



VRLA Rechargeable Battery

MSU-300 (MSU-300FR)

(2V, 300Ah)

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.
- 10+ 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) | 300 Ah |
| | 3 Hour Rate F.V.(1.80V/cell) | 225 Ah |
| | 1 Hour Rate F.V.(1.75V/cell) | 165 Ah |
| Approx. Weight | 19.4Kg(42.8lbs.) | |
| Terminals | B6 (Fitting M8 bolt & nut) I3 is optional | |
| Max. Discharge Current | 1350 A (5 sec.) | |
| Max. Charge Current | 75 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

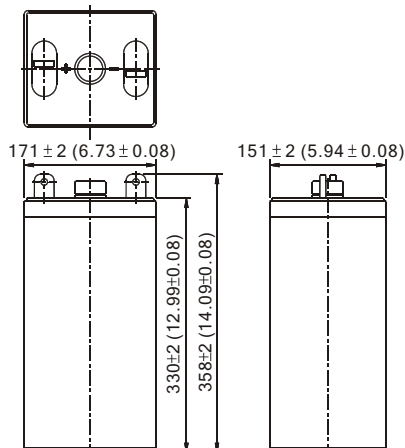


ISO14001

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

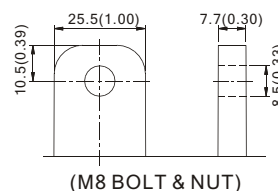
OUTER DIMENSIONS mm(inch)

| Length (L) | Width (W) | Container Height (H) | Total Height (TH) |
|--------------------|--------------------|----------------------|---------------------|
| 171±2.0(6.73±0.08) | 151±2.0(5.94±0.08) | 330±2.0(12.99±0.08) | 358±2.0(14.09±0.08) |

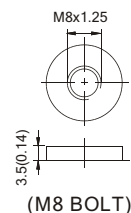


TERMINAL TYPE

- Terminal B6

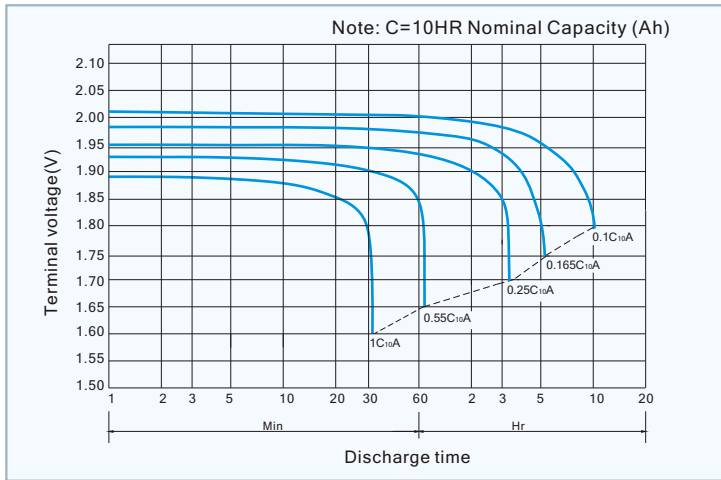


- Terminal I3

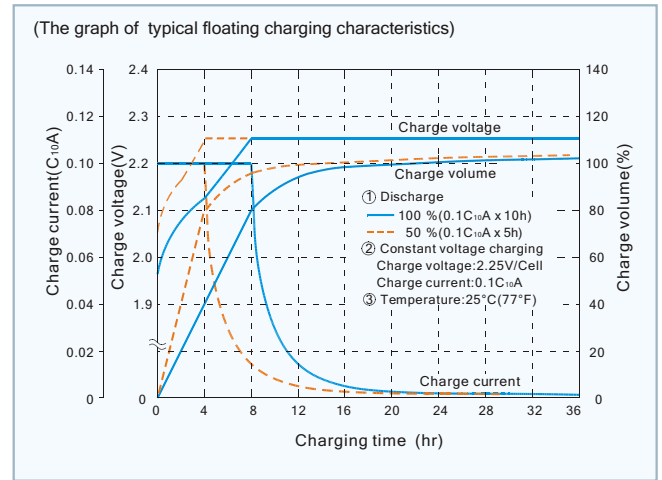


Terminal Hardware Initial Torque: 10.0 Nm ± 5%

MSU-300 (MSU-300FR) discharge characteristics (25°C /77°F)



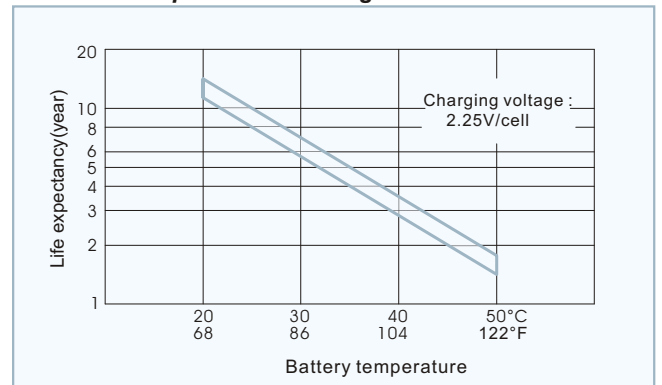
Battery Charging Characteristics



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 | 393.5 | 270.0 | 173.7 | 135.3 | 105.2 | 90.6 | 80.7 | 66.8 | 55.8 | 48.36 | 30.13 |
| 1.80V | 436.5 | 297.0 | 187.5 | 143.3 | 115.8 | 98.7 | 86.0 | 71.4 | 59.1 | 50.69 | 31.60 |
| 1.75V | 478.2 | 315.0 | 198.8 | 150.9 | 121.3 | 103.2 | 89.7 | 73.7 | 61.7 | 52.43 | 32.54 |
| 1.70V | 525.0 | 336.0 | 205.5 | 156.0 | 123.8 | 105.8 | 92.0 | 75.2 | 63.8 | 53.66 | 33.08 |
| 1.65V | 564.0 | 346.5 | 208.5 | 159.2 | 126.3 | 107.3 | 93.8 | 76.5 | 64.7 | 54.41 | 33.35 |
| 1.60V | 575.3 | 349.5 | 211.5 | 160.7 | 127.8 | 108.8 | 94.2 | 77.4 | 65.3 | 54.67 | 33.45 |

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 | 210.0 | 144.0 | 91.5 | 70.7 | 55.5 | 47.0 | 40.5 | 33.0 | 28.1 | 24.31 | 15.15 |
| 1.80V | 234.0 | 159.0 | 99.0 | 75.0 | 61.2 | 51.0 | 43.5 | 36.3 | 30.0 | 25.75 | 16.05 |
| 1.75V | 258.5 | 169.5 | 105.5 | 79.4 | 64.2 | 54.0 | 46.5 | 38.0 | 31.7 | 26.90 | 16.70 |
| 1.70V | 286.5 | 181.8 | 110.0 | 82.8 | 65.9 | 55.8 | 48.0 | 39.3 | 32.9 | 27.65 | 17.18 |
| 1.65V | 306.8 | 189.2 | 113.0 | 85.5 | 67.5 | 57.3 | 49.8 | 40.5 | 33.5 | 28.00 | 17.40 |
| 1.60V | 322.5 | 194.0 | 116.3 | 87.4 | 68.7 | 58.2 | 50.3 | 41.3 | 33.8 | 28.27 | 17.45 |

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

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