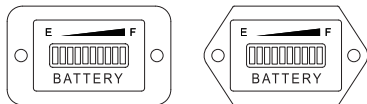


# OPERATING INSTRUCTIONS

## Battery “Fuel” Gauge

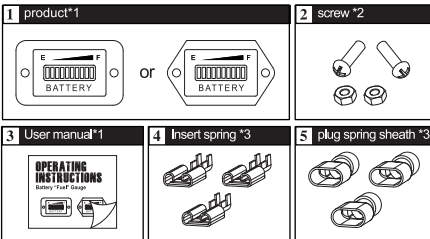


**Please read and understand the following notices carefully, and correctly install and operate the product before using.**



1. Please make sure to refer to the installation instructions in the Operating Instructions to avoid damage caused by installation errors
2. Failure to install and operate the unit in accordance with these instructions may result in damage or injury.
3. Please install the product in a proper location to avoid the possibility of this product being hit and prevent damage to the product.
4. Installation and startup must performed by skilled personnel.
5. If instrument failure or malfunction may cause personal injury or material damage, use additional safety measures such as limit switches, guards, etc.
6. This instrument was manufactured and tested according to the applicable technical standards. It complies with all the safety regulations as shipped from the factory.
7. Please use the product at the specified temperature, high temperature environment may cause damage to the product.
8. The display indicator of this product has two versions: single display (regular model) and full display (SR model). Please select the appropriate version according to your actual needs.

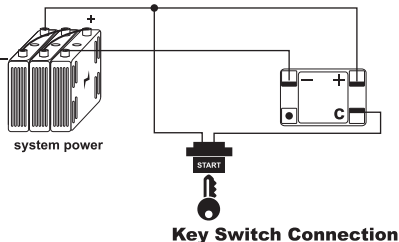
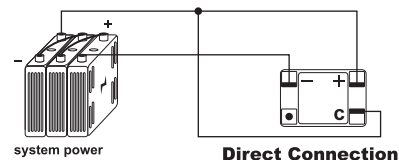
## Product Accessories List



## Product Operation

### 1. Product connection

- a) Please make sure the battery voltage matches the voltage of the battery fuel gauge before using , too high voltage will cause damage to the product.
- b) The battery fuel gauge has 2 kinds connection methods, please check the diagram as follows (key switch, no key switch)



- c) The gauge LED bar will scan from “E” to “F” when connected to power, and then will stay in the right bar (It means that the battery fuel gauge is connected correctly)

### 2. Product Operation

- a) The battery fuel gauge is displayed in 10 bars, and respectively represent the different battery capacity in the battery.

When the battery power is different, the indicator shows a different status. When the battery power is in a certain gear position, the corresponding LED light of the single display (regular model) lights up, and the other LED lights are off. The color of the LED light will vary according to the battery power condition.  
The full display (SR model) will light up the LED lights from the 1st LED gear to the corresponding LED gear, and the indicator color will be red.

### Single display (regular model):

LED BAR	Display Status	Battery Capacity
BAR 1	red	Battery voltage has been discharged to 90% of their capacity
BAR 2	yellow	Battery voltage has been discharged to 80% of their capacity
BAR 3	yellow	Battery voltage has been discharged to 70% of their capacity
BAR 4	green	Battery voltage has been discharged to 60% of their capacity
BAR 5	green	Battery voltage has been discharged to 50% of their capacity
BAR 6	green	Battery voltage has been discharged to 40% of their capacity
BAR 7	green	Battery voltage has been discharged to 30% of their capacity
BAR 8	green	Battery voltage has been discharged to 20% of their capacity
BAR 9	green	Battery voltage has been discharged to 10% of their capacity
BAR 10	green	Battery capacity is full

