

LS-AC-xxx-yyykWh-220VAC-zzzkW

Compact AC-Solar Home System with LFP-Battery



- **Integrated Solar PWM Charge controller with single cell monitoring and controlling (LiFePO4 only) and LCD Display**
- **PWM Controller for LiFePO4**
- **Integrated BMS with Cell-Balancing and Battery protection for LiFePO4**
- **AC Load output 220V/50Hz: 300/700W**
- **DC Load output 10A**
- **Option:**
 - **Pay as you Go (with Keypad)**
- **Surge Arrestor AC output**
- **Surge Arrestor Panel Input**
- **Plug & Play**
 - **2 AC sockets**
 - **MC4 terminals for panel connection**
- **Grounding Accessories (option on request)**
 - **Ground Rod**
 - **Ground wire**
- **RCD Earth Leakage protection with Air-Breaker function**



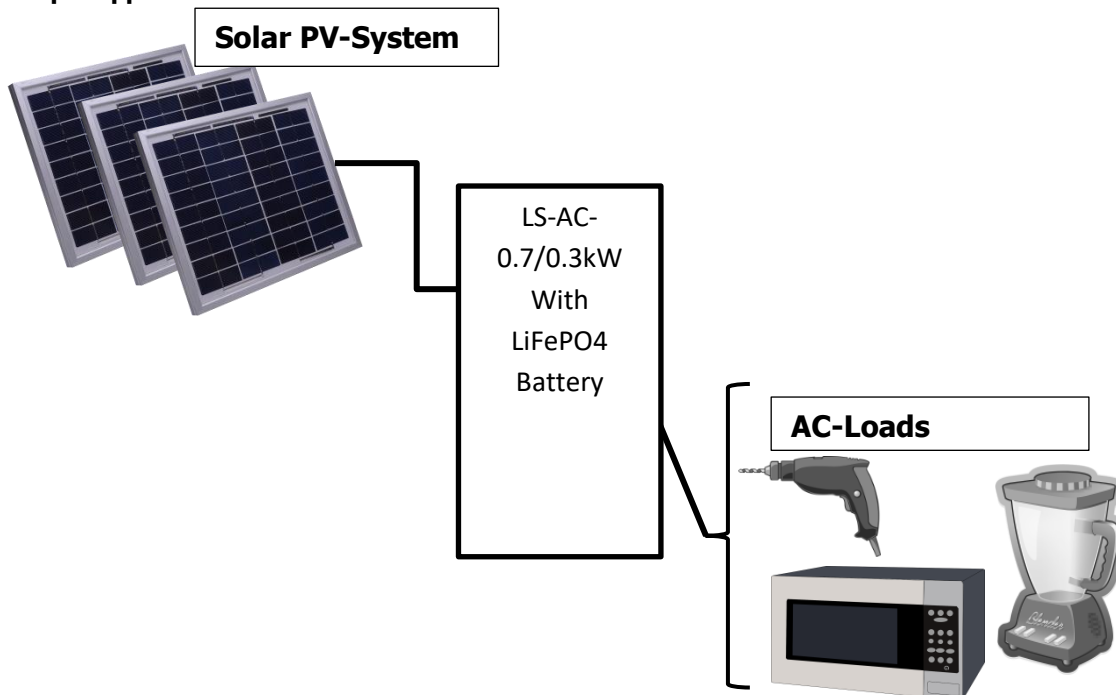
(Box will be adjusted according requirements)

Compact AC Solar Home System with integrated Charge- and Battery-Control/Monitoring Systems for LiFePO4-Battery therefore ideal for solar applications.

The integrated PWM Charge controller and AC inverter with Zimpertec unique single cell monitoring and control for optimizing the battery operation can ensure the best System performance.

The ready to use system makes the product useful for many applications, which can significantly reduce the service, maintenance and installation cost.

Example Application:



Technical Data:

Battery:

	LS-AC-12.8V-0.64kWh-220VAC/50Hz/0.3kW	LS-AC-25.6V-1.28kWh-220VAC/50Hz/0.7kW
Battery type:	LiFePO4 Prismatic cells	LiFePO4 Prismatic cells
Nominal Voltage:	12.8V	25.6V
Battery capacity	50Ah	50Ah
Battery Storage	640Wh	1280Wh
charging limit rating:	<14.6V (<3.65V/cell)	<29.2V (<3.65V/cell)
discharging limit rating:	>10V (>2V/cell)	>20V (>2V/cell)
Max. Battery charge and discharge Current: <i>(suitable for Inverter nominal rating)</i>	30A	40A
Battery Peak Discharge Current: <i>(suitable for Inverter peak rating)</i>	50A	70A
Battery Fuse:	50A	50A
Cycle Life at 25°C and 1C: 100% DOD @ 1C 80% DOD @ 0.5C	>3000 >4500	>3000 >4500
Self-Discharge:	<3%/month at 25°C	<3%/month at 25°C
Temperature Ratings:	Charging: 0...45°C Discharge: -20...+60°C	Charging: 0...45°C Discharge: -20...+60°C
Warranty against manufacturing and material failure	3 years	3 years

