

LG ESS Home 8

Single Phase AC-Coupled



The LG Electronics Home 8 is a state of the art home energy system designed for homeowners ready to take control of their home energy usage. The Home 8 is offered in AC-coupled configuration. The 7.5kW AC-coupled solution is ideal for customers looking to install an ESS in a home with an existing solar system. Allowing homeowners to seamlessly store excess solar energy to power their home both day and night. The 7.5kW AC-coupled product can be easily added to an existing solar system, offering a reliable and cost-effective way to manage Time-of-Use (TOU) rates provide backup power. Product features include quick and easy installation, a compact and modern design, and an integrated smart energy management system ThinQ® Service. The Home 8 EMS enables customers to control their electric bill through self-consumption of solar, TOU rate smart schedule, weather FCST base, and including an off-grid mode to protect the customer's home in the event of an power outage.



Features at a glance

Integrated Modern Design



Battery Integrated Modern Design for store energy & simple streamlined connection to Home

Valuable additional functions



Weather-based power back-up response options LG ESS Home provides automatic battery operation options during weather-events that normally cause power outages.

Easy and User Friendly



7-inch Touch Screen HMI
Installers can set up and test the product directly through the supplied HMI, without the need for a separate device.

Latest Reliability



Tested to UL9540A, the latest battery safety standard and UL1741SA, UL1741SB(TBD), NEMA Type 3R

Large Storage Capacity



Parallel operation of up to 4 LG ESS
LG ESS Home can deliver up to 30kW output power and 57.6kWh battery capacity.

Comfortable Maintenance



Customers can troubleshoot and keep their LG ESS Home up-to-date with ThinQ® Service .

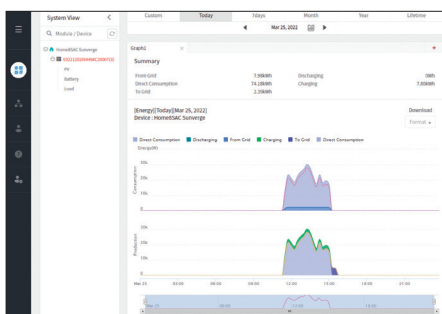
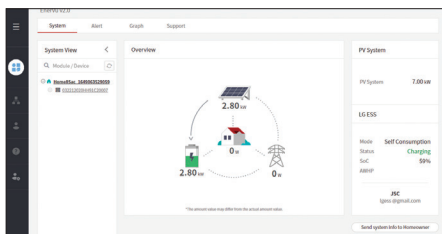


LG EnerVu, LG ThinQ®

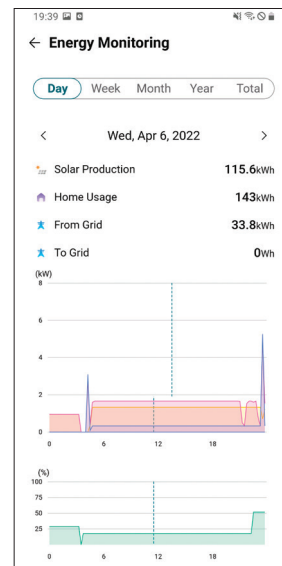
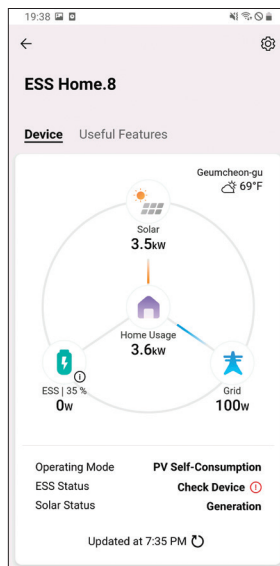
LG provides the monitoring tools for the installers and the users respectively. EnerVu is web monitoring system for the installer and LG ThinQ® is the mobile application for the users. (For these services, the registration is required)

To use the EnerVu web monitoring system, the user's ESS must be activated by LG ThinQ® mobile application first.

After registering in EnerVu, installer can check variety of information such as system status, information, report, etc.

