



## VRLA Rechargeable Battery

# MSU-2000 (2V, 2000Ah)



### FEATURES

- Sealed structure, no electrolyte leakage or spill.
- High performance alloy to secure corrosion-proof feature.
- Unique electrolyte system achieves maximum service life.
- Special paste formula promotes the good charging acceptance.
- Electrolyte with gel technology.
- 15 years design life floating charging.

### APPLICATIONS

- UPS
- Central Office
- Telecom
- Energy Storage Systems



### SPECIFICATIONS

Nominal Voltage	2V	
Nominal Capacity(25°C)	10 Hour Rate F.V.(1.80V/cell)	2000 Ah
	3 Hour Rate F.V.(1.80V/cell)	1500 Ah
	1 Hour Rate F.V.(1.75V/cell)	1100 Ah
Approx. Weight	117.0Kg(257.94lbs.)	
Terminals	B6 (Fitting M8 bolt & nut)	
Max. Discharge Current	7000 A (5 sec.)	
Max. Charge Current	500 A	
Operating Temperature Range	Charge	0°C~40°C(32°F~104°F)
	Discharge	-20°C~50°C(-4°F~122°F)
	Storage	-20°C~40°C(-4°F~104°F)
Self Discharge	< 3% per month (25°C)	
Internal Resistance	≤ 0.4mΩ (Fully Charged )	
Container Material	Standard: ABS( UL94 HB) MSU-2000 Optional: Flame Retardant ABS(UL94 V-0) MSU-2000FR	

Certificate as below:



MH19884



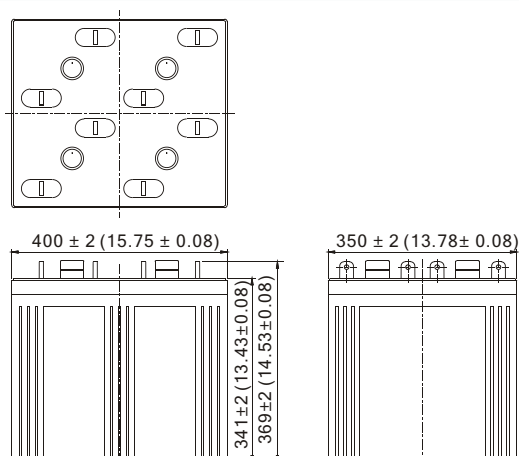
TS-1352

Compliance of the standards as below:

- IEC60896-21/22
- JIS C 8704-2
- GB/T19638.2
- YD/T799

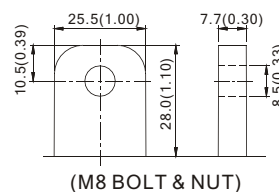
### OUTER DIMENSIONS mm(inch)

Length (L)	Width (W)	Container Height (H)	Total Height (TH)
400±2.0(15.75±0.08)	350±2.0(13.78±0.08)	341±2.0(13.43±0.08)	369±2.0(14.53±0.08)



