

Battery/Hour Meter

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

1 Notice



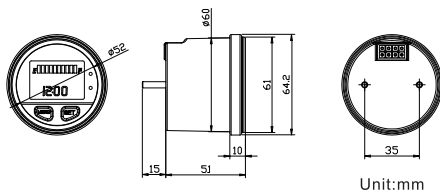
1. Please use the product accordance with the user manual strictly.
2. Please do not try to disassemble the main unit and its accessories.
3. This product with waterproof design can be used in the rain, but can not be used underwater.
4. When the temperature difference is large, please note panel interior might be fog, dew or in water.
5. Fierce vibration and strong impact may make the product failure.
6. Little error will be happened when measuring, within the normal range.
7. The product need professional installation, otherwise easily get an electric shock.



2 Product accessories list

- Product x 1
- User manual x 1
- 8 core joint x 1
- 8 core plug reed x 8
- M4 nut x 2
- BI012 mounting bracket x 1

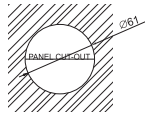
3 Product dimension



4 Product installation

1. How to install the product

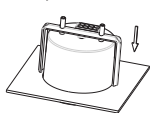
Notice: Mounting plate should have the related fixing holes. If no, please make the fixing holes on the mounting plate.



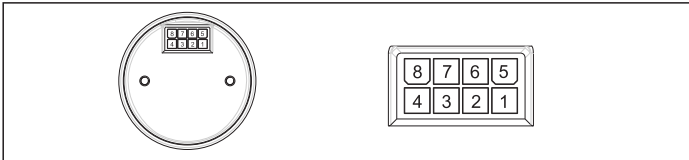
1 Install the meter into the mounting plate.



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



2. Product port definition



3. Connect the device port according to the port definition.

1	Timing control terminal. Connected to battery negative pole
2	Key switch. Connected to battery positive pole
3/4	Relay output terminal.
5	Power input negative terminal. Connect to battery negative pole
6	Timing control terminal. Connected to battery positive pole
7	Positive pole of battery
8	Voltage range control terminal. Voltage is 12/36V when connected to nothing, voltage is 24/48V when connected to negative power supply.

4. Verify the accuracy of the product installation.

Open the key switch and timer switch, LCD displays the current segment in LED interface, hourglass blinks or shows the current battery voltage in LCD interface. It means the installation is correct.

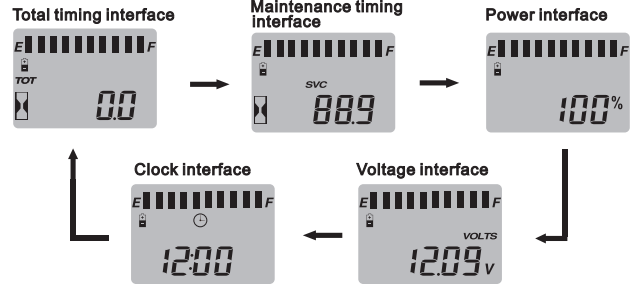
5 Button operation explanation

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

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

6 Interface switching

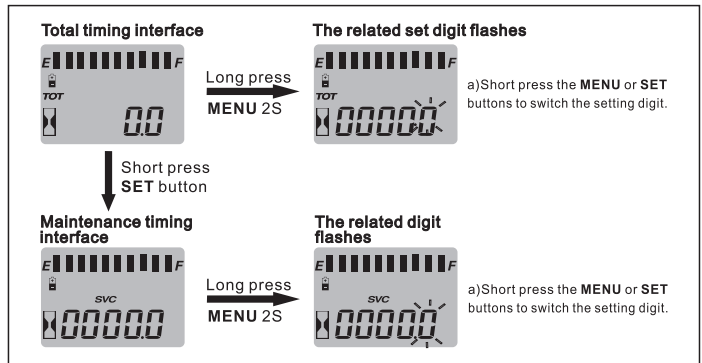
Short press the SET button to switch the five main interfaces, operation illustration please see as below:



