



## GWL ISDT-BG-8S ISDT Smart Battery Checker Instruction Manual

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### GWL ISDT-BG-8S ISDT Smart Battery Checker Instruction Manual



#### **WARNING**

We strongly recommend you read our user's guide before using BG-8S.

We accept no liability for damage, injury or any legal responsibility incurred directly or indirectly from the use of this product.

## Contents

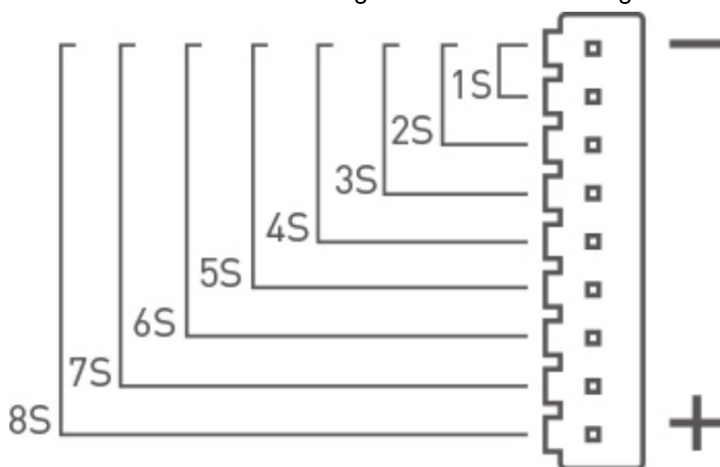
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## Specifications

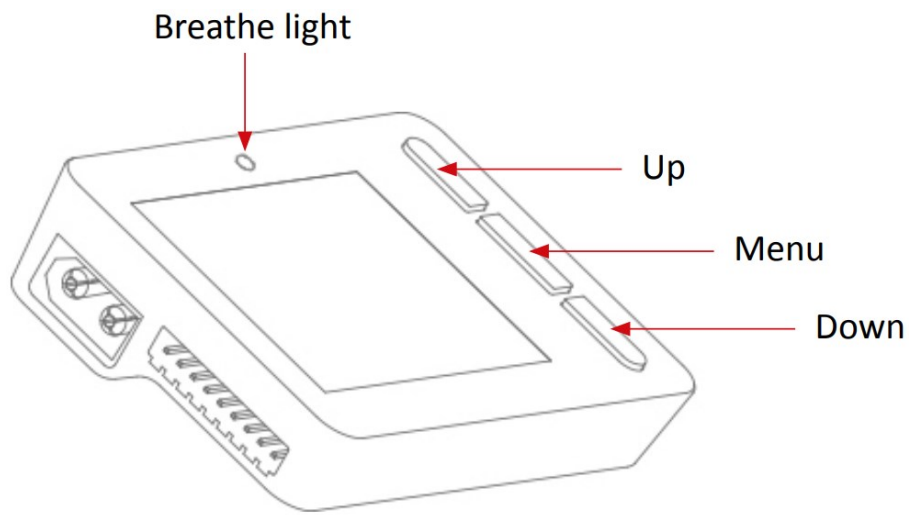
- **Working voltage:** 5.0 V 36 V
- **Input voltage:** 1s 0.8 V 15 V
- **Input voltage:** 2-8S 0.8 V 4.8 V
- **Battery cells:** 1 8s
- **Voltage measurement accuracy:**  $\pm 0.005$  V @ 4.2 V
- **Balancing cells accuracy:**  $< 0.005$  V
- **Support USB charging:** QC3.0, BC1.2, Maximum output 12V/2A
- **Support smart battery:** Charging and discharging setting, read battery info and usage history.
- **Dimension:** 80 x 55 x 19 mm
- **Weight:** 59 g

## Port diagram

This product is suitable for the lithium battery which has the XH 2.54 balance port. Connect the balance port align from BAT- as showed in the figure. When connecting 1S battery, input Voltage from XT60i must be more than 5 V.



