



VRLA Rechargeable Battery

MSU-200 (MSU-200FR)

(2V, 200Ah)

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)	200 Ah
	3 Hour Rate F.V.(1.80V/cell)	150 Ah
	1 Hour Rate F.V.(1.75V/cell)	110 Ah
Approx. Weight	13.5Kg(29.8lbs.)	
Terminals	B6 (Fitting M8 bolt & nut) I3 is optional	
Max. Discharge Current	900 A (5 sec.)	
Max. Charge Current	50 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	≤ 1.0mΩ (Fully Charged)	
Container Material	ABS(UL94-HB, UL94-V0 is optional)	




ISO 9001



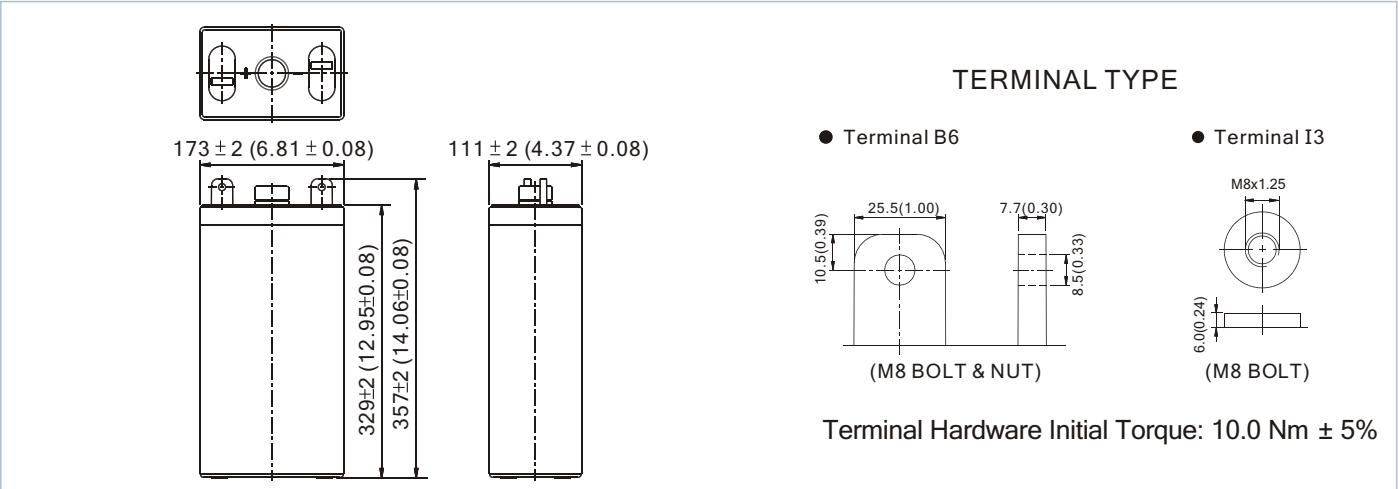
ISO 14001



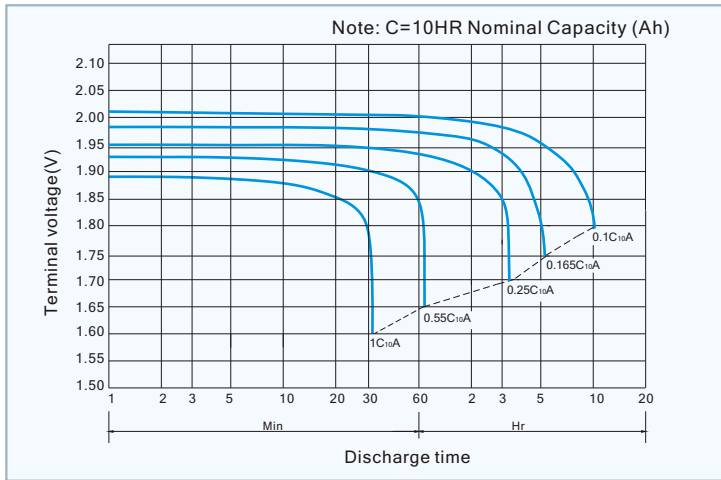
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- IEC60896-21/22
- JIS C 8704-2
- GB/T19638.2
- YD/T799