### Full display (SR model):

LED BAR	Display Status	Battery Capacity
BAR 1	red	Battery voltage has been discharged to 90% of their capacity
BAR 1-2	red	Battery voltage has been discharged to 80% of their capacity
BAR 1-3	red	Battery voltage has been discharged to 70% of their capacity
BAR 1-4	red	Battery voltage has been discharged to 60% of their capacity
BAR 1-5	red	Battery voltage has been discharged to 50% of their capacity
BAR 1-6	red	Battery voltage has been discharged to 40% of their capacity
BAR 1-7	red	Battery voltage has been discharged to 30% of their capacity
BAR 1-8	red	Battery voltage has been discharged to 20% of their capacity
BAR 1-9	red	Battery voltage has been discharged to 10% of their capacity
BAR 1-10	red	Battery capacity is full

**Voltage percentage correspondence table**

Voltage	1	2	3	4	5	6	7	8	9	10
12V	10,38	10,59	10,8	11,01	11,22	11,43	11,64	11,85	12,3	12,3*
24V	20,76	21,18	21,6	22,02	22,44	22,86	23,28	23,7	24,6	24,6*
36V	31,14	31,77	32,4	33,03	33,66	34,29	34,92	35,55	36,9	36,9*
48V	41,52	42,36	43,2	44,04	44,88	45,72	46,56	47,4	49,2	49,2*
72V	62,28	63,54	64,8	66,06	67,32	68,58	69,84	71,1	73,8	73,8*

## Troubleshooting Tips

### 1、 Battery Fuel Gauge scans from full to empty then shuts off.

✎ This occurs if your "C" terminal is not connected, make sure your "C" terminal is either connected to the battery "+" or key switch.

### 2. Battery Fuel Gauge shows one red ,yellow, and green LED

✎ This means you have improper voltage to the meter. Make sure you connect the wires going to the battery to the first and last positive and negative battery terminals in the series and not just one battery. Please reference the wiring diagram.

### 3. The battery has been emptied, but the battery fuel gauge is displayed in a powered state (for example, at fifth BAR).

✎ It is possible that this meter does not match your battery type. You can measure the voltage of the battery in the voltage scale and compare it with the voltage of the first bar. If the voltage of your battery is higher than that of the first bar (even more than that of the fifth bar), which means mismatch. Please contact the local dealer for replacement.

### 4. The battery is full, but the battery fuel gauge does not display full range.

✎ It is possible that this meter does not match your battery type. You can separately measure the voltage of your battery fully charged, and compare it with the voltage of the 10th bar in the voltage scale. If the voltage of your battery is much lower than that of the 10th bar, which means mismatch. Please contact the local dealer for replacement.

5. During the charging process, the battery fuel gauge indicates that the bar position is rising, but the full bar can not be displayed at all times. In fact, the battery is fully charged.

✎ There are three situations in which this situation occurs. A Your battery has been virtual (voltage is high) B The battery fuel gauge does not match your battery C The charger voltage is too low.

**a) Virtual power determination:** after using the battery for a period of time, but make sure that the battery is in a powered state, measure the current voltage of your battery separately and compare it with the voltage value indicated by battery fuel gauge (voltage scale), if the difference between the current indicating bar voltage or the adjacent bar voltage is small, your battery may be damaged. Please contact the professional battery agency for battery test confirmation.

**b) Mismatched determination:** if the battery is determined not to be damaged, please separately measure the voltage of your battery under full power and compare it with the voltage value of the 10th bar in the voltage scale. If the voltage of your battery is lower than that of the 10th bar, which means mismatch. Please contact the local dealer for replacement.

**c) Charger voltage problem:** some chargers have low charging voltage, which is lower than the full charge voltage of battery fuel gauge. Therefore, the meter will not display full range. Remove the charger and the meter, reconnect the meter to the battery (or turn it off with a key switch, then turn it on), and the battery fuel gauge will display full range.

## Product Specifications&Parameters

Item	Parameter&Introduction
Capacity (Regular model)	1 Red 2 Yellow 7 Green color LED for indicator
Capacity (SR model)	10 Red LED for indicator
System Voltage	12V,24,36V,48V,72V ( Depending on model )
Operating Voltage	+/- 25% of nominal voltage
Operating Current	≤100mA nominal
Operation Temperature	-10℃ to +50℃
Storage Temperature	-40℃ to +70℃
Product Size	53x32x24mm
Applicable Battery	Lead-acid Battery ( Depending on model )

## Product Dimension