## Function button



**Menu button:**

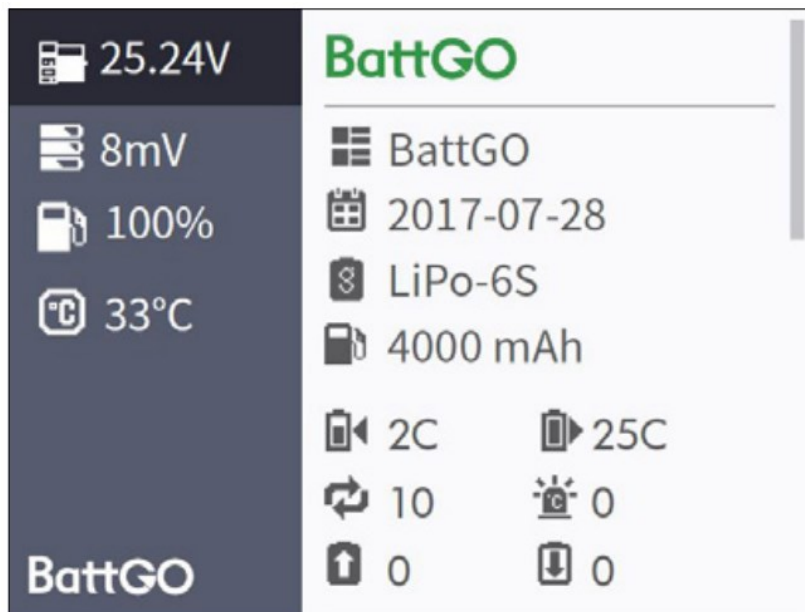
Short Press to enter setting menu

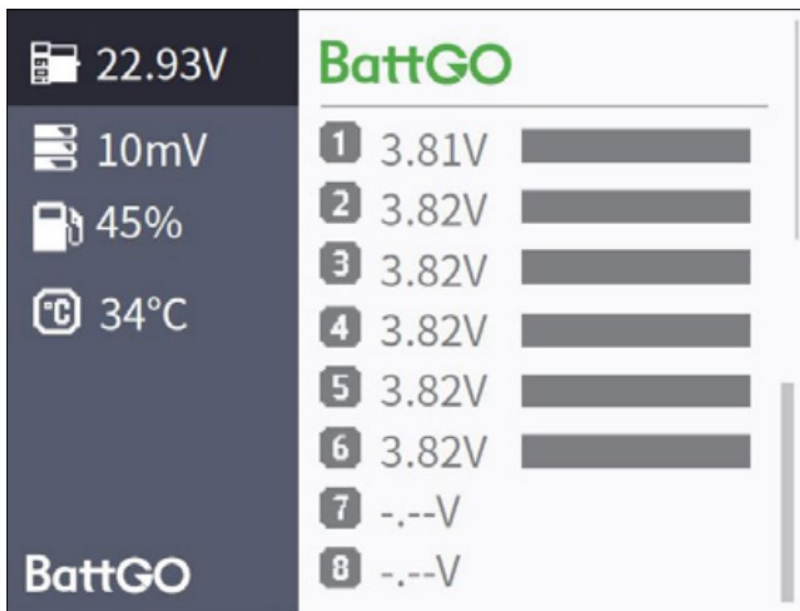
Long Press to enter smart battery menu

**Up/Down Button:**

Go up or down, choose different setting option.