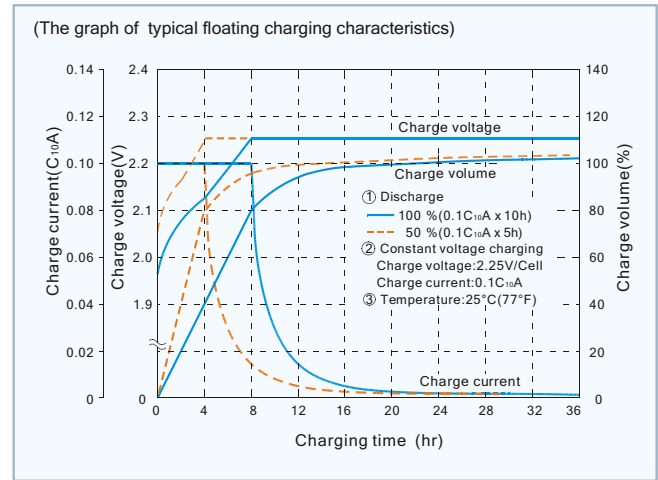
OUTER DIMENSIONS mm(inch)	Length (L)	Width (W)	Container Height (H)	Total Height (TH)
	173±2.0(6.81±0.08)	111±2.0(4.37±0.08)	329±2.0(12.95±0.08)	357±2.0(14.06±0.08)



MSU-200 (MSU-200FR) discharge characteristics (25°C /77°F)



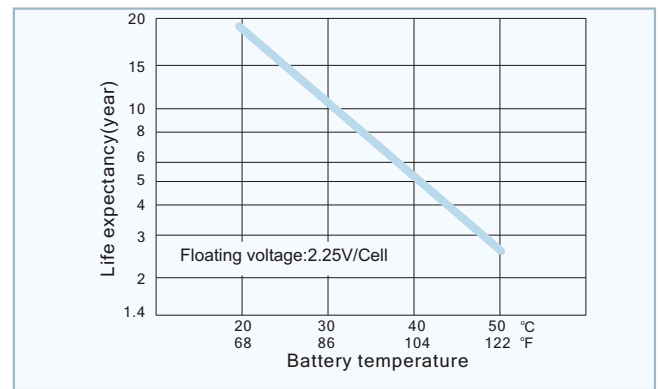
Battery Charging Characteristics



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	262.3	180.0	115.8	90.2	70.1	60.4	53.8	44.5	37.2	32.24	20.09
1.80V	291.0	198.0	125.0	95.5	77.2	65.8	57.3	47.6	39.4	33.80	21.10
1.75V	318.8	210.0	132.5	100.6	80.9	68.8	59.8	49.1	41.1	34.95	21.70
1.70V	350.0	224.0	137.0	104.0	82.5	70.5	61.3	50.1	42.5	35.77	22.05
1.65V	376.0	231.0	139.0	106.2	84.2	71.5	62.5	51.0	43.1	36.28	22.24
1.60V	383.5	233.0	141.0	107.2	85.2	72.5	62.8	51.6	43.5	36.44	22.30

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	140.0	96.0	61.0	47.2	37.0	31.3	27.0	22.0	18.7	16.21	10.10
1.80V	156.0	106.0	66.0	50.0	40.8	34.0	29.0	24.2	20.0	17.17	10.70
1.75V	172.3	113.0	70.3	52.9	42.8	36.0	31.0	25.3	21.1	17.94	11.13
1.70V	191.0	121.2	73.3	55.2	43.9	37.2	32.0	26.2	21.9	18.43	11.45
1.65V	204.5	126.1	75.3	57.0	45.0	38.2	33.2	27.0	22.3	18.67	11.60
1.60V	215.0	129.3	77.5	58.2	45.8	38.8	33.5	27.5	22.5	18.84	11.63

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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