

Energy Comfort Kit Solar

RoHS CE

Side: Small Solar Home System and Portable Power supply User Manual

Solar Side is a highly integrated 12V DC Solar Power storage device with plug and play functionality, advanced user interface and built in charger, containing all battery protection features for maintaining longest life time of the high quality LiFePO4 Battery. Easy to use Plug and Play connections.

Please read all the instructions completely and carefully before installation!

About this manual, liability exclusion:

This manual is content of the product and describes in detail the use of the product. The supplier will not take over any liability for damage caused by use other than the intended use or as mentioned in this manual. The supplier shall not be liable for any damage or accident caused by improper installation or any service/ repair carried out by non-authorized or non-trained persons.

Safety: Be aware of the high amount of Energy of the battery! Any short circuit and mechanical damage of the battery or the product may cause overheating or sparks. Do not use the product or the integrated battery if there is any mechanical damage. Disconnect the battery from Electronic and keep the battery away from any fire and sparks. Never open the battery or short-circuit the battery terminals as there is risk of overheating, sparks and fire!

The product and its accessories may only be used according to their specification. Solar Panel and load accessories may only be applied according to the systems specification with the voltage limit as defined. Follow the national regulations for safety and accident prevention. Do not use the product and its accessories in presence of solvents or inflammable gases and vapors. Do not operate the produce if any functional disorder occurs or any wire or component or its electrical insulation is visibly damaged. If this occurs remove the product immediately from its electrical power source. If any mechanical structure is damaged make sure the product is repaired immediately or removed to avoid any accident.

Function:

Solar Side has integrated Lithium Battery (LiFePO4 technology). The integrated Charge controller takes care for optimized charging of the battery and all the required protection features for long life time of battery. All connections are designed for Plug and Play operation. Several Solar Side products can be charged by connecting to one Solar Panel. Do not connect Load outputs of several Solar Side Systems to each other. This can damage the product.

ATTENTION: The controller is turned off for best possible energy saving during shipment and storage. For activation of the product please connect to its solar panel, if there is charging current the System will start automatically. Please notice, also if the Battery is empty and not recharged in time, the Controller will turn off for energy saving propose. In this case the Display will show no symbols. Please restart the system by connecting Solar Panel for recharging the battery.

Connection:

Do the connection according the assembly instruction. Connect loads, solar panels and USB devices according the specification and the manual.

	Solar Side 4	Solar Side 7
Nominal Voltage:	12.8V	
Battery type:	LiFePO4	
Battery capacity:	4000mAh/51Wh	7000mAh/89Wh
Charging current:	1.5A (max. 20W) - Solar Panel: Max 25Voc, no power limit, several LS can be connected to one panel for charging	
Load current:	5A	
Working temperature:	-20 ... +50°C	
USB outlet:	5V/1.5A	
Size:	158x85x65mm	224x85x65mm
Weight:	680g	1030g
Protection:	IP63: Battery + Electronic / IP22: Connectors	
Display:	LCD + LED	
Connector types:	Panel: 1 Barrel (5.5/2.5mm) - Load: 3 Barrel (4.75/1.7mm) - USB: USB-A	