Inverter:

Rated Power	300W	700W
Surge Power	600W	1400W
Waveform	Pure sine wave (THD<3%)	Pure sine wave (THD<3%)
AC output Voltage	220VAC±5%/50Hz	220VAC±5%/50Hz
Inverter Efficiency peak	>86%	>86%
Power ratings for Inverter @ 0..40°C @ 60°C	100% 50%	100% 50%
Protections:	Battery overvoltage, Undervoltage/ overtemperature, overload	Battery overvoltage, Undervoltage/ overtemperature, overload
AC output:	L/N-double circuit breaker 10A with earth leakage protection 100mA (on request) ¹⁾ Double AC Socket (confirm requested type regarding application country) Ground screw M6 (at outside surface of enclosure)	L/N-double circuit breaker 10A with earth leakage protection 100mA (on request) ¹⁾ Double AC Socket (confirm requested type regarding application country) Ground screw M6 (at outside surface of enclosure)
Warranty against manufacturing and material failure:	2 years	2 years

Regulator ZIMPERTEC: Type: LI-CC-AC

a) Solar PWM Charge Charger with integrated BMS

PV Open Circuit Voltage	Voc Max. 25 VDC	Voc Max. 45 VDC
PV Power	Max. 500Wp (36 cell panels) Vmpp ca.18V	Max. 1000Wp (2*36 or 1*72cell panels in series) Vmpp ca.36V
PV Charge Current	Max 30A	Max 30A
Panel Terminals:	2 MC4 terminal sets	2 MC4 terminal sets
Display:	LCD display	LCD display
PAYG	Option: Keypad for PAYG application	Option: Keypad for PAYG application
End of Charge Voltage:	3.55V/cell (14.2V for Battery Pack) Single cell controlling	3.55V/cell (28.4V for Battery Pack) Single cell controlling
BMS	Single cell monitoring with cell balancing and temperature control	Single cell monitoring with cell balancing and temperature control

Datasheet: LS-AC-XX.XV-Y.YYKWH-0.3-0.7KW-220VAC-50HZ-2021-03-16-V1.65 Subject to change without notice

b) DC Load output ZIMPERTEC:

Voltage:	Battery voltage range: 11V to 14.2V	Battery voltage range: 22V to 28.4V
Low Battery disconnect:	2.75V/cell (11V for Battery Pack) Ca. 4% SOC	2.75V/cell (22V for Battery Pack) Ca. 4% SOC
Nominal Load Current1/2:	Load2:30A (suitable for nominal Inverter power) Load1: 10A	Load2:40A (suitable for nominal Inverter power) Load1: 10A
Electronic Fuse: (overcurrent shut off, with self-reconnect after delay time)	Load2: ca. 35A Load1: ca. 10.5A	Load2: ca. 45A Load1: ca. 10.5A
Protection:	Short Circuit, Overload, Inductive Load protection	Short Circuit, Overload, Inductive Load protection
Connection:	Wire to Inverter 10mm ²	Wire to Inverter 10mm ²
Load1 connection:	1*SAE terminal	1*SAE terminal
Warranty against manufacturing and material failure:	3 years	3 years

Case ZIMPERTEC:

Box type:	Steel box with Door and wire outlet (powder coated)
Protection	IP40

Environment:

Humidity	5% to 95% non-condensing
Operating Temperature	0 to 45°C (50°C with charging limitations and AC power limit)
Storage Temperature	-15 to 60°C

Safety Equipment:

Surge Arrestor AC output	Din Rail type: Nominal Discharge Current $\geq 5kA$
Earth Leakage protection with Air-Breaker function	220V/10A, Fault current detection 100mA (other options available)
Solar Panel input: Surge Arrestor DC	Din Rail type: Nominal Discharge Current $\geq 5kA$
Solar Panel input: DC Air- Breaker	DC circuit breaker 65A ¹⁾

Grounding (option only):

Ground pin	1.5m, round, zinc plated steel, with wire connection lug
Grounding Wire connection	7m, 16mm ² , ring lug both ends for connection to System and Ground Pin

Inverter Compliance: EN55022 Class A; EN61000-3-2, 3; EN60950-1: 2006+A11:2009; E8*72/245/EEC, 95/54/EC