

capitol industrial batteries  

Household  
Energy Storage  
Systems

HESS 





# Household Energy Storage System (HESS)

Torch HESS is designed as an integrated micro-grid supported by either long cycle life, low cost Lead Carbon batteries or long cycle life lithium batteries and PV array accessing. The system can run under both islanded and grid-tied modes with unmatched quality, safety and performance. Equipped with a flexible and efficient management system, Torch HESS can be adjusted automatically according to the state of the public grid, PV, required loads, batteries and electricity price, to provide maximum benefit for the end user.

## Product Features

- Supports up to 6 Torch HESS parallel connections.
- The operating priorities can be set automatically eg. PV, battery and public grid.
- Several operating modes can be set, including grid-tied, off-grid and grid-tied back-up.
- Modern practical design for premium quality, superior reliability, convenient installation and maintenance.



## System Parameters

### Lead Carbon

Rated Output Power	4000 W
<b>PV INPUT</b>	
Maximum PV Array Power	5000W
Nominal (Max) DC Voltage	360V(580VDC)
<b>BATTERY (Lead Carbon)</b>	
Battery Capacity (100%DOD)	9.6kWh
Maximum Charging Current	30A
Nominal DC Voltage	48VOC
<b>AC OUTPUT</b>	
AC Output Voltage	220VAC
Power Factor	>0.99
<b>AC INPUT</b>	
Acceptable Input Voltage Range	170-280VAC
Maximum AC Input Current	40A
Frequency Range	50/60HZ
<b>GENERAL</b>	
Net Weight	350kg
Dimension H x W x D	667 mm*620 mm*550mm (battery holder)
Ingress Protection Rating	IP20 (Indoor)
Operating Temperature	0~40°C
Storage Temperature and Humidity Range	Temperature: -15 ~40°C Humidity: 0~90%RH

### Lithium

Rated Output Power	4000W
<b>PV INPUT</b>	
Maximum PV Array Power	5000 W
Nominal (Max) DC Voltage	360V(580VDC)
<b>BATTERY (Lithium Iron Phosphate)</b>	
Battery Capacity (100%E>OD)	4.8kWh
Maximum Charging Current	80A
Nominal DC Voltage	48VDC
<b>AC OUTPUT</b>	
AC Output Voltage	220VAC
Power Factor	>0.99
<b>AC INPUT</b>	
Acceptable Input Voltage Range	170-280VAC
Maximum AC Input Current	40A
Frequency Range	50/60Hz
<b>GENERAL</b>	
Net Weight	75kg
Dimension H x W x D	1259m m*460mm*212mm
Ingress Protection Rating	IP32 (Indoor)
Operating Temperature	0~40°C
Storage Temperature and Humidity Range	Temperature: -15-40°C Humidity: 0~90%RH

*Passion for Storage and Green Energy*

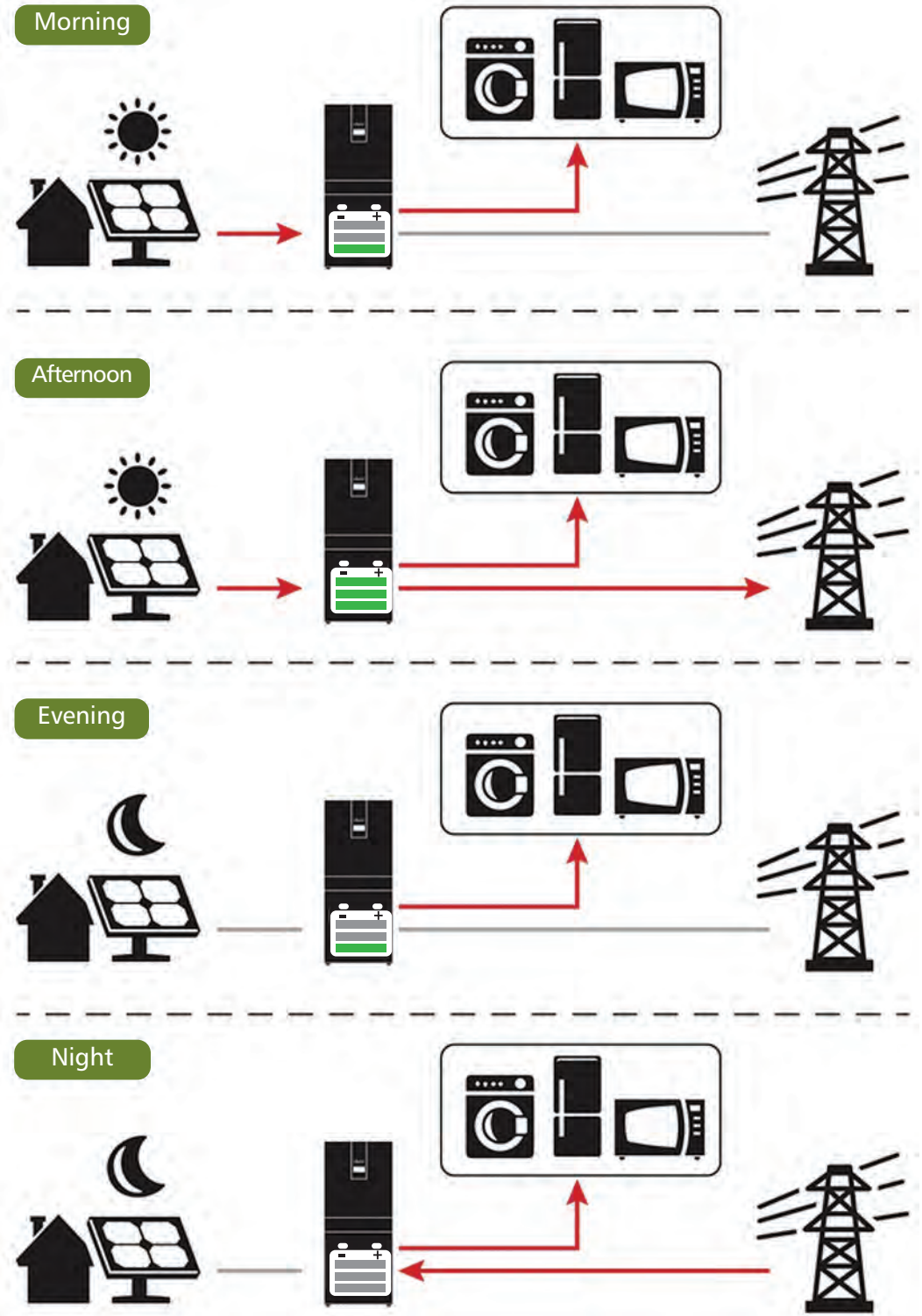


## Example of Intelligent Operation Mode (Flexible adjustment)

Torch HESS has been developed with an exclusive and modern all in one design which allows homeowners to install solar energy systems with affordable payback time.

Adopting the integrated design ideas of micro-grid, Torch HESS can run under both off-grid and grid-connected modes and switches seamlessly, which improves the reliability of power supply significantly.

With our flexible and efficient management system, the operational parameters can be adjusted automatically according to power grid, load, energy storage and electricity price so that the integration of the Torch HESS into an energy system can considerably increase the benefits to which a household can make use of self-generated electricity from PV.



Morning	Power from PV is preferred for own consumption and the remainder is for recharging the battery. In peak price, the battery supplies power to the load.
Afternoon	When the battery is fully charged and the load is small, the remaining power generated by PV is sent to the public grid.
Evening	After sunset, the system switches automatically and the battery supplies power to the load.
Night	When the battery can't meet the load, the public grid supplies power to the load in the regional price and the battery is then recharged by the public grid.



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