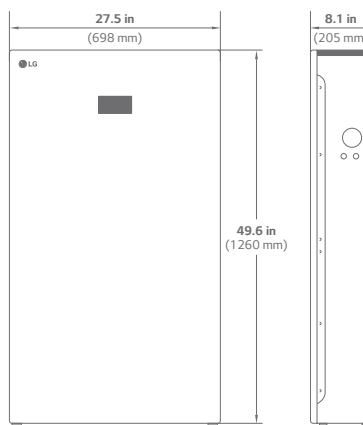


LG EnerVu

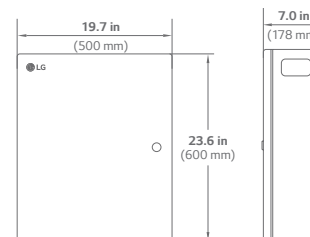


LG ThinQ®

Mechanical size



Home 8 (PCS+Battery)



Smart Energy Box



Specification LG ESS Home 8

Home 8 - General Specifications

Nominal Voltage (L-N/L-L)	120/240V Split Phase
Grid Frequency (Nominal)	60 Hz
Rated AC Power (Discharging)	7.5 kVA ¹⁾
Rated AC Power (Charging)	5.4 kVA ¹⁾
Total Capacity	15.8 kWh
Usable Capacity	14.4 kWh ²⁾
Round Trip Efficiency	> 90 % ^{3),4)}
CEC Efficiency(PCS only)	98 %
Overvoltage Category	Category IV
Interface	LED Display

- Adjustable, limited by the battery pack output capability such as charging/discharging power derating by the atmosphere temperature.
- Usable energy might be reduced for enhancing the battery lifetime and system stability.
- Verified according to LG Electronics conditions.
- AC to battery to AC with 4.32 kW charging and 2.88kW discharging power at 25 °C (77 °F) under the beginning of life.

Home 8 - Grid connection mode

Nominal Voltage (L-N/L-L)	120/240V Split Phase
Grid Frequency (Nominal)	60 Hz
Rated AC Power(Discharging)	7.5 kVA ¹⁾
Rated AC Power(Charging)	5.4 kVA ¹⁾
Rated AC Current(Discharging)	31.25 A
Rated AC Current(Charging)	22.5 A
Power Factor	- 0.8 ~ + 0.8

Home 8 - Backup mode

Nominal AC Voltage	120/240V Split Phase
Nominal AC Frequency	60 Hz
Max AC Power (Discharging)	9.0 kVA (10s)
Rated AC Power (Discharging)	7.5 kVA ¹⁾
Rated AC Power (Charging)	5.4 kVA ¹⁾
Max AC Current (Discharging)	37.5 A (10s)
Rated AC Current (Discharging)	31.25 A
Rated AC Current (Charging)	22.5 A

Home 8 - Battery

Battery Package Types	Cylindrical Li-ion
Total Capacity	15.8 kWh
Usable Capacity	14.4 kWh ²⁾
Nominal DC Voltage	406.56 V

Home 8 - Battery Module

Battery Package Types	Cylindrical Li-ion
Module Nominal DC Voltage	101.64 V
Module Capacity	36.9 Ah
Module Size[W*H*D]	600 x 212 x 190 [mm] (23.6 x 8.4 x 7.5 [in.])
Module Weight (Max)	26 kg / 57 lb

SE Box - General Specifications

Nominal Voltage (L-N/L-L)	120/240V Split Phase
Grid Frequency (Nominal)	60 Hz
Max AC Current Rating	200 A
Max Continuous AC Current Rating	160 A
Input Short Circuit Current Rating	10 kAIC ⁵⁾
Over Current Protection Device	100 ~ 200 A, Service Entrance Rated ^{5),6)}
AC Meter Accuracy	+/- 2 %
Operating Mode	PV Self-Consumption, Time of Use (ToU), Backup Only
Backup Operation	Automatic Disconnect for Seamless Backup
Backup Transfer Time	< 100 ms
Modularity	Up to 4 Home 8 units
Overvoltage Category	Category IV

- When protected by Class J fuses, LG, SE-box, is suitable for use in circuits capable of delivering not more than 22kA symmetrical amperes.
- LG SE Box is not suitable for use as service equipment in Canada.

