



Solar Battery PoE Power Charge Controller



Specifications

Input

Input Source types		Solar Panel
		PoE
		Battery
Input Voltage	Solar Panel	18V ~ 36V max. (≤ 180W)
	PoE	18V ~ 57V (35W~50W min)
	Battery	12V Lead Acid Battery (> 26Ah)

Note : recommend the input voltage higher than 24V would be better.

Output

Output Voltage & Current

Model	SBP-1212-02N	SBP-1218-02R	SBP-1224-02R	SBP-1248-02R	SBP-1256-02R
Output 1 (at rear term.)	12V/1.5A (as bat. volt.)	12V/1.5A (as bat. volt.)	12V/1.5A (as bat. volt.)	12V/1.5A (as bat. volt.)	12V/1.5A (as bat. volt.)
Output 2 (at RJ45 upper)	12V/1.5A (as bat. volt.)	18V/1A (regulated)	24V/0.75A (regulated)	48V/0.35A (regulated)	56V/0.32A (regulated)

Battery & PoE

Battery Charge Types	Solar Panel	Charge current depends on the wattage of the solar panel.
	PoE	Fixed current, 2.6A max.
Battery Types	12V Lead Acid Battery	
PoE Input Requirement	35W ~ 50W min.	



Protection

Battery Protection	Cut off the load when battery volt is lower than $11V \pm 0.3V$, and auto reconnect to the load when battery volt return to $12V \pm 0.3V$.
Other Protections	Battery polarity reversal protection
	Battery over discharge protection
	Battery over charge protection
	Solar panel polarity reversal protection
	Solar panel over charge protection
	Output short circuit protection
	PoE output short circuit protection
Battery output current limited: Fuse	

Indicators

Symbol	Means	Description
POE	PoE power input indicator	The LED lights on when P2 PoE connector lower jack with 18V ~ 57V input.
SOL	Solar power input indicator	The LED lights on when SOL connector is connected to solar panel with input voltage over 12V.
CHA	Charging indicator	The LED lights on when battery is connected on BAT connector and charging.
LOA	Loading indicator	The LED lights on when the P3 output connector on rear panel is connecting to a device and offers power, the nominal output voltage is 13V ~ 15V.
REV	Battery reverse indicator	The LED lights on when the battery polarity is reversed.

Recommended Operating Conditions

Operation Temperature	-25~ +45 °C
Storage Temperature	-40 ~ +85 °C
Operation Humidity	5% ~ 90%
Cooling	Free air cooling

RJ-45 Connector and Pin-Out

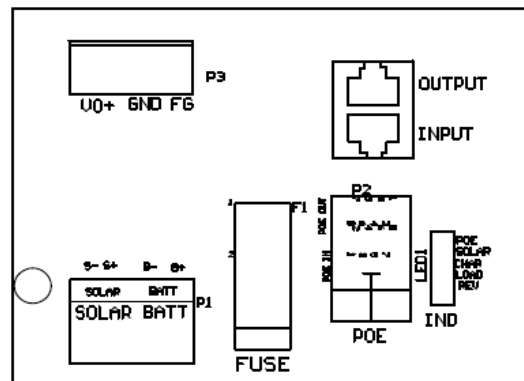
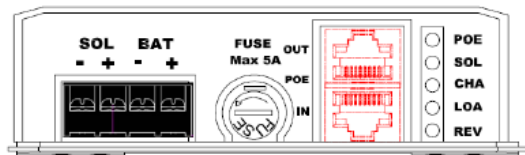
RJ-45 Input (Data & Power)		RJ-45 Output (Data & Power)		
Pin	Symbol	Description	Symbol	Description
1	Rx+	Data Receive	Rx+	Data Receive



2	Rx-	Data Receive	Rx-	Data Receive
3	Tx+	Data Transmit	Tx+	Data Transmit
4	-Vdc_return(+)	Feeding power(+)	-Vdc_return(+)	Feeding power(+)
5	-Vdc_return(+)	Feeding power(+)	-Vdc_return(+)	Feeding power(+)
6	Tx-	Data Transmit	Tx-	Data Transmit
7	-V dc	Feeding power(-)	-V dc	Feeding power(-)
8	-V dc	Feeding power(-)	-V dc	Feeding power(-)

Mechanical & Dimension

Plastic Case Material	PC
Plastic Case Finish	Texture
Plastic Case Color	Black
Plastic Case Dimension	159 x 118 x 40 (L x W x H) mm



Option for DIN Rail mounted

Package

Number of unit in one Carton	20
Weight and Volume without Power cord	T.B.D.
White Box Dimension	270 x 160 x 45 (L x W x H) mm

Installation Notice

Items	Description
1	Connect the battery to the P1 BAT terminal. Make sure the polarities are correctly connected. Sequentially connect the solar panel to SOL terminal and connect PoE source to P2 RJ45 lower jack. (If solar panel or PoE source is installed before the battery, and if the polarity of battery is reversed, then the fuse will be burnt.)
2	Make sure the output voltage of the solar panel was regulated, otherwise will due to the output voltage on the P3 terminal of the prototype over 18V when the model without



battery be connected. (mass production will be revised to be “cut off the output when the voltage on P3 terminal over 18V).

System Integrated and Application