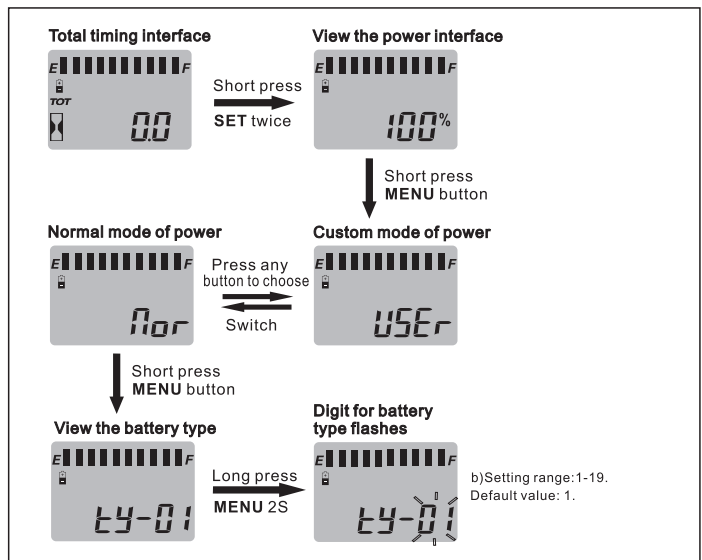
7 Product operation

1. View and set in the total timing interface and maintenance timing interface.

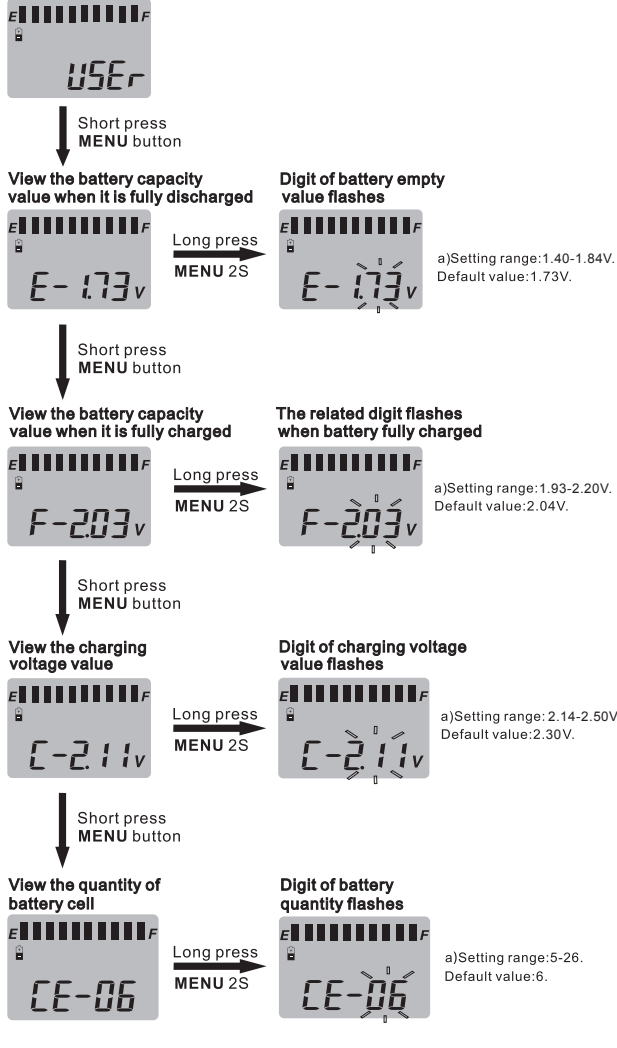
※Open the key switch and timer switch, hourglass will blink in timing interface.



