



# MSJ Series

## MSJ-400 Datasheet

2V VRLA-AGM

### Specifications

|  |  |
|--|--|
| Voltage (Vdc)                          | 2  |
| Ah Capacity<br>(8-Hr 1.75 VPC @ 25°C)  | 405.60   |
| Ah Capacity<br>(20-Hr 1.75 VPC @ 25°C) | 420.00   |
| Ah Capacity<br>(8-Hr 1.80 VPC @ 25°C)  | 394.40   |
| Max Charge Current (A)                 | 120.00   |
| Max Discharge Current (A)              | 2400 (5sec)  |
| Short Circuit Current (A)              | 6065   |
| Internal Resistance                    | Approx. 0.30 mΩ  |
| Terminal Type                          | I4 thread copper alloy terminal to accept M8 bolt  |
| Terminal Torque                        | 126±25 Kgf·cm / 109±22 Lbf·in / 12.3±2.5 N·m   |
| Container Material                     | Flame Retardant ABS (UL 94-V0)   |
| Weight (kg. / lb., Approx.)            | 28.60 / 63.03  |
| Depth (D) (mm / in)                    | 197.0±2.0 / 7.76±0.08  |
| Width (W) (mm / in)                    | 170.0±2.0 / 6.69±0.08  |
| Height (H) (mm / in)                   | 339.0±2.5 / 13.15±0.10   |
| Design Life                            | Up to 20 Years in Standby Service at 25°C. Eurobat (20°C): >12 Years Very Long Life  |
| Operating Temperature                  | Nominal: 25°C (77°F)<br>Discharge: -15°C - 50°C (5°F-122°F)<br>Charge/Storage: -15°C - 40°C (5°F - 104°F)  |
| Float Charging Voltage                 | 2.21 ~ 2.25 Vdc/battery<br>25°C (77°F)   |
| Eq. Charging Voltage                   | 2.35 Vdc/battery<br>25°C (77°F)  |
| Self-Discharge                         | Less than 10% after 90 days, can be stored up to 6 months and 10 months with equalization charge* at 25C (77F); Full recharging is required before usage, and charged sooner if stored at higher temperature than 25C (77F). |



Valve Regulated Lead Acid (VRLA) Battery

Maintenance-Free, Absorbent Glass Mat (AGM) Technology for Efficient Gas Recombination of up to 99%

Pure Lead Construction and Proprietary Elements

Designed for High-Capacity Float Service Standby Power Applications

Built in Accordance with IEC 60896-21/22:2004, UL1973 Listed (MH66728) and UL1989 Recognized (MH14533)

Certified by TUV NORD according to ISO 9001:2015





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### Constant Current Discharge Characteristics Per Battery: Amperes (25°C, 77°F)

| F.V/Time | 15MIN | 30MIN | 60MIN | 2HR | 2.5HR | 3HR | 5HR  | 6HR  | 8HR  | 10HR | 20HR | 24HR |
|----------|-------|-------|-------|-----|-------|-----|------|------|------|------|------|------|
| 1.67V    | 631   | 472   | 296   | 172 | 143   | 123 | 77.9 | 66.0 | 51.6 | 42.7 | 21.4 | 17.8 |
| 1.75V    | 533   | 415   | 276   | 167 | 139   | 120 | 76.1 | 64.6 | 50.7 | 42.0 | 21.0 | 17.5 |
| 1.80V    | 456   | 368   | 255   | 159 | 134   | 116 | 73.7 | 62.8 | 49.3 | 40.9 | 20.5 | 17.0 |

### Constant Power Discharge Characteristics Per Battery: Watts (25°C, 77°F)

| F.V/Time | 15MIN | 30MIN | 60MIN | 2HR | 2.5HR | 3HR | 5HR | 6HR | 8HR | 10HR | 20HR | 24HR |
|----------|-------|-------|-------|-----|-------|-----|-----|-----|-----|------|------|------|
| 1.67V    | 1146  | 866   | 542   | 329 | 274   | 236 | 155 | 133 | 102 | 79.6 | 39.8 | 33.2 |
| 1.75V    | 1006  | 789   | 512   | 320 | 267   | 231 | 153 | 131 | 100 | 78.2 | 39.1 | 32.6 |
| 1.80V    | 902   | 712   | 478   | 307 | 258   | 224 | 149 | 128 | 97  | 75.9 | 38.0 | 31.6 |

