

- Long Life LiFePO4 Battery 3000cycles
- Plug & Play
- 12.8V System Voltage
- PWM charger with temperature protection and control
- Clear and easy to read LED display for System Status
  - Battery SOC by 4 LEDs
  - Charging LED
  - 3 Load status leds
- Manual load on/off button
- System Pre-Installed
  - Integrated battery
  - Integrated Charge controller
  - Integrated Battery Management System
  - Integrated Cell Balancing
  - Battery temperature control
  - Integrated battery emergency protection board for mechanical cut off in failure case
  - Prewired
  - 5 + 1 DC connectors for load connection
- Data logging
- USB 5V output
- Optional streetlight control function with timer and dimming
- Optional Prepayment function



Box and component arrangement might modify

The ALL IN ONE integrated System with its long life Lithium Iron Phosphate battery can provide excellent and long term energy service to the user. The single battery cell monitoring and control technology, implemented into the Zimpertec Solar Charge Controllers, ensure fast and save charging for best possible battery life time.

Built in terminals for solar panel and load output will provide easy system installation. Together with Zimpertec's Plug & Play wiring and Indoor LED lamps users can do the installation without technical skills.

For protecting the battery investment an independent Battery protection board will disconnect the battery by fuse if there is any serious failure condition.

Technical Data:	Litio-SHS-10Ah	Litio-SHS-20Ah	Litio-SHS-40Ah
<b>Battery:</b>			
Type:	LiFePO4		
Capacity:	10Ah	20Ah	40Ah
Nominal Voltage:	12.8V (4 cells in Series, 3.2V each)		
Life time:	>2500 cycles (100%DOD)		>3000 cycles (100%DOD)

<b>Battery protection:</b>	
Emergency cut off	Battery disconnect at critical conditions which can reduce battery life or destroy battery: <ul style="list-style-type: none"> <li>• if too high battery voltage</li> <li>• if too low battery voltage</li> </ul> (can only be reset by service staff, not by user)

<b>Charge Controller</b>	
Charge Control Type:	PWM serial control with reverse current protection by Mos-Fet
Charge Current:	10A with Battery temperature control system      20A with Battery temperature control system
Control Algorithm:	Optimized for LiFePO4 batteries with single cell charge control
Load Control Type:	Mos-FET with additional reverse Mos-Fet for wrong battery polarity protection and Free Wheeling Diode
Load Current:	10A      20A
Protection	Over load, over temperature, reverse polarity, surge protection by Varistor
Others:	Manual load on/off button
Display	<ul style="list-style-type: none"> <li>• SOC (4 LEDs, yellow)</li> <li>• Charging (green)</li> <li>• Load on (yellow)</li> <li>• Load off (red)</li> <li>• Failure (red)</li> </ul> with Prepayment options only : Paid days LCD, warning LED (red)
Battery Management System:	cell balancing, cell monitoring, Battery temperature monitoring

<b>Installation box:</b>	
Box Dimensions	(LxWxH) 359x248x153mm (front door type)
Charge controller	Front Panel type
Load Switch	Manual Load Switch
Load Terminal	1. Barrel socket 5pcs (4.7/1.7mm) 2. Cigarette lighter socket 3. terminal for additional load connection with two wire glands
Battery terminal	Connect by plug to Charge Controller (battery built into the assembly box)
Panel terminal	Panel wire plug
USB charging output	2 USB terminals, 5V, 1.5A

<b>Street light control option:</b>	
Timer	5 timer interval with independent Dimming
Dimming	0...10V output for dimming control
Motion Sensor	Input for Motion control with adjustable dimming and delay timer function

<b>Option:</b>	<b>Pay as You Go/ Rent to Own/ Prepayment</b>
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Status: Preliminary