

Battery Indicator With Hour Meter

Please read and understand following notice carefully, and correctly install and operate the product before using.

1 Notice



WARNING

1. Please use the product accordance with the user manual strictly.
2. Please do not try to disassemble the main unit and its accessories.
3. This product with waterproof design can be used in the rain, but can not be used underwater.



DO NOT DISASSEMBLE

4. When placed in a larger temperature difference, please pay attention to the panel with fog, condensation and water.

5. Fierce vibration and strong impact may make the product failure.

6. Error will be happened when measuring, please notice that the error is not the same when compared to the same model products.

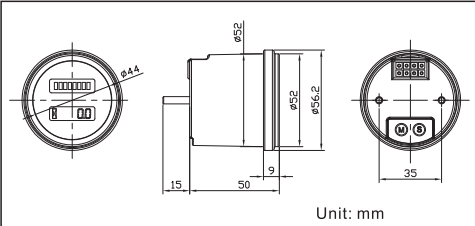
7. The product need professional installation, otherwise easy to get an electric shock.



WATERPROOF

2 Parts list of the product 3 Product dimension

- Product x 1
- User manual x 1
- 8-pin connector plug springx8
- 8-pin connector x 1
- M4 Nuts x 2
- Mounting brackets x 1

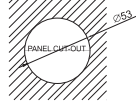


Unit: mm

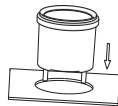
4 Installation

1. How to install.

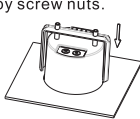
Notice: The mounting plate is required matching installation groove and holes, if don't have, please install the groove and drill corresponding holes in the mounting plate.



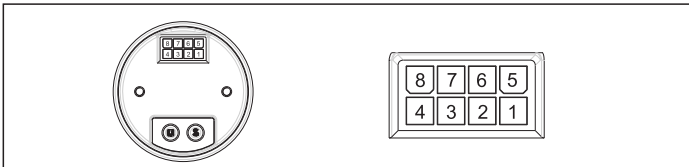
- 1 Insert the meter into the mounting plate like below pictures.



- 2 Mounting brackets pass through the screws and the top side against the mounting plate, and secured by screw nuts.



2. Product contactor definition.



3. Docking contactor according definition with the device port one by one.

1	Timing control terminal. Effective when connected to battery negative pole
2	Key switch. Effective when connected to battery positive pole
3/4	Relay output terminal. Large current 5A
5	Power input negative terminal. Connect to battery negative pole
6	Timing control terminal. Effective when connected to battery positive pole
7	Positive pole of battery input. (12-36V)
8	Positive pole of battery input. (24-48V)

4. Verify the accuracy of the product installation.

Turn on the key switch and time switch, LED displays the current bar, LCD hourglass icon blinks or displays the current battery voltage, it indicates that the installation is correct.

5 Button operation explanation

Button	Short press	Long press
M button	Check the sub menu interface; increase value when settings.	Enter into setting; fast increase when setting.
S button	Switch main interface or return to main interface; decrease value when settings.	Fast decrease when setting.

※At setting mode, press the **M** + **S** button 2S to save and exit the settings.

6 Interface operation

Product has two main interfaces: Timing interface, battery interface.

Short press **S** button to switch these two main interfaces. Button operation like below.

Timing main interface



Switching

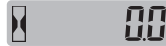
Battery main interface



1. Timing function: Total running hours and partial time.

- 1 Total running hours: The defaulted interface is total running hours. When open the key switch and time switch, Timing interface hourglass icon blinks.
 - a) Total running time is counting up. Maximum timing value is 999999H.
 - b) Timing display mode: When time is 0.0-99999.9H, timing resolution is 0.1H; when time is 100000-999999H, timing resolution is 1H.

Timing main interface



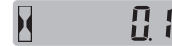
Note: Total time can not be reset. Only when total hours more than 999,999, it will start from 0 again.

Short press
M once



Blink
alternately

View partial time interface



a) Partial time display range and accuracy is the same with total running hours.

Long press
M 2s

Clear partial time



2. Working mode: Normal mode and user setting mode.

1 Battery normal mode operation

Battery main interface

000 v

Short press
M once

View current battery mode

nor

Long press
M 2s

Set battery mode

nor

USER

Battery normal mode Battery user setting mode

a) Press any button to switch the battery mode.

