



**MSV series**

**MSV 300**

**2V 300Ah**

### Valve Regulated Lead Acid Battery

Maintenance-Free Sealed Lead Acid Battery.

Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99%.

### Design for Standby Power Applications

#### 【Design Life】

Up to 15 Years in Standby Service at 25°C

Eurobat (20°C) : 12 years and longer, Long Life

#### 【Operating Temperature Range】

Nominal Operating Temperature : 25°C (77°F)

Discharge : -20°C ~ 50°C (-4°F~122°F)

Charge: 0°C ~ 40°C (32°F~104°F)

Storage: -20°C ~ 40°C (-4°F~104°F)

#### 【Float Charging Voltage】

2.21 ~ 2.25 VDC/Unit at 25°C (77°F)

#### 【Equalization Charging Voltage】

2.35 VDC/Unit at 25°C (77°F)

#### 【Self Discharge】

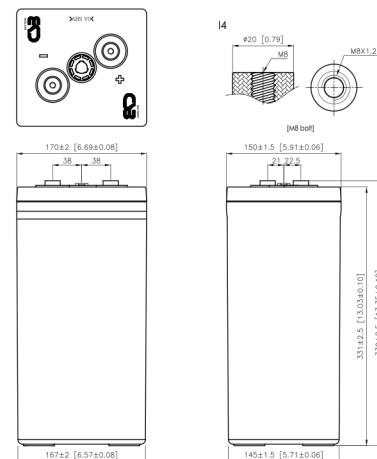
Less than 10% after 90 days, can be stored up to 6 months at 25°C (77°F);

Fully recharging is required before usage, and charged sooner if stored at higher temperature than 25°C (77°F).



### Specification

|                           |                                                   |              |                 |
|---------------------------|---------------------------------------------------|--------------|-----------------|
| Nominal Voltage           | 2V (single cell per unit)                         |              |                 |
| Nominal Capacity          | 300 Ah @10hr-rate to 1.80V per cell @25°C (77°F)  |              |                 |
| Weight                    | Approx. 18.20 Kg (40.11 lbs)                      |              |                 |
| Maximum Discharge Current | 1800 A (5sec)                                     |              |                 |
| Internal Resistance       | Approx. 0.54 mΩ                                   |              |                 |
| Short Circuit Current     | 3600A                                             |              |                 |
| Maximum Charge Current    | 90 A                                              |              |                 |
| Terminal type             | I4 thread copper alloy terminal to accept M8 bolt |              |                 |
| Terminal breaking Torque  | 414 Kg·cm / 359 Lbf·in / 40.57 N·m                |              |                 |
| Container Material        | Flame Retardant ABS (UL 94-V0)                    |              |                 |
| Dimensions                | Depth (D)                                         | 170.0±2.0 mm | 6.69±0.08 inch  |
|                           | Width (W)                                         | 150.0±1.5 mm | 5.91±0.06 inch  |
|                           | Container height (h)                              | 331.0±2.5 mm | 13.03±0.10 inch |
|                           | Overall Height (H)                                | 339.0±2.5 mm | 13.15±0.10 inch |



#### Constant Current Discharge Characteristics Unit: A (25°C, 77°F)

| F.V/Time | 15MIN | 30MIN | 60MIN | 2HR  | 3HR  | 4HR  | 5HR  | 6HR  | 8HR  | 10HR | 20HR | 24HR |
|----------|-------|-------|-------|------|------|------|------|------|------|------|------|------|
| 1.60V    | 427   | 294   | 194   | 115  | 86.3 | 68.3 | 57.8 | 50.3 | 39.8 | 33.8 | 16.9 | 14.1 |
| 1.67V    | 389   | 280   | 185   | 111  | 81.8 | 66.0 | 55.5 | 48.0 | 39.0 | 33.0 | 16.5 | 13.8 |
| 1.70V    | 362   | 273   | 182   | 109  | 81.0 | 65.3 | 54.8 | 47.3 | 38.3 | 32.3 | 16.2 | 13.5 |
| 1.75V    | 316   | 252   | 168   | 103  | 75.8 | 61.7 | 51.8 | 45.0 | 36.8 | 30.8 | 15.4 | 12.8 |
| 1.80V    | 274   | 220   | 158   | 99.0 | 72.8 | 59.3 | 50.3 | 44.3 | 36.0 | 30.0 | 15.0 | 12.5 |
| 1.83V    | 238   | 195   | 146   | 93.0 | 69.8 | 56.3 | 48.0 | 42.0 | 34.2 | 29.3 | 14.7 | 12.2 |

#### Constant Power Discharge Characteristics Unit: W (25°C, 77°F)

| F.V/Time | 15MIN | 30MIN | 60MIN | 2HR | 3HR | 4HR | 5HR  | 6HR  | 8HR  | 10HR | 20HR | 24HR |
|----------|-------|-------|-------|-----|-----|-----|------|------|------|------|------|------|
| 1.60V    | 700   | 517   | 346   | 208 | 156 | 125 | 106  | 93.0 | 75.0 | 63.0 | 31.5 | 26.3 |
| 1.67V    | 640   | 494   | 345   | 206 | 154 | 124 | 105  | 92.3 | 74.3 | 62.3 | 31.2 | 26.0 |
| 1.70V    | 610   | 479   | 334   | 202 | 151 | 123 | 104  | 90.8 | 72.8 | 61.5 | 30.8 | 25.6 |
| 1.75V    | 552   | 447   | 312   | 193 | 145 | 118 | 100  | 87.0 | 71.3 | 60.0 | 30.0 | 25.0 |
| 1.80V    | 504   | 400   | 294   | 185 | 139 | 113 | 96.8 | 84.8 | 69.0 | 59.3 | 29.7 | 24.7 |
| 1.83V    | 429   | 347   | 271   | 174 | 133 | 108 | 92.3 | 81.0 | 66.0 | 57.0 | 28.5 | 23.8 |

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