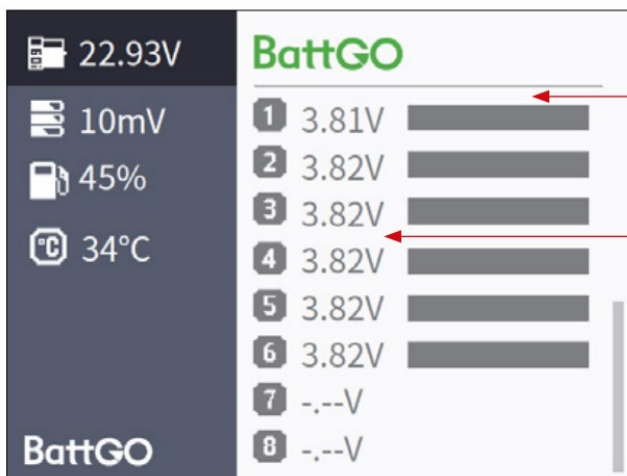
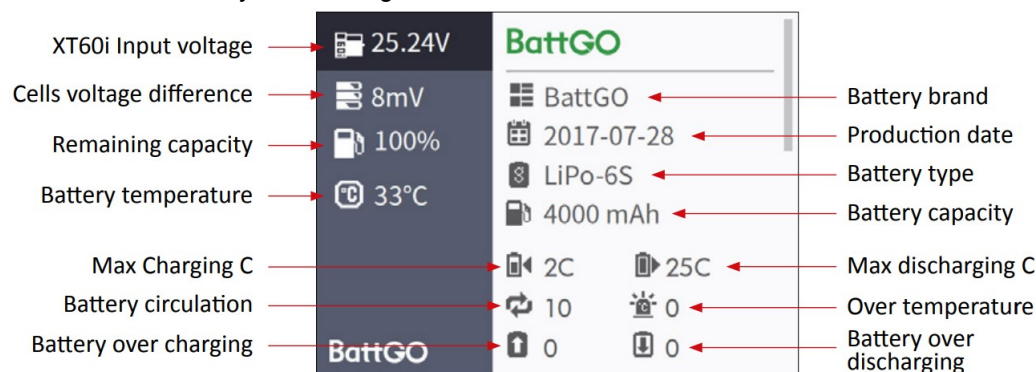
**Measurement display**





### WHEN XT60i CONNECTING TO SMART BATTERY

In this mode, BG-8S can read smart battery info. After plug in XT60i, default display is 01, press down button go to 02 to read battery cells voltage.



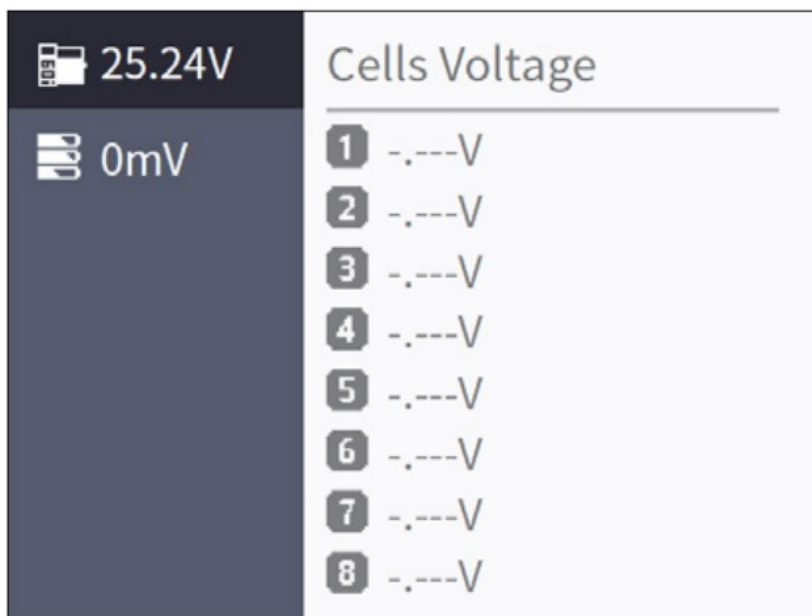
The histogram shows the voltage differences

Cells voltage

### WHEN XT60i CONNECTING TO NORMAL BATTERY

When XT60i connecting to normal battery, BG-8S would only show total voltage, balance port need to be connected to check each cell voltage.

