



## VRLA Rechargeable Battery

# MSU-1500 (MSU-1500FR)

## (2V, 1500Ah)

### 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.

### APPLICATION

- UPS
- Central Office
- Telecom
- Energy Storage Systems



### SPECIFICATIONS

Nominal Voltage	2V	
Nominal Capacity(25°C)	10 Hour Rate F.V.(1.80V/cell)	1500 Ah
	3 Hour Rate F.V.(1.80V/cell)	1125 Ah
	1 Hour Rate F.V.(1.75V/cell)	825 Ah
Approx. Weight	106Kg(233.7lbs.)	
Terminals	B6 (Fitting M8 bolt & nut)	
Max. Discharge Current	6000 A (5 sec.)	
Max. Charge Current	375 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	ABS(UL94-HB, UL94-V0 is optional)	



ISO 9001

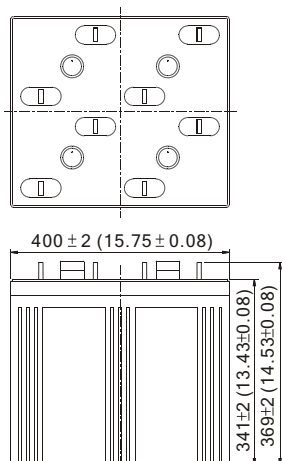


ISO14001

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

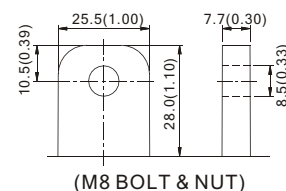
### OUTER DIMENSIONS mm(inch)

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

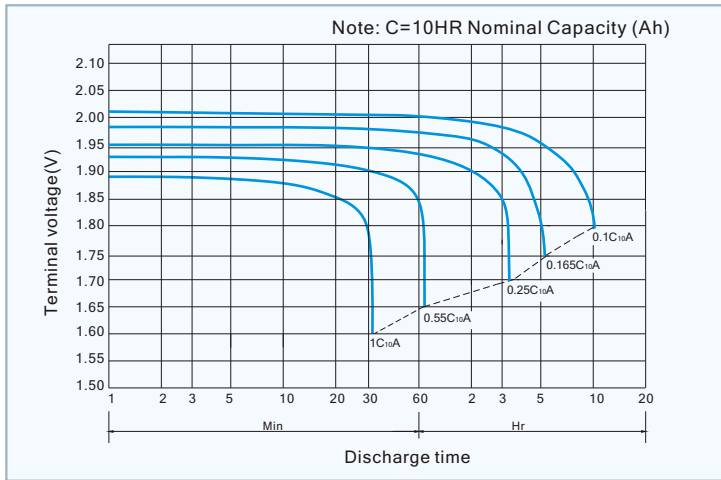
- Terminal B6



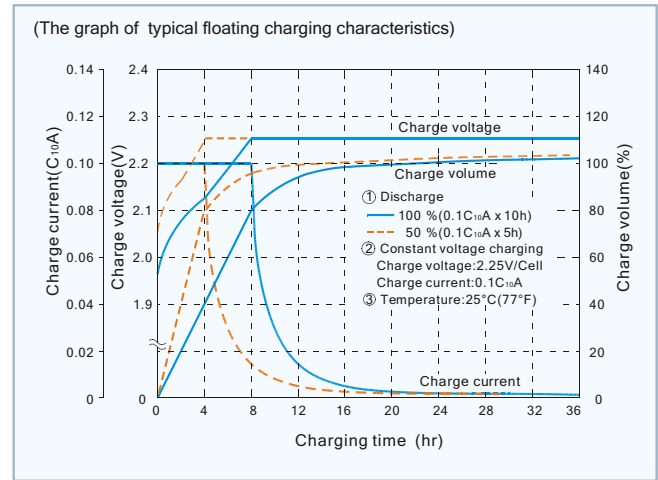
(M8 BOLT & NUT)

Terminal Hardware Initial Torque: 10.0 Nm ± 5%

**MSU-1500 (MSU-1500FR) discharge characteristics (25°C /77°F)**



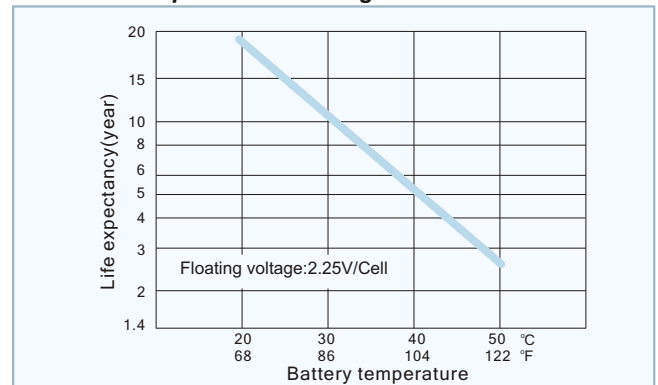
**Battery Charging Characteristics**



**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	30 Min	1 Hr	2 Hr	3 Hr	4 Hr	5 Hr	6 Hr	8 Hr	10 Hr	12 Hr	20 Hr
1.85V	1967.3	1350.0	868.5	676.4	525.8	453.0	403.5	333.8	279.0	241.80	150.66
1.80V	2182.5	1485.0	937.5	716.6	579.0	493.5	429.8	357.0	295.3	253.47	157.99
1.75V	2391.0	1575.0	993.8	754.5	606.6	516.0	448.5	368.3	308.4	262.16	162.69
1.70V	2625.0	1680.0	1027.5	780.2	618.8	528.8	459.8	375.8	318.8	268.28	165.38
1.65V	2820.0	1732.5	1042.5	796.1	631.5	536.3	468.8	382.5	323.3	272.07	166.77
1.60V	2876.3	1747.5	1057.5	803.7	639.0	543.8	471.0	387.0	326.3	273.33	167.25

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

F.V. (V/cell) \ Discharge Time	30 Min	1 Hr	2 Hr	3 Hr	4 Hr	5 Hr	6 Hr	8 Hr	10 Hr	12 Hr	20 Hr
1.85V	1050.0	720.0	457.5	353.7	277.5	234.8	202.5	165.0	140.3	121.55	75.74
1.80V	1170.0	795.0	495.0	375.0	306.0	255.0	217.5	181.5	150.0	128.75	80.25
1.75V	1292.3	847.5	527.3	397.1	321.0	270.0	232.5	189.8	158.3	134.51	83.48
1.70V	1432.5	909.0	549.8	413.8	329.3	279.0	240.0	196.5	164.3	138.24	85.88
1.65V	1533.8	945.8	564.8	427.6	337.5	286.5	249.0	202.5	167.3	140.02	87.00
1.60V	1612.5	969.8	581.3	436.8	343.5	291.0	251.3	206.3	168.8	141.33	87.23

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

Trail A/1 REV. Jan. 2011

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