1741, UL CSA 61010-1, UL CSA 61010-02-30
Emissions	FCC Part 15 Class B

Lunar Partner

The Lunar System, when paired with Eaton AbleEdge smart breakers, delivers a flexible and cost-effective way to extend backup power and integrate existing PV inverters.

System

Current rating	15/20/30/40/50/60A[4]
Breaker type	BRS plug-on style
Metering	Revenue Grade Metering (±0.5%)
Ground Fault Circuit Protection (GFCI)	Yes
Max # of smart breakers per Lunar System	8
Compatible Panels	Lunar Bridge and any Eaton BR-style residential panels
Compatible PV inverters	All CEC-listed solar inverters
Maximum Non-Lunar AC PV in backup	11. 5kWac combined
Maximum Distance from Lunar Bridge/ MSA Controller	**Free air:** 75 ft (23 m) **Through 1 wall (wood/drywall):** 30 ft (9 m) **Through 1 wall (concrete/brick):** 10 ft (3 m)
Commissioning	Lunar Installer App
Warranty	10 years mechanical, 3 years electronics

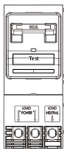
[4] 40/50/60A available today. Contact Lunar for 15/20/30A availability.

Environmental

Ambient operating temperature	-30 °C to +40 °C
Humidity	0% to 90%, noncondensing

Mechanical

Footprint	2-pole: Takes 2 spaces in a loadcenter

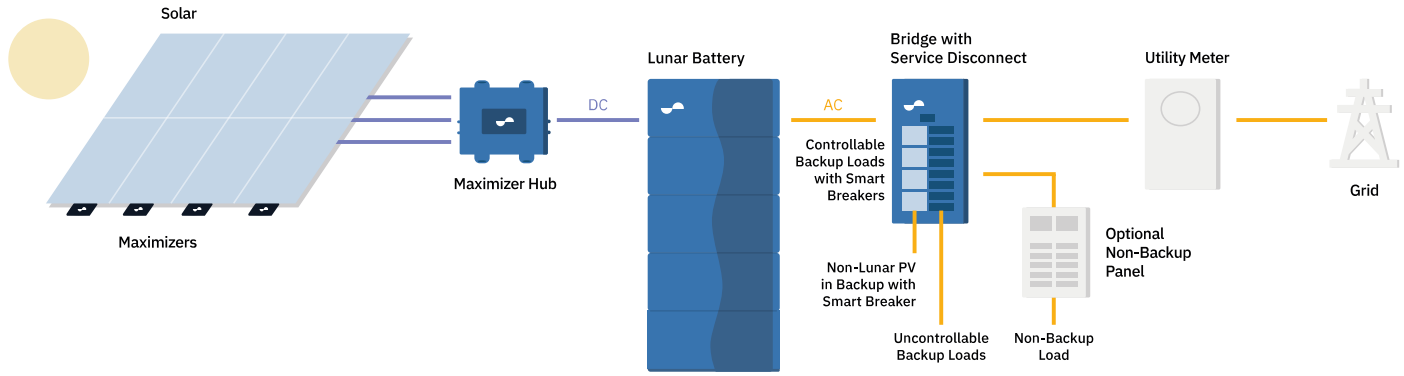


Compliance

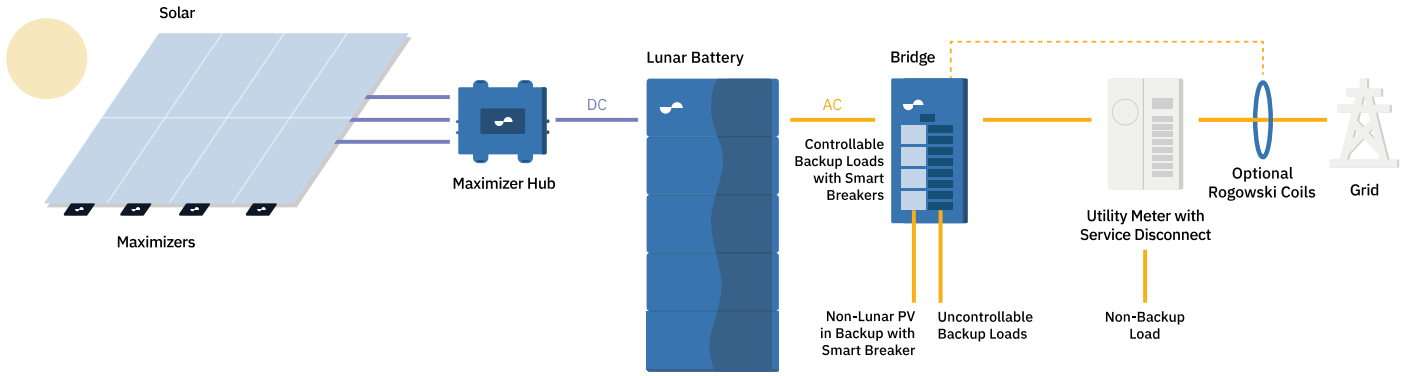
Certifications	UL 943; CSA C22.2 No. 144.1-16, UL 486A-486B, CSA C22.2 No. 65, UL 489, CSA C22.2 No. 144.1, UL 1998, CSA C22.2 No. 0.8, UL 60730-1, FCC Part 15, ICES-003

System Layout

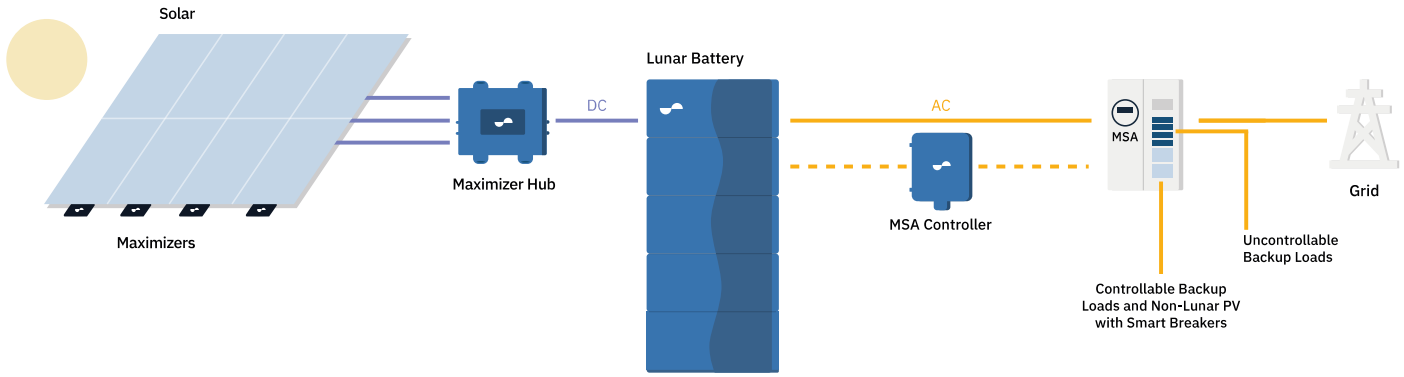
Lunar System with Service Disconnect at Lunar Bridge



Lunar System with Service Disconnect at Utility Meter



Lunar System with MSA and MSA Controller





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