

MANUAL

▲ READ THIS MANUAL CAREFULLY BEFORE INSTALLATION

DIGITAL SOLAR GEL BATTERY

High-tech / Non-spillable / Deep cycle



Introduction.....

This battery is with digital display which is type of electronic battery and is developed and designed under the new concept of brand new valve regulated sealed lead acid battery. The charged status of battery is monitored in real time. The working days of battery is also recorded. When the battery is in low charged or low capacity, there will be automatic alarm which instructs the user to maintain the battery timely. There are built-in standby filling packs which are under the lid cover of battery. When the battery is nearly at the end of the service life, the user can use the filling pack to maintain the battery easily which can prolong the service life of battery

Application.....

This new design battery is mainly for solar power storage system, wind power storage system and PV etc.

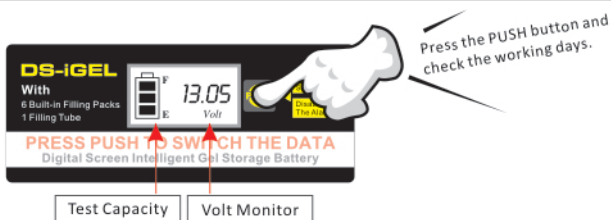
Features and functions.....

- 1.The electronic chip is built in which can monitor the charge status of battery in real time, when the battery is in low charged or low capacity, it can alarm intelligently.Besides, the working days of battery is automatically recorded.
- 2.The cover of battery is the type of buckle which is easily to be opened.
- 3.There are 6 built-in standby filling packs which are under the lid cover of battery. When the battery is nearly at the end of the service life, the user can use the filling pack to maintain the battery easily which can prolong the service life of battery.
(Noted: 1.Model SBMT-12DGD-33, SBMT-12DGD-38, SBMT-12DGD-55, SBMT-12DGD-75 with two filling pack. 2.Model SBMT-12DGD-20 without filling pack)
- 4.The lead plate of battery is made of special activate material formula which makes the battery has longer cycle life.
- 5.The positive lead plate of battery is made of high purity of alloy with low Ca and high tin which enhances the corrosion resistance.
- 6.100% batteries will be inspected before shipment which ensures the batteries have stable and enduring quality guarantee.
- 7.The battery is completely sealed and maintenance-free which is in low rate of self-discharging The sealing technique is safe and secure.
- 8.With filling GEL electrolyte, the battery has better performance whatever is in low temperature or in high temperature which can meet the working requirement of ambient temperature range from -30°C to 65°C.
- 9.The design life of floating charging is more than 8 years.

DIAGRAM OF LCD SCREEN.....

NO.	BATTERY STATUS		INDICATION
	POWER	STATUS OF FLASHING	
1		—	Power<10%
2		—	30%<Power<60%
3		—	60%<Power<90%
4		—	Power>90%
5		Flash in second Maintain on!	Power <10%, charge or maintain the battery!
6		Flash in second Maintain on!	Battery is overcharged, maintain the battery or the charging circuit!

FEATURES.....



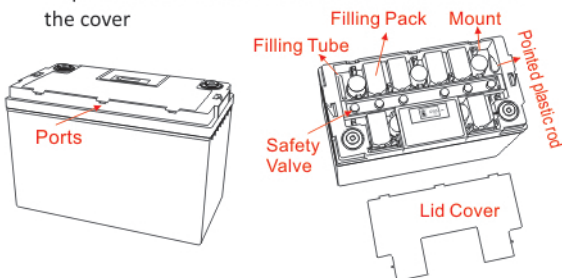
Please follow the below method 1 or method 2 to activate the date record function , if it was activated, battery screen would display 001 day

1. Battery voltage is higher than 13.5V for more than 48 hours
2. Battery voltage is higher than 13.4V, and reduce to be lower than 12.8V within 48 hours

Installation and Maintenance.....

There will be a certain degree of water loss during use of the battery which is more serious under high temperature and over charge. To prolong the service life, The user can fill the battery according to the following steps.

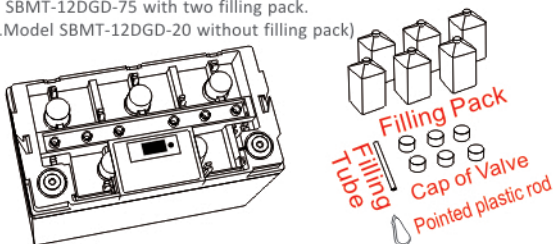
Step one: Using thin sheet metal to pry up the lid cover from the lid ports on the side of the lid cover and then remove the cover



Step two: Take out the 6 filling packs and remove the 6 caps of valve.