### TERMINAL TYPE

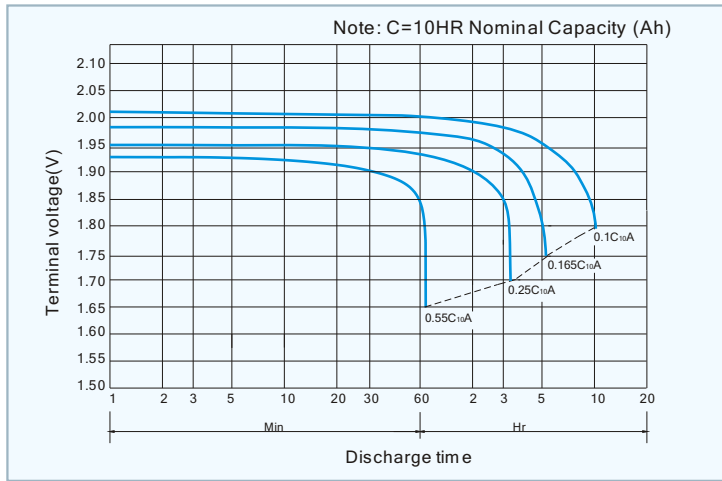
- Terminal B6



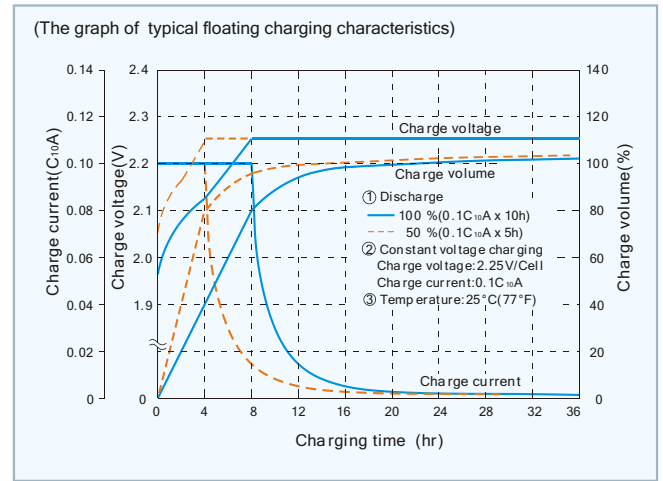
(M8 BOLT & NUT)

Terminal Hardware Initial Torque: 10.0 Nm ± 5%

**MSU-2000 (MSU-2000FR) discharge characteristics (25°C/77°F)**



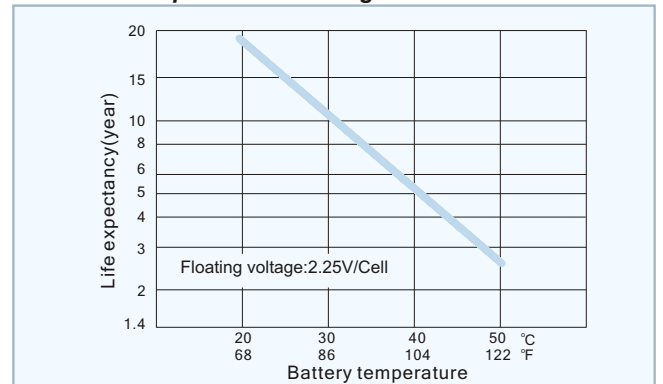
**Battery Charging Characteristics**



**Charging Procedure**

Application	Charging method	Charging Voltage at 25°C (V/cell)	Temperature compensation coefficient of charging voltage (mV/°C/cell)	Charging time 0.1C <sub>10A</sub> , 25°C (h)	
				100% discharge	50% discharge
For standby power Source	Constant voltage (with current restriction)	2.23~2.25	-3	24	20

**Effect Of Temperature On Long Term Float Life**



**Constant power discharge characteristics at 25 °C/77 °F Unit: W**

F.V. (V/cell) \ Discharge Time	1 Hr	2 Hr	3 Hr	4 Hr	5 Hr	6 Hr	8 Hr	10 Hr	12 Hr	20 Hr
1.85V	1800.0	1158.0	901.9	701.1	604.0	538.0	445.0	372.0	322.40	200.88
1.80V	1980.0	1250.0	955.5	772.0	658.0	573.0	476.0	393.7	337.96	210.65
1.75V	2100.0	1325.0	1006.0	808.8	688.0	598.0	491.0	411.2	349.55	216.92
1.70V	2240.0	1370.0	1040.3	825.0	705.0	613.0	501.0	425.0	357.71	220.50
1.65V	2310.0	1390.0	1061.5	842.0	715.0	625.0	510.0	431.0	362.76	222.37
1.60V	2330.0	1410.0	1071.6	852.0	725.0	628.0	516.0	435.0	364.44	223.00

**Constant current discharge characteristics at 25 °C/77 °F Unit: A**

F.V. (V/cell) \ Discharge Time	1 Hr	2 Hr	3 Hr	4 Hr	5 Hr	6 Hr	8 Hr	10 Hr	12 Hr	20 Hr
1.85V	960.0	610.0	471.6	370.0	313.1	270.0	220.0	187.0	162.07	100.98
1.80V	1060.0	660.0	500.0	408.0	340.0	290.0	242.0	200.0	171.67	107.00
1.75V	1130.0	703.0	529.4	428.0	360.0	310.0	253.0	211.0	179.35	111.30
1.70V	1212.0	733.0	551.8	439.0	372.0	320.0	262.0	219.0	184.33	114.50
1.65V	1261.0	753.0	570.1	450.0	382.0	332.0	270.0	223.0	186.69	116.00
1.60V	1293.0	775.0	582.3	458.0	388.0	335.0	275.0	225.0	188.44	116.30

All data and artworks shall be changed without prior notice, BB reserves the right to explain and update the information contained herein.

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