

FEATURE

1. Maintenance-Free, Without Compensation Acid Liquid.
2. Wide Operating Temperature Range (-35°C~45 °C)
3. Long Service Life: NP Series For 3~5 Years, GM Series For 15 Years.
4. Operating In Any Position
5. Small internal Resistance
6. Low Self-discharge. It Can Remain More Than 60% Capacity After 6 Months In The Normal Temperature.
7. Finishing Charge In The Factory And Convenient For Use.
8. Deep Discharge Recovery

INSTALLATION

1. Normally Battery Is Used In Connection Series. The Max. Voltage Of The Circuit Should Be Lower Than 400V. If The Battery Need Be Used In Parallel Series, The Parallel Series Should Not Be More Than Two Circuit.
2. The Distance Between Two Battery Should Be More Than 5cm When Installation. And Avoiding Sun And Heat Source.
3. Please Take Off All Personal Metal Goods Such As Wristwatch And Necklace.
4. Please Use Insulation Tools.
5. Please Not Put Metal Tools Or Other Things On The Battery.
6. Please Pay Attention To The Terminal.
7. Please Pay Attention To Short Current Between The Battery And The Battery Shelf When You Install The Battery In The Battery Shelf.

CHARGE

1. Float Charge:
Normally In Constant Voltage And Limited Current Method. Select Constant Voltage: 25°C, NP Series 2.25~2.3V/Cell; GM Series 2.23~2.25V/Cell;

The Current Is Limited In 0.2CA (C: Means The Rated Capacity Of The Battery). When The Temperature Is Higher Or Lower Than 25°C, The Float Charge Voltage Should Be Adjusted. The Rate Of The Adjustment Is -3mV/°C Battery.

2. Cycle Charge:
Normally In Constant Voltage And Limited Current Method. Current Is Limited Under 0.2CA. When The Temperature Is 25 °C, NP Series 2.4V/Battery; GM Series 2.35V/Battery. When The temperature Is Higher Or Lower Than 25 °C, The Voltage Should Be Adjusted. The Adjustment Rate Is -4mV/° C Battery.
3. Balanced Charge:

Firstly The Battery Should Be Charged With Constant Current. Then Be Charged According To: NP Series 2.4/Cell, GM Series 2.35V/Cell. The Charge Time Is Depended On The Discharge Deep. Details As Follows:

Discharge Deep (%)	Current Of Constant Current Charge(A)	Constant current Transfer to Constant Voltage (H)	Voltage Of Constant Voltage Charge (V)	Charge Time (H)
20	0.1C ₁₀	1.5	2.35	12
	0.125 C ₁₀	1.0	2.35	10
50	0.1 C ₁₀	3.8	2.35	18
	0.125 C ₁₀	2.8	2.35	16
80	0.1 C ₁₀	6.3	2.35	22
	0.125 C ₁₀	4.5	2.35	20
100	0.1 C ₁₀	8	2.35	26
	0.125 C ₁₀	6	2.35	24

Note: When Float Charge, If Any Battery's Float Charge Voltage Is Lower Than 2.2V/Cell In A Battery Group, The Battery Should Be Charged In Balance.

4. Compensating Charge:
The Battery Will Lose Some Capacity In The Transportation Or Store. The Battery Should Be Charged Before Use If The Store Time Is Too Long.
If Store Time Between 6 Months To One Year, The Battery Should Be Charged For 3 Days In Balanced Voltage 2.25V/Cell.

If Store Time Between One To Two Years, The Battery Should Be Charged For 3 Days In Balanced Voltage 2.30V/Cell.

ATTENTION

1. When The Battery Is Charged, There Is Explode Gas From It. So The Battery Should Be Far From The Fire.
2. If The Battery Is Fallen And Broken And The Acid Liquid Inside Out To The Cloth Or Skin, Please Wash Them Immediately.
3. Be Sure Not To Wash The Battery Using Any Organic Solvent.
4. Please Check The Battery Per-month. If You Find Any Battery Whose Voltage Is Lower Than Others, Please Balanced Charge It. If This Is Not Effective, Please Change It By A New One With Same Model. If You Find Any Battery Whose Temperature Is Higher Than Others (High 5 C°~10 C° Than The Others In Same Group), Please Change It By A New One With Same Model.
5. The Bad Battery Should Be Returned And Please Not Scrap It Any Where.



CHAMPION

VALVE REGULATED LEAD-ACID BATTERY

User's Manual

Guangdong Zhicheng Champion Group Co., Ltd.