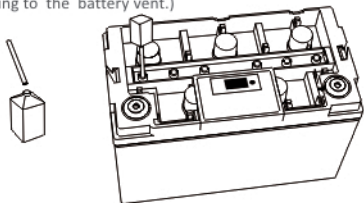
(Noted: 1. Model SBMT-12DGD-33, SBMT-12DGD-38, SBMT-12DGD-55, SBMT-12DGD-75 with two filling pack.

2. Model SBMT-12DGD-20 without filling pack)



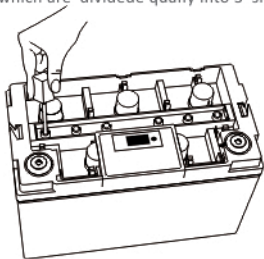
Step three: Use the pointed plastic rod to pierce the aluminum film of the fluid bottle mouth and form a round hole. Insert the injection tube into the bottle and then connect the other side of the tube to one of the vents of the safety valve.

(Note: The battery acid injection tube for SBMT-12DGD-33 (38) is facing to the battery vent.)

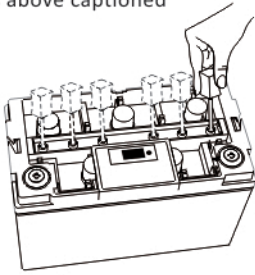


Step four: Gently squeeze the water solution from the filling pack and fill them into the battery completely. Cover the safety valve with cap when the filling is done.

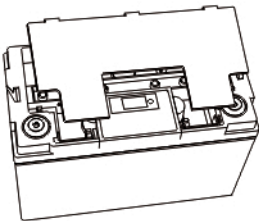
(There are two scale marks on the surface of each filling pack for models SBMT-12DGD-33, SBMT-12DGD-38, SBMT-12DGD-55, and SBMT-12DGD-75, which are divided equally into 3 single valve holes.)



Step five: Filling the the rest 5 filling packs with the same way which is above captioned



Step six: When the filling are done, please make sure the cover is buckled and fit well



▲ ATTENTION

1. It is not necessary to shore filling pack and tube back to the battery after used.
2. The filling fluid used for maintenance is non-toxic and corrosive. When the cover sheet is lifted, the exhaust valve rubber cap may pop up. After the filling is completed, the exhaust valve rubber cap must be re-covered.
3. DO NOT over discharging the battery, charging the battery timely after discharging.
4. Dismount or disconnect the negative terminal of battery if the battery hasn't been in service for long term.
5. DO NOT check the battery power by short-circuit the terminal.
6. Regularly check the terminal connection and the surface of terminal is clean or not to ensure well connection.
7. Storage the battery where is 5~25°C, dry, ventilated and no direct sunshine. Keep the battery at least 2m away from the heat source. Regularly check and maintain the battery.

Shelf and maintenance

In 3 months	During 3-6 months	Over 6 months
Install directly	Limited charging volts: $\leq 14.4v$ Limited charging current: $\leq 0.2C$ Charging hours: 2-3 hours	Limited charging volts: $\leq 14.4v$ Limited charging current: $\leq 0.2C$ Charging hours: 4-6 hours

8. Maintenance of LCD screen.

- 8.1. Protect the screen from hard material crushing.
- 8.2. Keep the screen clean and dry.
- 8.3. Regularly check the showing status of screen.
- 8.4. Pay attention to the buzzer whether it's on or not.
- 8.5. Maintain the battery timely when there is alarm.

Warning.....

- 1.The inside electrolyte will corrode metal, cotton product, stone. Use properly.
- 2.Do not reverse battery to avoid electrolyte leakage
- 3.The hydrogen will be generated during the working and discharging of battery which will cause explosion if there were fire. Pay attention for the following
 - 3.1.Maintain and use the battery where is ventilate
 - 3.2.No sparks and flame when the battery is in maintenance
 - 3.3.Do not place metals and conductive objects near the terminals to avoid short circuit by connecting positive and negative. This can damage terminal.
- 4.When using battery in temperature over 45°C,consider cooling down by reduce the charging current and/or charging volt to result of battery life.
- 5.When move battery with terminal of cable,do not pull cable or it would damage cable or terminal.
- 6.DO not knock the terminal by hammer during the battery installation
- 7.Be safe during carrying to prevent hitting.

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