



# MSV Series

## MSV-650 Datasheet

2V VRLA-AGM

### Specifications

Voltage (Vdc)	2
Ah Capacity (8-Hr 1.75 VPC @ 25°C)	636.80
Ah Capacity (20-Hr 1.75 VPC @ 25°C)	692.00
Ah Capacity (8-Hr 1.80 VPC @ 25°C)	624.00
Max Charge Current (A)	195.00
Max Discharge Current (A)	3900 (5sec)
Short Circuit Current (A)	7258
Internal Resistance	Approx. 0.38 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.)	41.40 / 91.25
Length (L) (mm / in)	307.0±2.5 / 12.09±0.10
Width (W) (mm / in)	171.0±2.0 / 6.73±0.08
Height (H) (mm / in)	339.0±2.5 / 13.15±0.10
Design Life	Up to 15 Years in Standby Service at 25°C. Eurobat (20°C): >12 Years Very Long Life
Operating Temperature	Nominal: 25°C (77°F) Discharge: -15°C - 50°C (5°F-122°F) Charge/Storage: -15°C - 40°C (5°F - 104°F)
Float Charging Voltage	2.21 ~ 2.25 Vdc/battery 25°C (77°F)
Eq. Charging Voltage	2.35 Vdc/battery 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	844	606	401	241	203	177	120	104	84.5	71.5	35.1	29.2
1.75V	684	545	364	223	188	164	112	97.5	79.6	66.6	34.6	28.9
1.80V	594	477	343	215	181	158	109	95.9	78.0	65.0	34.0	28.4

### 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	1387	1071	748	447	380	333	228	200	161	135	67.6	56.3
1.75V	1197	968	676	418	357	314	216	189	154	130	67.0	55.9
1.80V	1091	866	637	401	342	301	210	184	150	128	66.3	55.2

