



VRLA Rechargeable Battery

MSU-500 (MSU-500FR)

(2V, 500Ah)

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)	500 Ah
	3 Hour Rate F.V.(1.80V/cell)	375 Ah
	1 Hour Rate F.V.(1.75V/cell)	275 Ah
Approx. Weight	30.8Kg(67.9lbs.)	
Terminals	B6 (Fitting M8 bolt & nut) I3 is optional	
Max. Discharge Current	2200 A (5 sec.)	
Max. Charge Current	125 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	≤ 0.8mΩ (Fully Charged)	
Container Material	ABS(UL94-HB, UL94-V0 is optional)	




ISO 9001

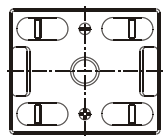


ISO 14001

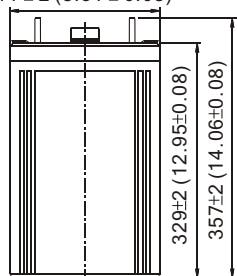


● IEC60896-21/22
 ● JIS C 8704-2
 ● GB/T19638.2
 ● YD/T799

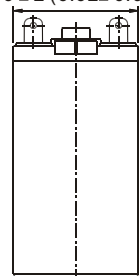
OUTER DIMENSIONS mm(inch)	Length (L)	Width (W)	Container Height (H)	Total Height (TH)
		211±2.0(8.31±0.08)	176±2.0(6.92±0.08)	329±2.0(12.95±0.08)



211 ± 2 (8.31 ± 0.08)

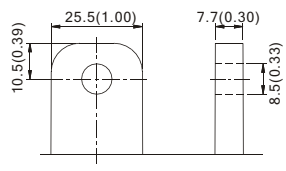


176 ± 2 (6.92 ± 0.08)



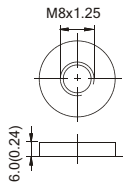
TERMINAL TYPE

● Terminal B6



(M8 BOLT & NUT)

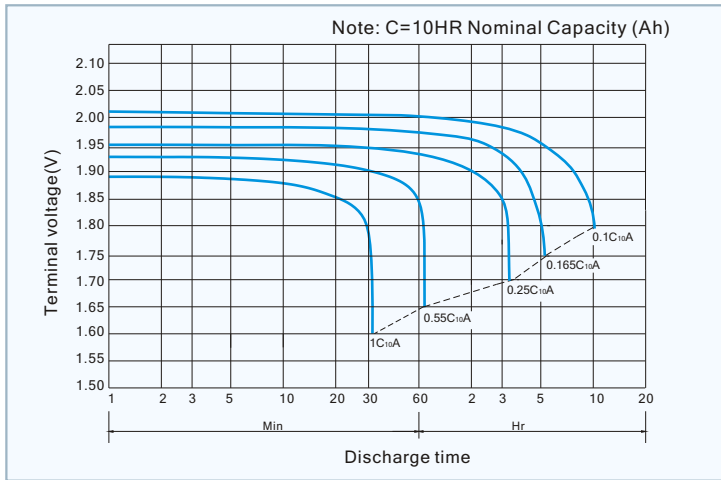
● Terminal I3



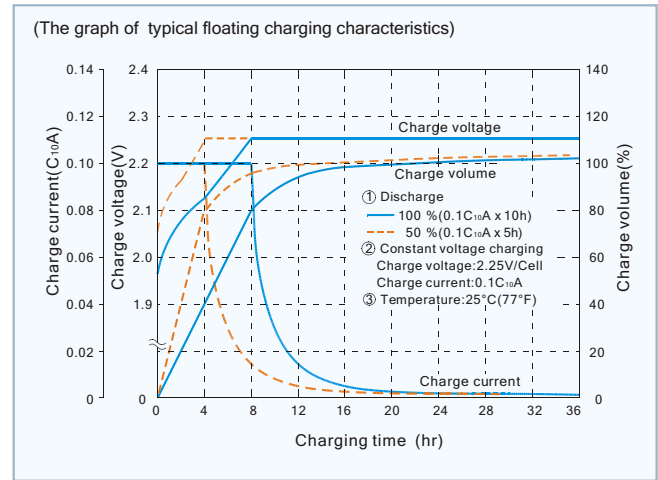
(M8 BOLT)

Terminal Hardware Initial Torque: 10.0 Nm ± 5%

MSU-500 (MSU-500FR) discharge characteristics (25°C /77°F)



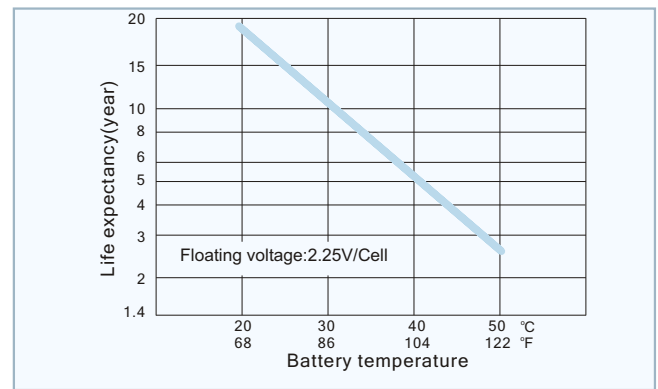
Battery Charging Characteristics



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 _{10A} , 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	655.8	450.0	289.5	225.5	175.3	151.0	134.5	111.3	93.0	80.60	50.22
1.80V	727.5	495.0	312.5	238.9	193.0	164.5	143.3	119.0	98.4	84.49	52.66
1.75V	797.0	525.0	331.3	251.5	202.2	172.0	149.5	122.8	102.8	87.39	54.23
1.70V	875.0	560.0	342.5	260.1	206.3	176.3	153.3	125.3	106.3	89.43	55.13
1.65V	940.0	577.5	347.5	265.4	210.5	178.8	156.3	127.5	107.8	90.69	55.59
1.60V	958.8	582.5	352.5	267.9	213.0	181.3	157.0	129.0	108.8	91.11	55.75

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	350.0	240.0	152.5	117.9	92.5	78.3	67.5	55.0	46.8	40.52	25.25
1.80V	390.0	265.0	165.0	125.0	102.0	85.0	72.5	60.5	50.0	42.92	26.75
1.75V	430.8	282.5	175.8	132.4	107.0	90.0	77.5	63.3	52.8	44.84	27.83
1.70V	477.5	303.0	183.3	137.9	109.8	93.0	80.0	65.5	54.8	46.08	28.63
1.65V	511.3	315.3	188.3	142.5	112.5	95.5	83.0	67.5	55.8	46.67	29.00
1.60V	537.5	323.3	193.8	145.6	114.5	97.0	83.8	68.8	56.3	47.11	29.08

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

A/4 REV. Jan. 2011

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