



## *Revision History*

Revision	Author	Description
Rev 1.0	Michael	New release

# 1. Specifications

## 1.1 Input

<b>Input Source types</b>		Solar Panel
		PoE
		Battery
<b>Input Voltage</b>	Solar Panel	18V ~ 36V max.
	PoE	18V ~ 57V

Table 1-1

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

## 1.2 Output

### 1.2.1 Output Voltage & Current

Model	BC-5012-12	BC-5012-18	BC-5012-24	BC-5012-48	BC-5012-56
<b>Output 1 (at rear term.)</b>	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.)
<b>Output 2 (at RJ45 upper)</b>	12V/1.0A (as bat. volt.)	18V/1A (regulated)	24V/0.75A (regulated)	48V/0.35A (regulated)	56V/0.32A (regulated)

Table 1-2

### 1.2.2 Battery & PoE

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

Table 1-3

## 1.3 Protection

<b>Battery Protection</b>	Cut off the load when battery volt is lower than 11V±0.3V, and auto reconnect to the load when battery volt return to 12V±0.3V.
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<b>Other Protections</b>	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

Table 1-2

## 1.4 Indicators

Symbol	Means	Description
<b>POE</b>	PoE power input indicator	The LED lights on when P2 PoE connector lower jack with 18V ~ 57V input.
<b>SOL</b>	Solar power input indicator	The LED lights on when <b>SOL</b> connector is connected to solar panel with input voltage over 12V.
<b>CHA</b>	Charging indicator	The LED lights on when battery is connected on <b>BAT</b> connector and charging.
<b>LOA</b>	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.
<b>REV</b>	Battery reverse indicator	The LED lights on when the battery polarity is reversed.

Table 1-5

## 1.5 Recommended Operating Conditions

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

Table 1-3

## 2. RJ-45 Connector and Pin-Out

Pin	RJ-45 Input (Data & Power)		RJ-45 Output (Data & Power)	
	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(-)

Table 2-1

## 3. 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

Table 3-1

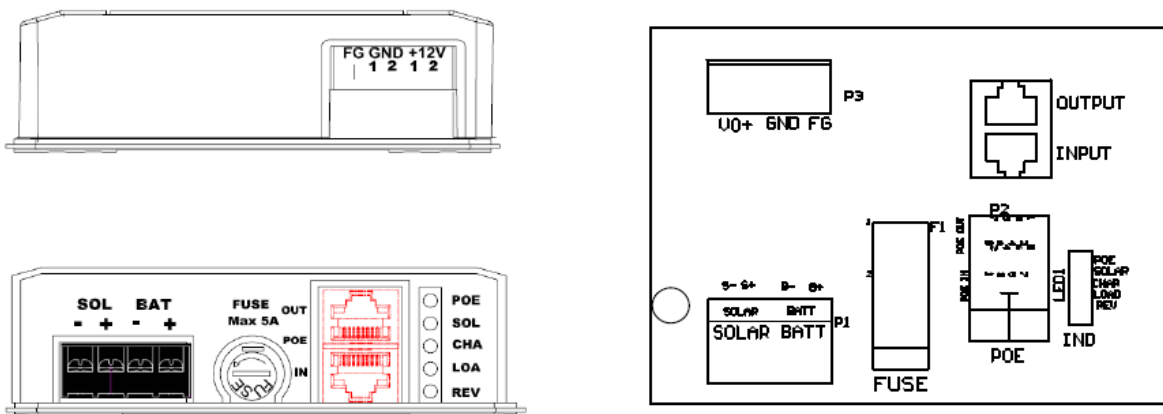


Figure 3-1 Option for DIN Rail mounted

## 4. 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

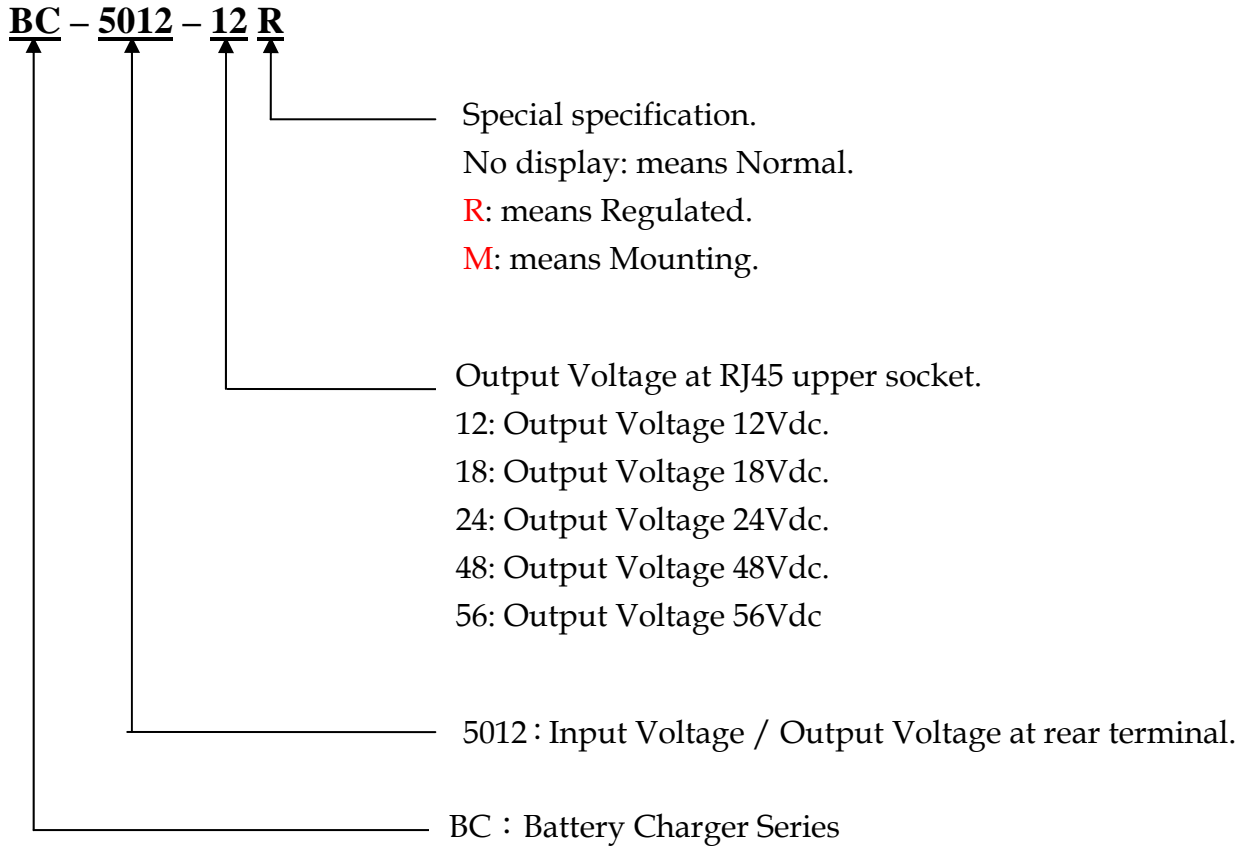
Table 4-1

## 5. Installation Notice

Items	Description
1	Connect the battery to the P1 <b>BAT</b> terminal. Make sure the polarities are correctly connected. Sequentially connect the solar panel to <b>SOL</b> 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).

Table 5-1

## 6. Ordering Information



### Available Part Number

Part number	Description
BC-5012-12	RJ45 upper socket output / rear terminal output 12V, no regulated.