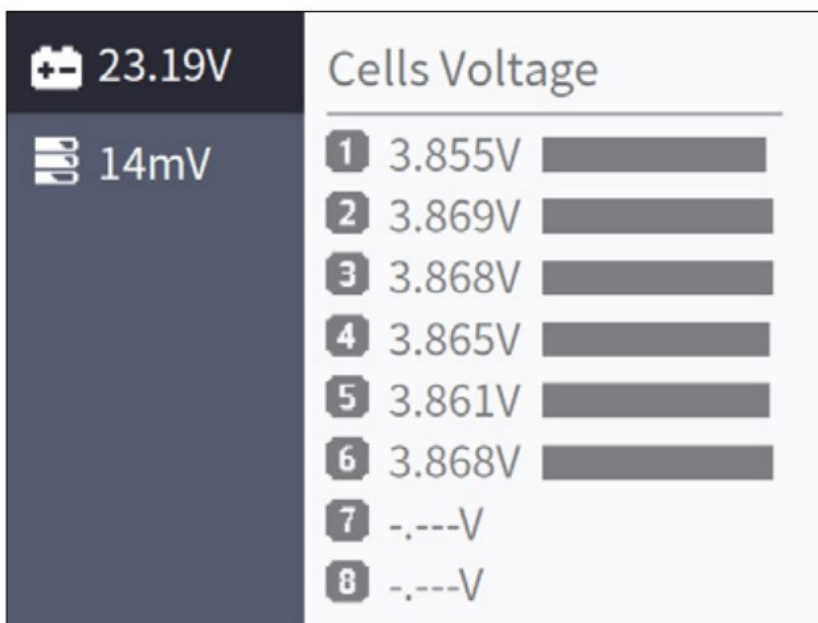
**PS:** If only XT60i was connected, short press menu button twice to start USB charging.



#### WHEN BATTERY CONNECTING TO BALANCE PORT

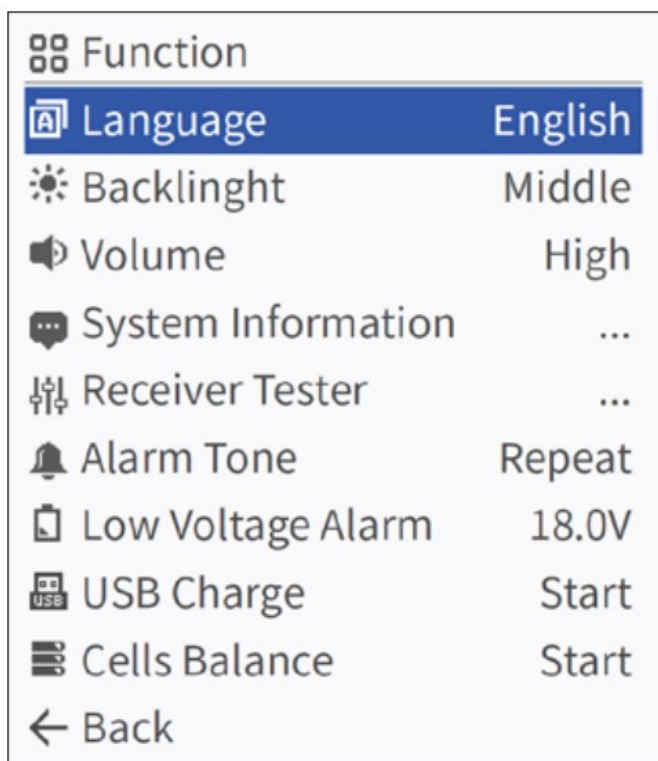
When a battery is connected to the balance port, BG-8S will show total battery voltage, max voltage difference between each cell and each cell voltage.

**PS:** When only a balance port is connected, short press menu twice, the battery can initiate cell balancing task.



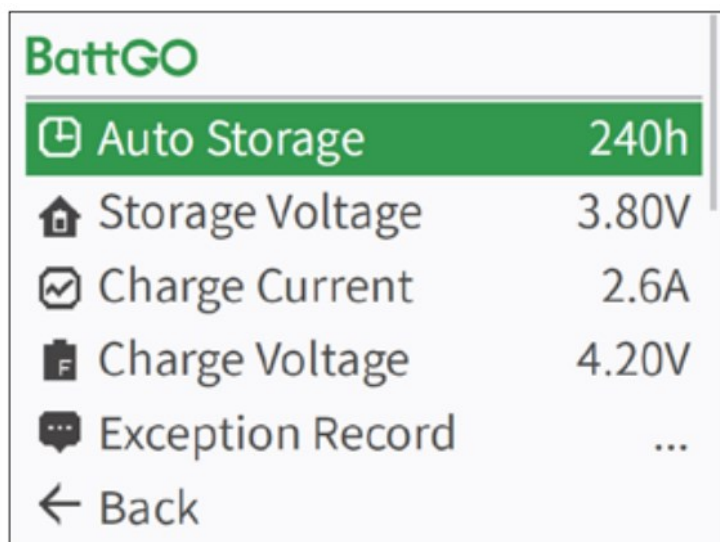
#### Function Setting

Short press menu button to see system function menu below:



