



# MSV series MSV-1000



## Valve Regulated Lead Acid Battery

Maintenance-Free Sealed Lead Acid Battery.  
Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99%.

### General Design for Standby Power Applications

#### 【Design Life】

Up to 15 Years in Standby Service at 25°C  
Eurobat (20°C) : >12 YEARS VERY LONG LIFE

#### 【Operating Temperature Range】

Nominal Operating Temperature : 25°C (77°F)  
Discharge : -15°C ~ 50°C (5°F~122°F)  
Charge: -15°C ~ 40°C (5°F~104°F)  
Storage: -15°C ~ 40°C (5°F~104°F)

#### 【Float Charging Voltage】

2.21 ~ 2.25 VDC/Unit at 25°C (77°F)

#### 【Equalization Charging Voltage】

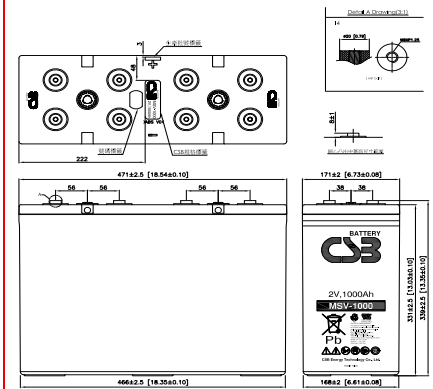
2.35 VDC/Unit at 25°C (77°F)

#### 【Self Discharge】

Less than 10% after 90 days, can be stored up to 6 months at 25°C (77°F);  
Fully recharging is required before usage, and charged sooner if stored at higher temperature than 25°C (77°F).

### Specification

Nominal Voltage	2V (single cell per unit)	
Nominal Capacity	1000 Ah @10hr-rate to 1.80V per cell @25°C (77°F)	
Weight	Approx. 64.40 Kg (141.94 lbs)	
Maximum Discharge Current	6000 A (5sec)	
Internal Resistance	Approx. 0.38 mΩ	
Short Circuit Current	--	
Maximum Charge Current	300 A	
Terminal types	I4 thread copper alloy terminal to accept M8 bolt	
Terminal tightening torque	126±25 Kgf·cm / 109±22 Lbf·in / 12.3±2.5 N·m	
Container Material	Flame Retardant ABS (UL 94-V0)	
Dimensions	Length (L)	471.0±2.5 mm      18.54±0.10 inch
	Width (W)	171.0±2.0 mm      6.73±0.08 inch
	Container height (h)	331.0±2.5 mm      13.03±0.10 inch
	Overall Height (H)	339.0±2.5 mm      13.15±0.10 inch



### Constant Current Discharge Characteristics Unit: A (25°C, 77°F)

F.V/Time	15MIN	30MIN	60MIN	2HR	2.5HR	3HR	5HR	6HR	8HR	10HR	20HR	24HR
1.60V	1423	979	648	383	327	288	193	168	133	113	56.5	47.1
1.67V	1298	933	618	370	313	273	185	160	130	110	55.0	45.8
1.70V	1206	910	608	363	308	270	183	158	128	108	54.0	45.0
1.75V	1052	839	560	343	290	253	173	150	123	103	51.5	42.9
1.80V	915	734	528	330	279	243	168	148	120	100	50.0	41.7
1.83V	795	649	488	310	265	233	160	140	114	97.5	48.8	40.6

### Constant Power Discharge Characteristics Unit: W (25°C, 77°F)

F.V/Time	15MIN	30MIN	60MIN	2HR	2.5HR	3HR	5HR	6HR	8HR	10HR	20HR	24HR
1.60V	2332	1722	1153	693	592	520	353	310	250	210	105	87.5
1.67V	2134	1648	1150	688	585	513	350	308	248	208	104	86.7
1.70V	2033	1595	1113	673	573	503	348	303	243	205	103	85.4
1.75V	1842	1489	1040	643	549	483	333	290	238	200	100	83.3
1.80V	1679	1333	980	618	527	463	323	283	230	198	99.0	82.5
1.83V	1430	1156	903	580	500	443	308	270	220	190	95.0	79.2

Please refer to the official site for the latest rating confirmation. URL: [www.csb-battery.cn](http://www.csb-battery.cn)

Issued: 201112

### Sales Offices

希世比能源科技股份有限公司  
CSB Energy Technology Co., Ltd.

#### BUSINESS HEADQUARTERS

Tel: +886-2-2880-5600  
Fax: +886-2-2888-3300

#### USA OFFICE

Tel: +1-817-244-7777 / 1-(800)3-CSB-USA (272872)  
Fax: +1-817-244-4445

#### EUROPE (EMEA) OFFICE

Tel: +31(0)180-418-140  
Fax: +31(0)180-418-327

Recognized under UL 1989,  
and certified by ISO 9001, 14001, 45001, 50001.



#### TAIPEI OFFICE

Tel: +886-2-2880-5600  
Fax: +886-2-2888-3300