



## VRLA Rechargeable Battery

# MSU-600 (MSU-600FR)

## (2V, 600Ah)

### 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)	600 Ah
	3 Hour Rate F.V.(1.80V/cell)	450 Ah
	1 Hour Rate F.V.(1.75V/cell)	330 Ah
Approx. Weight	36.3Kg(80.0lbs.)	
Terminals	B6 (Fitting M8 bolt & nut) I3 is optional	
Max. Discharge Current	2640 A (5 sec.)	
Max. Charge Current	150 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	≤ 0.7mΩ (Fully Charged )	
Container Material	ABS(UL94-HB, UL94-V0 is optional)	




**ISO 9001**



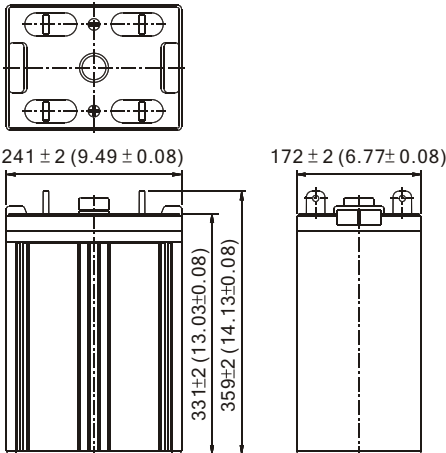
**ISO 14001**



MH19884

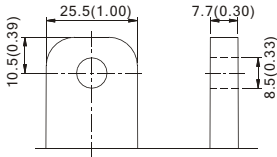
- IEC60896-21/22
- JIS C 8704-2
- GB/T19638.2
- YD/T799

OUTER DIMENSIONS mm(inch)	Length (L)	Width (W)	Container Height (H)	Total Height (TH)
	241±2.0(9.49±0.08)	172±2.0(6.77±0.08)	331±2.0(13.03±0.08)	359±2.0(14.13±0.08)



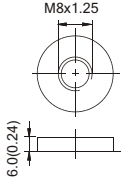
### TERMINAL TYPE

● Terminal B6



(M8 BOLT & NUT)

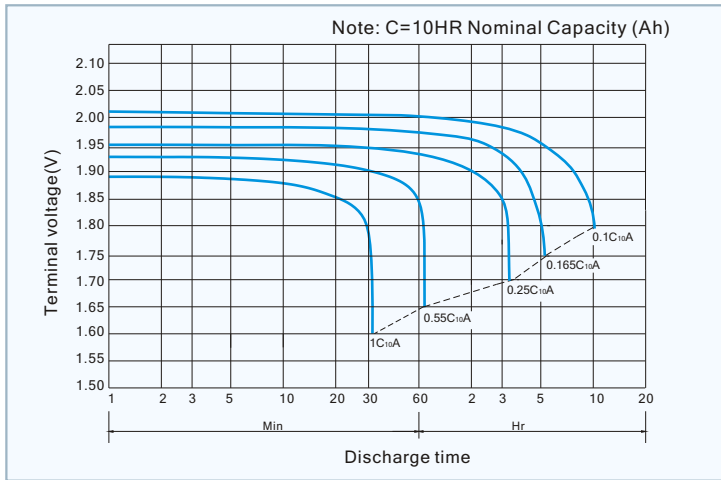
● Terminal I3



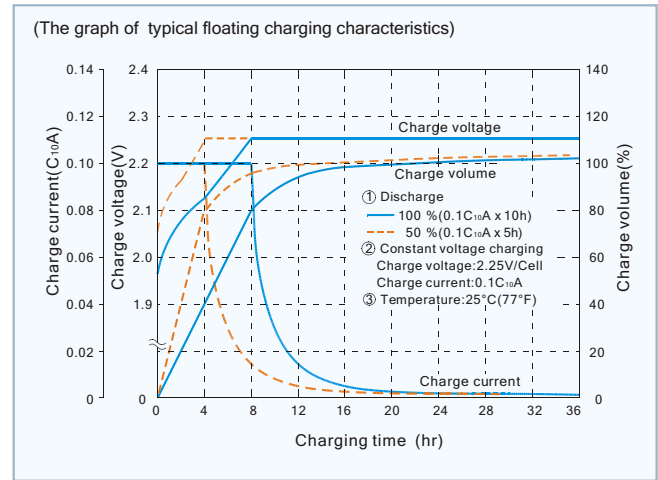
(M8 BOLT)

Terminal Hardware Initial Torque: 10.0 Nm ± 5%

**MSU-600 (MSU-600FR) discharge characteristics (25°C /77°F)**



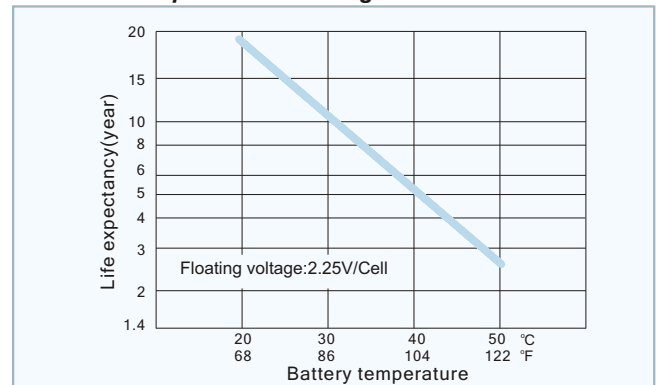
**Battery Charging Characteristics**



**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	786.9	540.0	347.4	270.6	210.3	181.2	161.4	133.5	111.6	96.72	60.26
1.80V	873.0	594.0	375.0	286.6	231.6	197.4	171.9	142.8	118.1	101.39	63.20
1.75V	956.4	630.0	397.5	301.8	242.6	206.4	179.4	147.3	123.4	104.86	65.08
1.70V	1050.0	672.0	411.0	312.1	247.5	211.5	183.9	150.3	127.5	107.31	66.15
1.65V	1128.0	693.0	417.0	318.5	252.6	214.5	187.5	153.0	129.3	108.83	66.71
1.60V	1150.5	699.0	423.0	321.5	255.6	217.5	188.4	154.8	130.5	109.33	66.90

**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	420.0	288.0	183.0	141.5	111.0	93.9	81.0	66.0	56.1	48.62	30.29
1.80V	468.0	318.0	198.0	150.0	122.4	102.0	87.0	72.6	60.0	51.50	32.10
1.75V	516.9	339.0	210.9	158.8	128.4	108.0	93.0	75.9	63.3	53.81	33.39
1.70V	573.0	363.6	219.9	165.5	131.7	111.6	96.0	78.6	65.7	55.30	34.35
1.65V	613.5	378.3	225.9	171.0	135.0	114.6	99.6	81.0	66.9	56.01	34.80
1.60V	645.0	387.9	232.5	174.7	137.4	116.4	100.5	82.5	67.5	56.53	34.89

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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