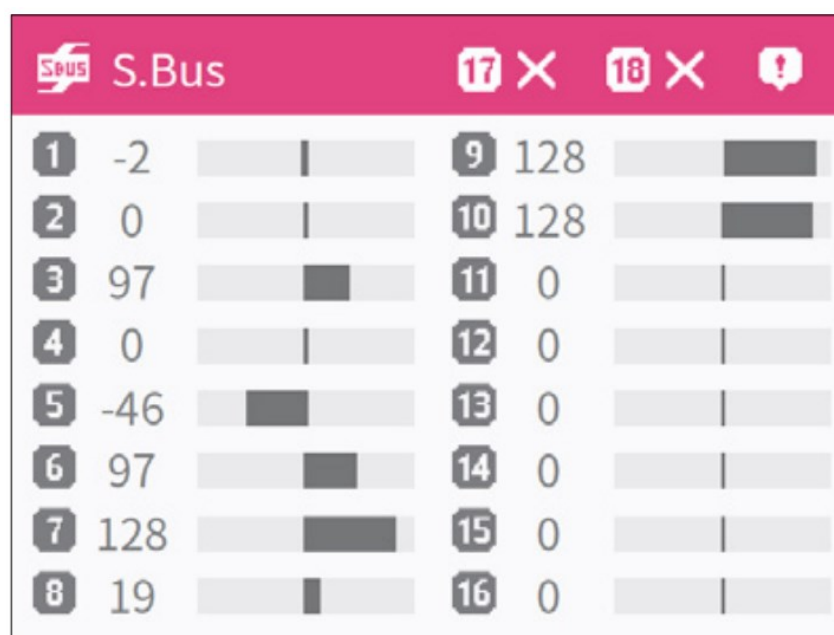
|                    |  |
|--------------------|--|
| Language           | Support up to 7 languages  |
| Backlight          | Back light adjustment, back light will automatically turn off in 2 minutes if no operation (In balancing mode in 20 seconds)   |
| Volume             | Support high, middle, low and 0 volume. Alarm sound can not be turned off.   |
| System Information | Show firmware version  |
| Receiver Tester    | Support multiple prototype testing, PWM\ S.Bus   |
| Alarm Tone         | Low voltage alarm can be set to beep once or beep per minute   |
| Low Voltage Alarm  | Connecting XT60i port, User can select voltage 5-30v as low voltage alarm threshold. Connecting balance port, user can select single cell voltage 2.5-3.9v as low voltage alarm threshold. Connecting BattGo smart battery, BG-8S will automatically select battery's lowest discharging voltage as alarm voltage. |
| USB Charge         | When XT60i is connecting to battery, BG-8S can support USB charging  |
| Cells Balance      | When balance port is connecting to battery, BG-8S can support cells balancing.   |
| Back               | Exit function menu   |

When connecting to smart battery, in standby press and hold menu button then you can go into system setting.



|                  |   |
|------------------|---|
| Auto Storage     | Select how many hours, Battgo smart battery would initiate auto storage function. |
| Storage Voltage  | Set storage voltage   |
| Charge Current   | Set charge current  |
| Charge Voltage   | Set full voltage  |
| Exception Record | Check exception records of over charging/discharging/temperature                  |
| Back             | Exit function menu  |

