

MHB MS Series--Small-size batteries

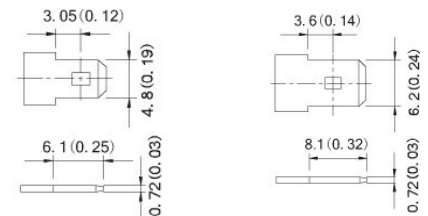
- 100% before shipment testing, stable and reliable long-term quality
- patented grid alloy formula and updated manufacturing technique
- completely sealed and maintenance-free, low self-discharge
- Excellent charging and re-charging acceptance
- Cycle use: More than 260 cycles at 100% DOD
- Floating & standby use: 3-5 years

Application:

- Alarm System
- Cable Television
- Communication Equipment
- Emergency Power System
- Security System
- Medical Equipment
- UPS
- Power tools
- Control Equipment
- Toys

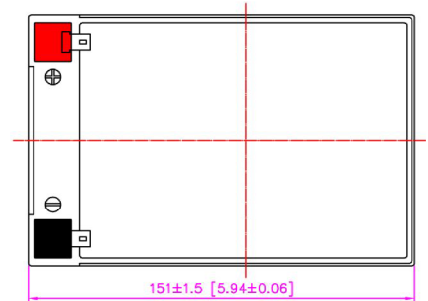
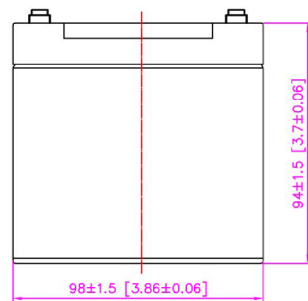
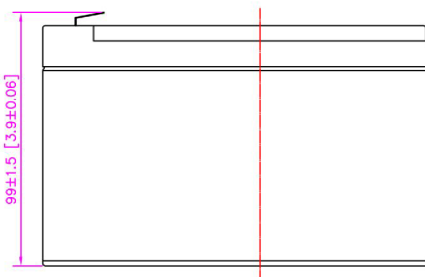
Construction:

- ComponentRaw material
- PositiveLead dioxide
- NegativeLead
- ContainerABS
- CoverABS
- SealantEpoxy
- Safety valve Rubber
- TerminalCopper
- SeparatorFiber glass
- ElectrolyteSulfuric acid



F1 Terminal

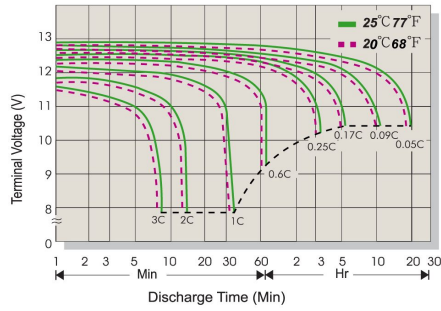
F2 Terminal



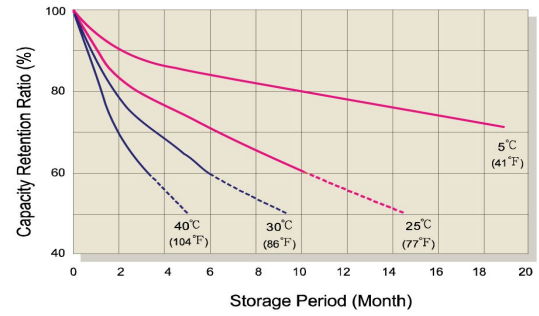
Speification:

Battery Model	MS 12-12 12V12AH			
Designed Floating Life	3~5 Years			
Capacity (25°C)	20HR(0.60A,10.5V)	10HR(1.15A,10.5V)	5HR(2.16A,10.5V)	1HR(7.19A,10.5V)
	12.00AH	11.50AH	10.80AH	7.19AH
Dimensions	Length	Width	Height	Total Height
	151mm (5.94inch)	98mm (3.86inch)	94mm (3.70inch)	99mm (3.90inch)
Approx. Weight	3.70Kg (8.15 lbs) ±5%			
Internal Resistance	Full charged at 25°C : ≤25mΩ			
Self Discharge	3% of capacity declined per month at (25°C)			
Capacity Affected by Temp.(20HR)	40°C	25°C	0°C	-15°C
	102%	100%	85%	65%
Charge Voltage(25oC)	Cycle use		Float use	
	14.4-15.0V(-30mV/°C), max. Current: 3.60A		13.6-13.8V (-20mV/°C)	