SE Box - Interface

User Interface	7-inch Touch LCD, LG ThinQ App(User), EnerVu Web(Installer)
Internet Connection	Ethernet 10/100, WLAN (802.11 b/g/n)
External Device	MODBUS

Environmental Specification

	Home 8	SE Box
Dimensions[W*H*D]	698 X 1260 X 205 [mm] (27.5 X 49.6 X 8.1 [in.])	500 X 600 X 178 [mm] (19.7 X 23.6 X 7.0 [in.])
Weight	163 kg / 359 lb	25 kg / 55 lb
Cooling	Fan(Forced Air Cooling)	Natural Convection
Operating Temperature	-20 ~ 50 °C (-4 ~ 122 °F) @ Discharging -10 ~ 45 °C (14 ~ 113 °F) @ Charging	-20 ~ 50 °C (-4 ~ 122 °F)
Recommended Operating Temperature	0 ~ 35 °C (32 ~ 95 °F) @ Discharging 0 ~ 33 °C (32 ~ 91.4 °F) @ Charging	-20 ~ 50 °C (-4 ~ 122 °F)
Storage Temperature	-20 ~ 50 °C (-4 ~ 122 °F)	
Ambient Humidity (RH)	5 ~ 95% (non-condensing)	
Altitude	< 3000 m (9843 ft)	
Mounting Type	Floor Stand with Wall Mount	Wall Mount
Noise	< 47 dB	
Warranty	10 years (Battery : 70% @ 10 years) ⁷⁾	

- 10-years Warranty : Condition of registration with LG ThinQ service and internet connection.

Compliance

LGE ESS Home 8	Home 8	SE Box
Grid Code	IEEE1547, 1547.1, UL1741, UL1741SA, CA Rule21	CA Rule21, IEEE2030.5-2018/Sunspec CSIP
Safety	UL1741, C22.2 No.107.1-16, UL1642, UL1973, UL9540A	UL1741, C22.2 No.107.1-16
Functional Safety	IEC60730-1 Annex H	-
System Safety	UL9540	
Enclosure	NEMA Type 3R	
EMC	FCC Part 15 Subpart B	
Seismic	IEEE 693-2005, High	

SE Box - Accessories

LG Electronics DO NOT provide Eaton products. Installer must provide properly rated breaker per circuit breaker list following. Eaton is a trade name, trademark and/or service mark of Eaton Corporation plc, or its subsidiaries and affiliates.

Main breaker	Eaton CSR or BW series main breaker. CSR2100, 100A Main Breaker, 2-pole, 120/240V, 25kAIC CSR2125N, 125A Main Breaker, 2-pole, 120/240V, 25kAIC CSR2150N, 150A Main Breaker, 2-pole, 120/240V, 25kAIC CSR2175N, 175A Main Breaker, 2-pole, 120/240V, 25kAIC CSR2200N, 200A Main Breaker, 2-pole, 120/240V, 25kAIC BW2100, 100A Main Breaker, 2-Pole, 120/240V, 10kAIC BW2125, 125A Main Breaker, 2-Pole, 120/240V, 10kAIC BW2150, 150A Main Breaker, 2-Pole, 120/240V, 10kAIC BW2175, 175A Main Breaker, 2-Pole, 120/240V, 10kAIC BW2200, 200A Main Breaker, 2-Pole, 120/240V, 10kAIC
Branch circuit breaker	Eaton BR series circuit breaker. BR220B, 20A Circuit Breaker, 2-pole, 120/240V, 10kAIC BR230B, 30A Circuit Breaker, 2-pole, 120/240V, 10kAIC BR240B, 40A Circuit Breaker, 2-pole, 120/240V, 10kAIC BR250B, 50A Circuit Breaker, 2-pole, 120/240V, 10kAIC BR260, 60A Circuit Breaker, 2-pole, 120/240V, 10kAIC BR270, 70A Circuit Breaker, 2-pole, 120/240V, 10kAIC BR280, 80A Circuit Breaker, 2-pole, 120/240V, 10kAIC BR290, 90A Circuit Breaker, 2-pole, 120/240V, 10kAIC BR2100, 100A Circuit Breaker, 2-pole, 120/240V, 10kAIC BR2110, 110A Circuit Breaker, 2-pole, 120/240V, 10kAIC BR2125, 125A Circuit Breaker, 2-pole, 120/240V, 10kAIC
Hold Down kit ¹⁾	Eaton BRHDK125, Hold Down Kit for fixing BR series circuit breaker(if required)
Sub-feed lug block	Eaton BRPSF225, 225A/2pole Main or Sub-feed lug block
Current Transformer	Calro Gavazzi CTD-1X.200.1A.XXX ²⁾

