

ALPHA-ESS



Inverter



Transformer



Battery Module

Description

This tailor-made Smart Home Battery System consists of three components: **1)** 7.6kW or 9.6kW split-phase inverter with AC or DC options. **2)** External isolation transformer. **3)** 8.2kWh 256V DC high voltage LFP battery module. The system can support 6 modules for a maximum capacity of 49.2 kWh to store energy from the grid or a PV system. Use the stored energy during high demand or sell it back to grid with optimized management through the Emporia cloud platform and energy monitoring devices.

Features

- Superior Lithium Iron Phosphate
- Custom modular storage capacity
- Choose 7.6kW or 9.6kW inverter
- Remotely manage with mobile app
- Backup during grid outages
- Store cheap/renewable energy
- Use energy at high demand
- Sell stored energy to grid
- Saves money/conserves energy
- Reduces carbon

Specification Highlights

Integration Options	AC or DC coupled
Backup Config	Critical Loads or Whole Home
Battery Type	Lithium Ion (LiFePO ₄)
Inverter Power	7.6kW / 9.6kW
Energy Capacity	8.2kWh each (Up to 6 modules for 49.2kWh)
Usable Capacity	7.8kWh each (Up to 6 modules for 46.8kWh)
Inverter Efficiency	97.6%
Battery Cycle Life	≥ 10,000
Nominal Voltage	256 V
Max Current	38.4A (1.2)
Operating Temp	14 to 122° F (-10 to 50° C)
Humidity	15–85 %
Monitoring	WiFi
IP Protection	IP65 (Outdoor)
Certification	UL9540, UL1973, UL1741

ALPHA-ESS Inverter/Transformer



Inverter



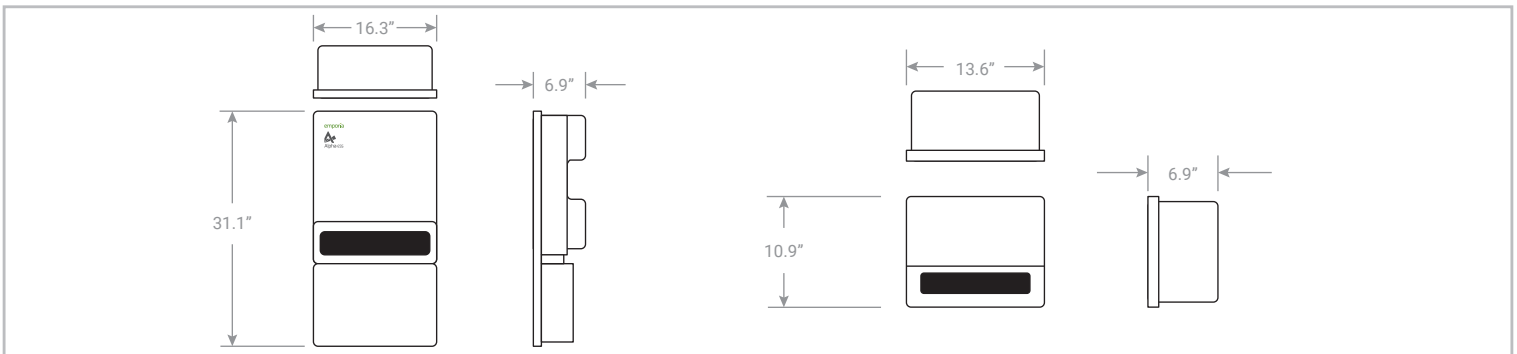
Transformer

Description

Emporia offers two different inverter powers: 7.6kW and 9.6kW. The inverter is installed separate to the battery systems.

Inverter Specifications

Backup Config	Critical Loads or Whole Home
AC Output Power	7600W (7.6) 9600W (9.6)
AC Max Overload	9120W (7.6) 11520 VA (9.6)
AC Max Current	38A / 40A
AC Output Voltage	120V or 240V
Rated Frequency	60 Hz
Max Efficiency	97.6%
PV Max Input Power	11400W (7.6) 15000W (9.6) -- <i>DC Coupled Only</i>
PV Max Input Volt	600V -- <i>DC Coupled Only</i>
PV MPPT Trackers	4 -- <i>DC Coupled Only</i>
Battery Input Volt	80-495V
Mounting	Wall Bracket
Operating Temp	-31–140° F (-35–60° C)
Inverter Size	16.3 x 31.1 x 6.9" (415 x 791 x 175 mm)
Inverter Weight	70.5 lbs (32 kg)
Transformer Size	13.6 x 10.9 x 6.9" (345 x 277 x 174 mm)
Transformer Weight	48.5 lbs (22 kg)



ALPHA-ESS Battery Module



Description

8.2 kWh battery module with BMS and intelligent EMS cloud monitoring package. Add up to 6 modules in parallel for additional capacity.

Battery Module Specifications

Battery Type	Lithium Ion (LiFePO ₄)
Nominal Voltage	256V
Energy Capacity	8.2kWh each (Add up to 6 for 49.2 kWh)
Usable Capacity	7.8kWh each (Add up to 6 for 46.8 kWh)
DoD	95%
Internal Resistance	≤ 240 mΩ
Cycle Life	≥ 10,000
Max Current	38.4A (1.2)
Charging Temp	33.8–122° F (1–50° C)
Discharging Temp	-4–122° F (-20–50° C)
Humidity	15–85%
Size	22.8 x 31.5 x 9.0" (580 x 800 x 230 mm)
Monitoring	Voltage, Current, Temperature
Weight	187.4 lbs (85 kg)

