



# MSJ series MSJ-200



## 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 20 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】

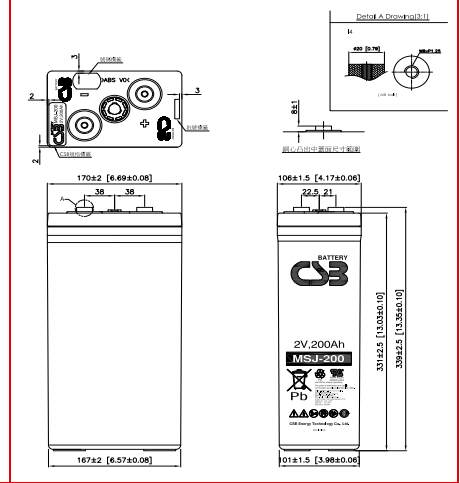
2.35 VDC/Unit at 25°C (77°F)

#### 【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	200 Ah @10hr-rate to 1.80V per cell @25°C (77°F)		
Weight	Approx. 15.00 Kg (33.04 lbs)		
Maximum Discharge Current	1200 A (5sec)		
Internal Resistance	Approx. 0.42 mΩ		
Short Circuit Current	3939A		
Maximum Charge Current	60 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	Depth (D)	170.0±2.0 mm	6.69±0.08 inch
	Width (W)	106.0±1.5 mm	4.17±0.06 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	371	248	152	87.0	72.5	62.4	39.3	33.3	26.0	21.5	10.8	9.0
1.67V	332	236	148	86.0	71.7	61.7	38.9	33.0	25.8	21.4	10.7	8.9
1.70V	312	228	145	85.3	71.1	61.3	38.7	32.8	25.7	21.3	10.6	8.9
1.75V	281	208	138	83.3	69.7	60.2	38.1	32.3	25.3	21.0	10.5	8.7
1.80V	240	184	127	79.7	67.0	58.1	36.9	31.4	24.7	20.5	10.2	8.5
1.83V	212	169	119	76.3	64.2	55.8	35.6	30.5	24.0	19.9	9.9	8.3

### 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	649	450	276	166	138	119	78.0	66.9	51.2	40.1	20.1	16.7
1.67V	603	433	271	165	137	118	77.6	66.5	50.9	39.8	19.9	16.6
1.70V	579	422	267	163	136	117	77.2	66.2	50.6	39.6	19.8	16.5
1.75V	529	394	256	160	134	116	76.3	65.4	49.9	39.1	19.5	16.3
1.80V	475	356	239	154	129	112	74.4	63.8	48.4	38.0	19.0	15.8
1.83V	428	332	225	148	124	108	72.3	62.2	46.9	36.8	18.4	15.3

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

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



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