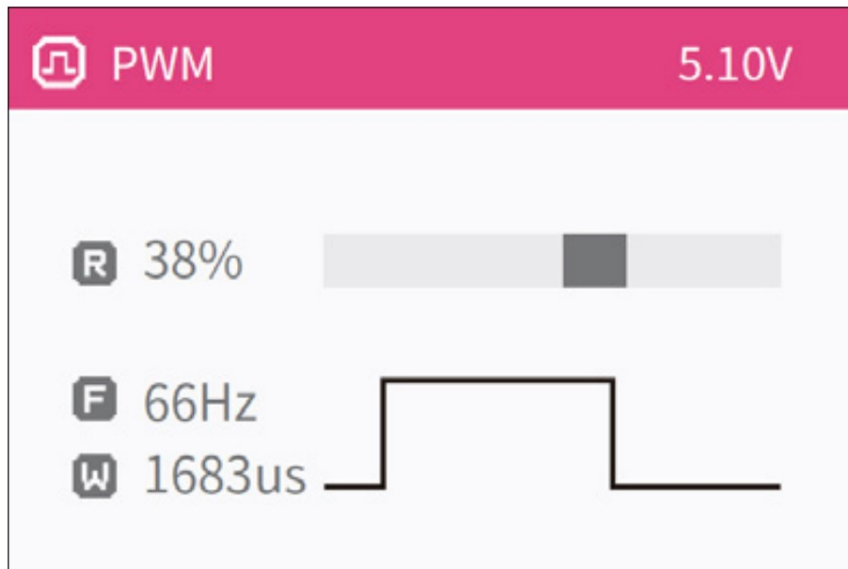
## Receiver signal testing



## PWM TESTING

RC control signal PWM protocol analysis, connect to servo receiver signal output, BG-8S will detect PWM output

period and pulse width.



## S. BUS TESTING


S.Bus protocol analysis, support up to 18 channels servo control data analysis, servo receiver failure protection testing.

## USB

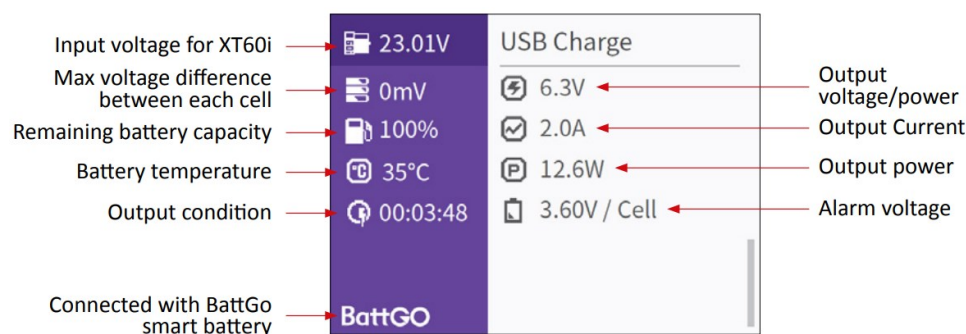
When XT60i is connected to the battery, BG-8S could perform USB charging function. USB charging, after 2 minutes without operation, display will turn off, and light up to purple.

If current is more than 3A or power is more than 26 W, it will turn off USB charging. If temperature is more than 60°C, it will stop charging until temperature is lower than warning level. The recharge will start automatically. Battery capacity and BattGo mark would appear only if a smart battery is connected.

**Lowest input voltage:** For normal battery, if balance port is connected to a single cell, protection voltage would be displayed as lowest input voltage, if the balance port is not connected to a battery, total protection voltage would be displayed as lowest input voltage. For smart battery, single cell protection voltage would be always showed as lowest input voltage.

Devices with QC: 