Short press
M once

View battery type

LY-01

Long press
M 2s

Set battery type

LY-01

a) Setting range: 1-19. Default: 1.

2 Battery user setting mode operation

Battery user setting mode

USER

Short press
M twice

View battery empty value

E-1.70 v

Long press
M 2s

Set battery empty value

E-1.70 v

a) Setting range: 1.40-2.20V. Default: 1.73V.

Short press
M once

View battery full value

F-2.03 v

Long press
M 2s

Set battery full value

F-2.03 v

a) Setting range: 1.70-2.30V. Default: 2.04V.

Short press
M once

View charging voltage value

C-2.38 v

Long press
M 2s

Set charging voltage value

C-2.38 v

a) Setting range: 1.80-2.50V. Default: 2.30V.

Short press
M once

View battery quantity

bt-06

Long press
M 2s

Set battery quantity

bt-06

a) Setting range: 5-26. Default: 6.

Notes: The battery quantity refers to 1 pcs single battery, eg, the quantity of 12V battery packs is 6 pcs.

7 Correlation chart between each bar and color definition

Bars	10th bar	9th bar	8th bar	7th bar	6th bar	5th bar	4th bar	3th bar	2th bar	1th bar
Definition light's	Green	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Red
10th bar	Always lit	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit
9th bar	Not lit	Always lit	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit
8th bar	Not lit	Not lit	Always lit	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit
7th bar	Not lit	Not lit	Not lit	Always lit	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit
6th bar	Not lit	Not lit	Not lit	Not lit	Always lit	Not lit	Not lit	Not lit	Not lit	Not lit
5th bar	Not lit	Not lit	Not lit	Not lit	Not lit	Always lit	Not lit	Not lit	Not lit	Not lit
4th bar	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit	Always lit	Not lit	Not lit	Not lit
3th bar	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit	Always lit	Not lit	Not lit
2th bar	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit	Flash	Not lit
1th bar	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit	Not lit	Flash	Flash

8 Different battery type parameter table

※The charging voltage value is the value of first bar.

Type	Battery empty value	Battery full value	Charging voltage value	Type	Battery empty value	Battery full value	Charging voltage value
1	1.73	2.04	2.08	11	1.84	2.11	2.16
2	1.85	2.02	2.06	12	1.86	2.03	2.07
3	1.75	1.97	2.01	13	1.89	2.10	2.15
4	1.90	2.03	2.07	14	1.91	2.08	2.12
5	1.98	2.08	2.12	15	1.93	2.12	2.16
6	1.63	1.97	2.02	16	1.70	2.02	2.06
7	1.57	1.90	1.95	17	1.65	2.00	2.04
8	1.68	1.95	1.99	18	1.92	2.15	2.19
9	1.78	2.06	2.10	19	1.83	2.06	2.10
10	1.82	2.08	2.12				

9 Specification

Operating voltage	DC 12-48V	Waterproof level	IP65
Timing range	999999H	Display model	28.5x9.4mm LCD+ three color LED
Timing accuracy	0.1H		
Voltage accuracy	±0.5%	Display Windows size(Visible)	25.5x7.4mm
Charging delay time	200S		
Delay time of every bar	155S	Product weight	108g
Housing material	ABS+Aluminum	Dimension	Φ56x65mm

10 Trouble shooting

Problems	Possible reasons	Solutions
No LED and LCD display	1.Power supply connection is wrong. 2.Power lines are damaged.	1.Check whether the power cable wiring connected according to the instruction. 2.Repair or replace the power lines.
Hourglass icon is not flashing after timing function opened.	1.Wrongly connected with timing terminal. 2.Wire damaged.	1.Check whether connected according to the instruction. 2.Repair or replace the wire.
Voltage(12V,24V, 36V,48V) No change on voltage bar	1.Parameters of battery set wrongly. 2.Delay time not reached.	1.Set battery parameters in accordance with the requirements. 2.Wait for 200S to view.
Unclear display on LCD or color changed	1.Wrong installation angle of the product. 2.Direct sunlight for a long time.	1.Adjust the installation angle. 2.Put the hour meter in the shade.