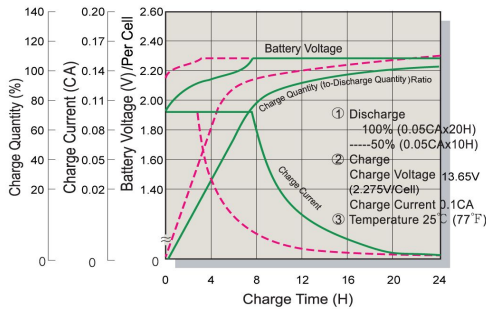
Terminal Voltage (V) and Discharge Time



Capacity Retention Characteristic



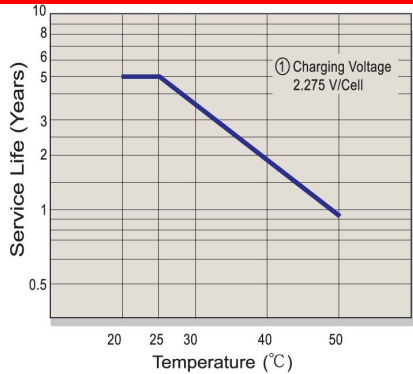
Battery Voltage and Charge Time for Standby Use



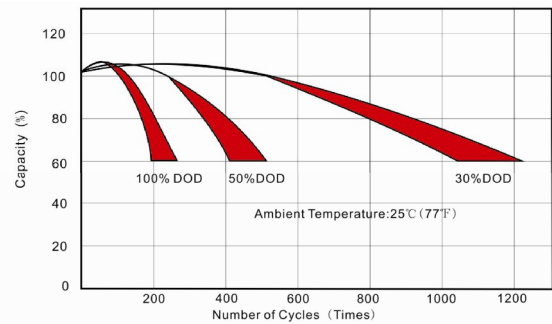
Battery Voltage and Charge Time for Cycle Use



Tickle(or Float) Service Life



Cycle Service Life



Constant Current Discharge (CC, Unit: A) at 25°C (77°F)

F.V/Time	5Min	10Min	15Min	30Min	1Hr	2Hr	3Hr	4Hr	5Hr	6Hr	10Hr	20Hr
1.85V/Cell	34.25	24.68	18.88	11.93	6.92	3.97	3.03	2.423	2.080	1.696	1.112	0.578
1.80V/Cell	34.91	25.15	19.24	12.16	7.06	4.04	3.09	2.469	2.120	1.728	1.133	0.589
1.75V/Cell	35.56	25.62	19.60	12.39	7.19	4.12	3.15	2.515	2.160	1.761	1.155	0.600
1.70V/Cell	38.76	27.16	20.78	12.88	7.31	4.19	3.20	2.560	2.198	1.792	1.175	0.611
1.67V/Cell	42.67	29.46	22.55	13.60	7.39	4.24	3.24	2.587	2.221	1.811	1.187	0.617
1.60V/Cell	46.23	31.00	23.72	14.18	7.47	4.28	3.27	2.615	2.245	1.830	1.200	0.624

Constant Power Discharge (CP, Unit: W) at 25°C (77°F)

F.V/Time	5Min	10Min	15Min	30Min	1Hr	2Hr	3Hr	4Hr	5Hr	6Hr	10Hr	20Hr
1.85V/Cell	66.79	48.12	36.82	23.27	13.50	7.74	5.92	4.72	4.62	3.31	2.17	1.13
1.80V/Cell	68.07	49.04	37.53	23.71	13.76	7.89	6.03	4.81	4.71	3.37	2.21	1.15
1.75V/Cell	69.34	49.96	38.23	24.16	14.02	8.03	6.14	4.91	4.80	3.43	2.25	1.17
1.70V/Cell	75.59	52.96	40.52	25.12	14.26	8.17	6.25	4.99	4.88	3.49	2.29	1.19
1.67V/Cell	83.21	57.45	43.96	26.52	14.42	8.26	6.32	5.04	4.93	3.53	2.32	1.20
1.60V/Cell	90.15	60.45	46.26	27.66	14.57	8.35	6.38	5.10	4.99	3.57	2.34	1.22