- Compatible with BRHDK125 Hold-Down Kit to comply with 2017 NEC 710.15E for back-fed circuit breakers.
- A current transformer for PV inverter output measurement is included in SE Box package. If the extra current sensors are required on the site, installer MUST order the current transformer from LG Electronics. If other current transformer may be used in the system, LG Electronics DO NOT ensure the energy measurement accuracy and the system stability.

SE Box - Wire Gauges

Grid lug(L1,L2)	Cu/Al : 6 AWG ~ 300 KCMIL
CSR/BW Breaker(L1,L2)	Cu/Al : 6 AWG ~ 300 KCMIL
Backup/Non-backup load lugs(L1,L2)	Cu/Al : 6 AWG ~ 250 KCMIL
Neutral(Large)	Cu/Al : 6 AWG ~ 250 KCMIL
Neutral(Medium) and Ground	Cu/Al : 14 AWG ~ 2/0 AWG

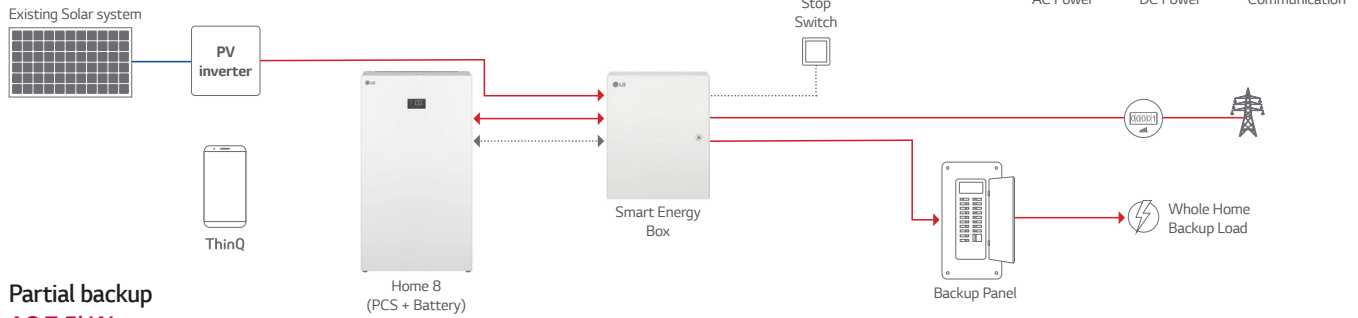
System configuration

The LG Home 8 is provided as an integrated all in one storage system (PCS+Battery) and smart energy box included CT Sensors. Furthermore LG Home 8 can connect 4-unit all in one system all together for up to 57.6kWh of total storage.

The 7.5kW AC-coupled product can be easily added to an existing solar system, offering a reliable and cost-effective way to manage Time-of-Use (TOU) rates provide backup power. Additionally allowing homeowners to seamlessly store excess solar energy to power their home both day and night.