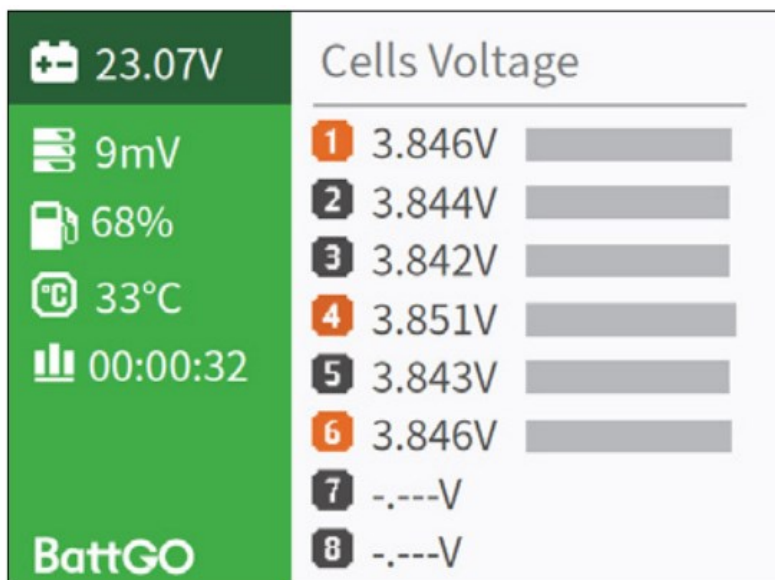
Devices without QC: 



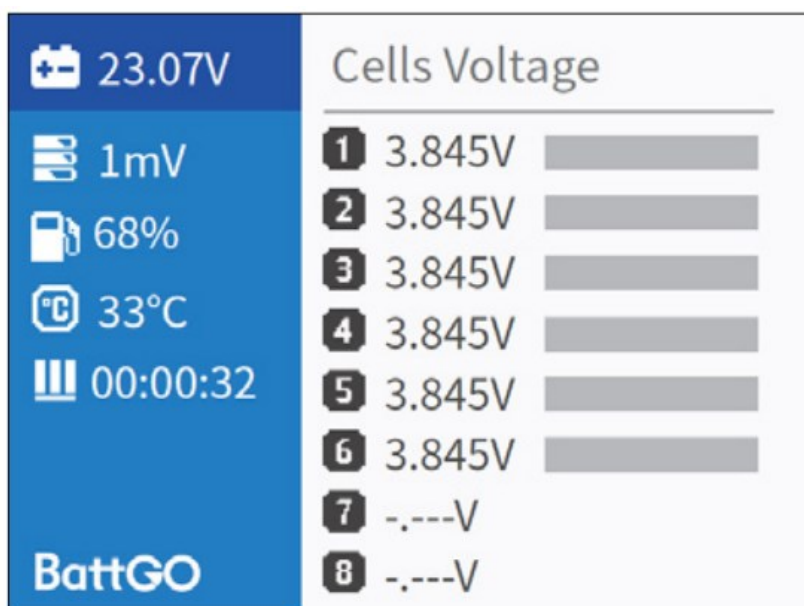
## Cells balancing

When balance port is connected, user can initiate cells balancing task. During task, display will turn off, breath light will turn on within 20s, if no operation is detected. Battery capacity percentage, temperature BattGo mark will only show when smart battery is connected.

- In balancing cells would show as yellow, and breath light is green during operation.



- After balancing completed, left side would turn to blue, breath light would turn to blue.



### WARNING

#### **This battery checker is suitable for:**

LiHv (1-8S) / LiPo (1-8S) / LiFe(1-8S) / Lilon (1-8S) / NiMH/Cd(1-10S); this battery checker is suitable for the connection with balance port of battery.

While it is connected to the battery checker, negative electrode of the balance port must start from "BAT" - .

Reverse protection circuit is inside of the BG-8S, no damage will cause to BG-8S while connected reversely. BG-8S is designed for RC areas, please don't use this on other purpose.

If the device is not used for long time, please disconnect BG-8S with your battery to avoid over discharging your battery.

### Support

#### Product Webpage




#### **GWL a.s.**

Průmyslová 11, 102 00 Prague 10  
Czech Republic, European Union



## Documents / Resources

|   |  |
|---|--|
|  | <p><a href="#">GWL ISDT-BG-8S ISDT Smart Battery Checker</a> [pdf] Instruction Manual<br/>ISDT-BG-8S ISDT Smart Battery Checker, ISDT-BG-8S ISDT, ISDT-BG-8S ISDT Battery Checker, Smart Battery Checker, Battery Checker, Checker</p> |
|---|--|

## References

- [▼ Europe's leading lithium battery cells and solar components distributor - GWL](#)