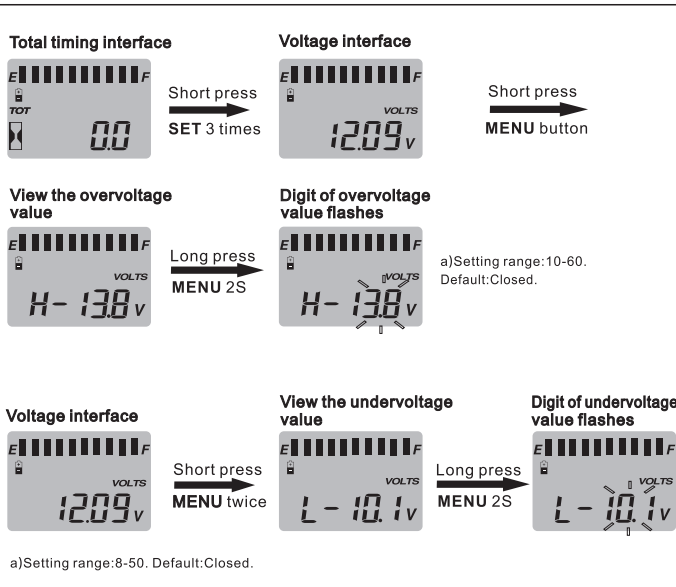
2. Battery function: View the remaining battery power, battery mode is optional for normal mode or custom mode.



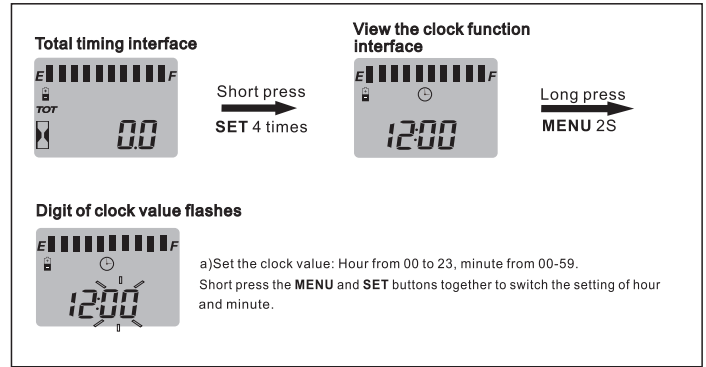
Custom mode of power



3. Voltage function: Set the overvoltage value and undervoltage value.



4. Clock function: View and set the time



8 Parameter list for different battery types

Notice: Charging value is the first bar value.

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

Working voltage	DC 12-48V	Charging delay time	200S
Total hours	99999H	Delay time of every bar	155S
Partial hours	9999.9H		
Housing material	ABS+Aluminum	Display mode	37x31mmLCD
Timing accuracy	Timing accuracy is 0.1H when hour range is 0.0-9999.9H; Timing accuracy is 1H when hour range is 10000-99999H; timing accuracy $\pm 0.01\%$.	Display windows size(Visible)	35x24.6mmLCD
		Product weight	135g
Voltage accuracy	$\pm 0.5\%$	Dimension	$\Phi 64.5 \times 66 \text{mm}$
Waterproof level	IP65		

10 Trouble shooting

Problems	Possible reasons	Solution
No display on LCD	1.Power wire is connected incorrectly. 2.Power wire is damaged. 3.Key switch is damaged.	1.Check the power wire if it is connected according to the user manual. 2.Repair or change the power wire. 3.Repair or change the key switch.
Hourglass does not flash when open the timing function	1.Timing port connection is incorrect. 2.Wire is damaged.	1.Check if connected according to the user manual. 2.Repair or change the wire.
No change on voltage value or voltage bar	1.Wire connection is incorrect. 2.Delay time is not reached.	1.Check if connected according to the user manual. 2.Wait for 200S, then view again.
Unclear display on LCD or color changed	1.Wrong angle of the product. 2.Long direct sunlight.	1.Adjust the installation angle. 2.Put the hour meter in the shade.