Solar Side user manual and assembly instruction

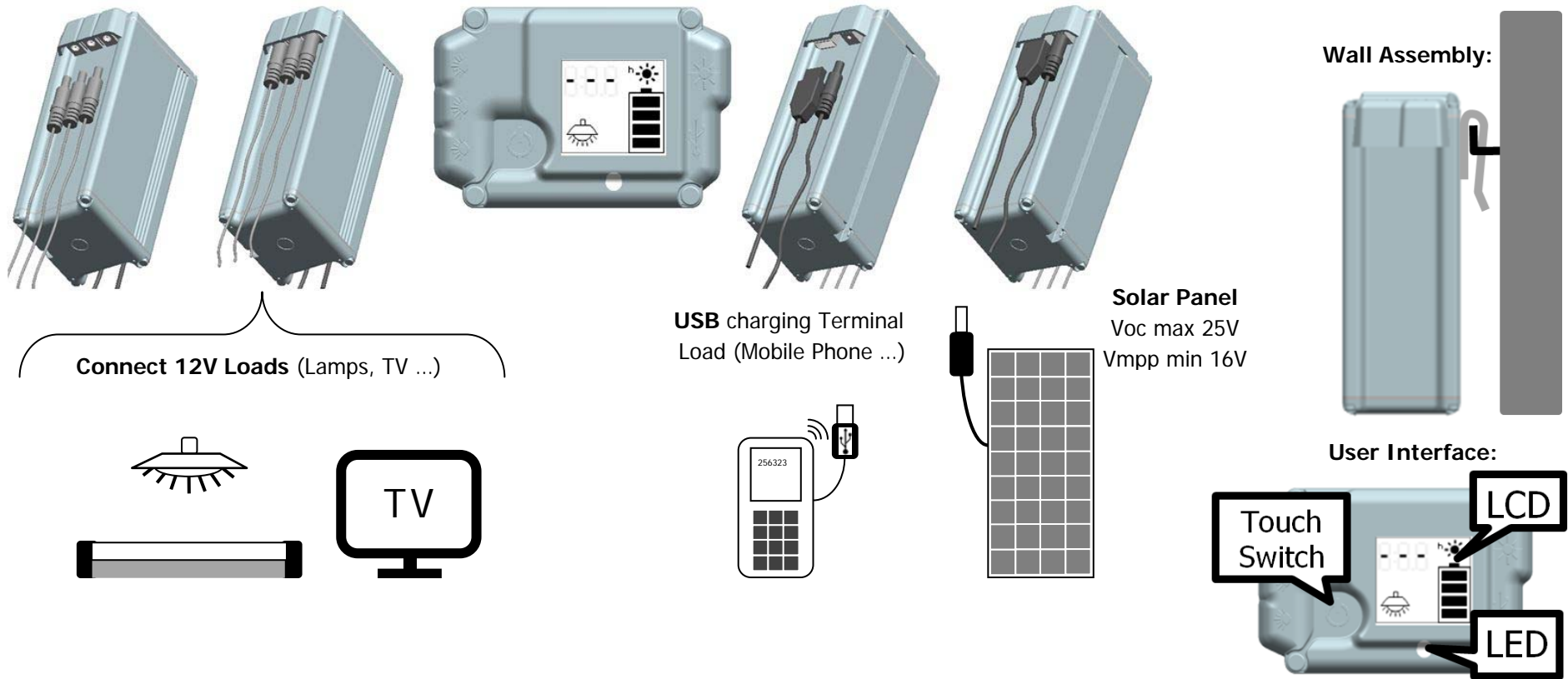
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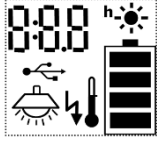
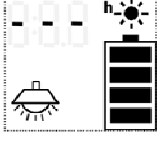
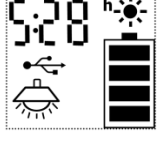





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




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Connecting Solar Side:



User Interface:

LCD:	Status:	LED:	Description:
			All Symbols
			Normal operation: <ul style="list-style-type: none"> Sun symbol flashing → Solar Panel is charging the battery --- h → no load connected No USB load connected
			Normal operation with load connected: <ul style="list-style-type: none"> Sun symbol flashing → Solar Panel is charging the battery 5:28 h → the load can be operated for approximately additional 5:28 hours USB load connected
	Flash		Solar Panel charging
	ON		Solar Panel charging, Battery fully charged
	OFF		No panel, no charging
	ON		Load output ON
	OFF		Load output turn OFF Battery empty
			Load connected, remaining load operation time 5hours 28min
			No load connected
		ON	Load overcurrent → Load output turn off Auto-Reconnect after one minute Battery voltage too high → System failure

LCD:	Status:	LED:	Description:
		ON	Over temperature → Load output turn off
	ON		<ul style="list-style-type: none"> No charging, battery temperature out of range (>65 or <-20) Electronic over temperature protection
	Flash		Battery temperature in low charging current range (reduced charging current)
	ON		USB load connected
	OFF		No USB load connected, output turn off
			Battery State of Charge: >75%; >50%; >25%; >0%; 0%
	Flash	Flash	Battery low State of charge
Backlight			Turn on Backlight by pushing "ON"  button
		ON Flash	Load output turn off, battery low state of charge, can operate small loads for some time after push ON button 