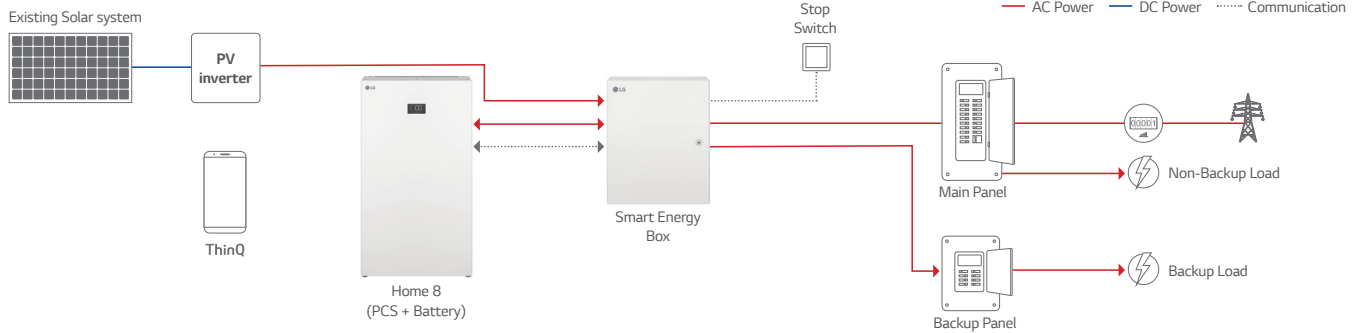
Whole home backup

AC 7.5kW



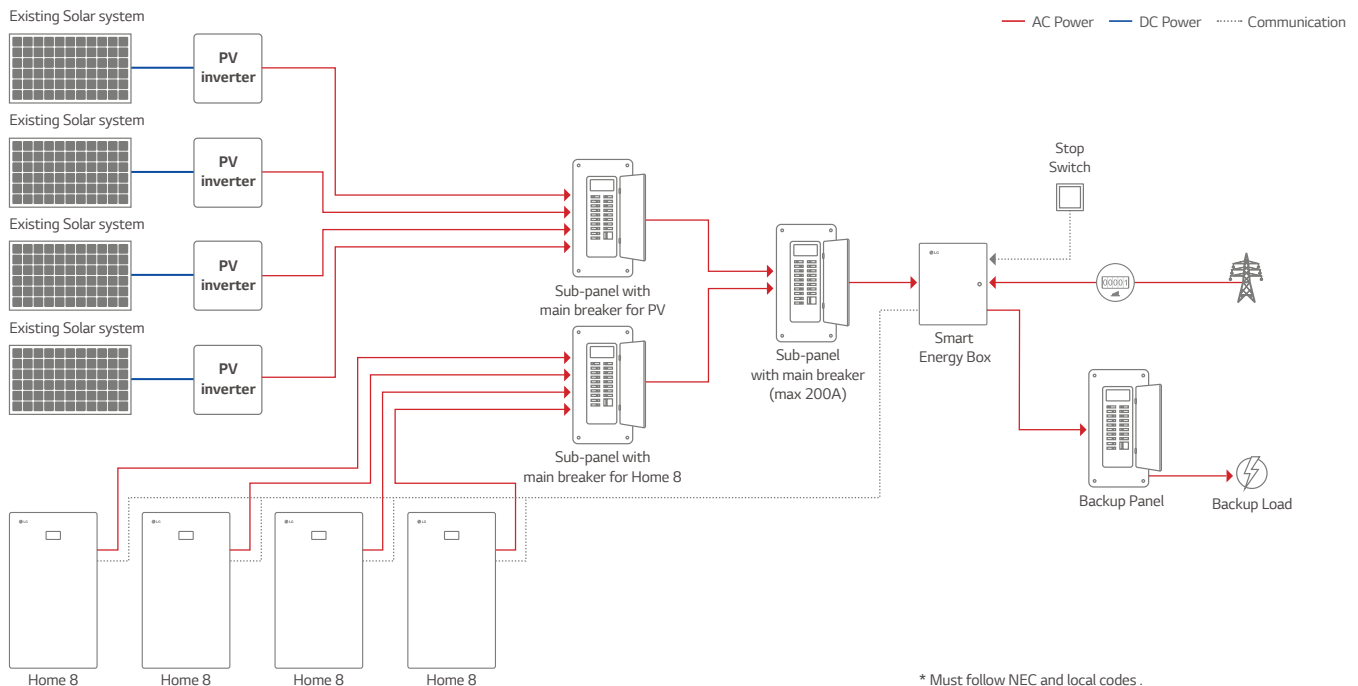
Partial backup

AC 7.5kW



Multiple 4 Home 8 units connection with large-scaled PV inverter

LG Home Energy Storage System can connect 4-AC units for up to 57.6kWh of total storage.



* Must follow NEC and local codes .