

MHB MS Series--Small-size batteries

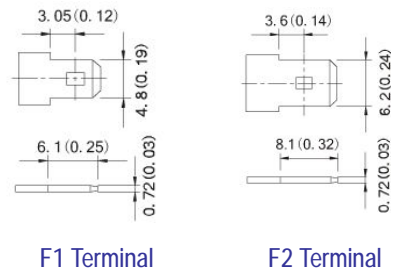
- 100% before shipment testing, stable and reliable long-term quality
- patented grid alloy formula and updated manufacturing technique
- completely sealed and maintenance-free, low self-discharge
- Excellent charging and re-charging acceptance
- Cycle use: More than 260 cycles at 100% DOD
- Floating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

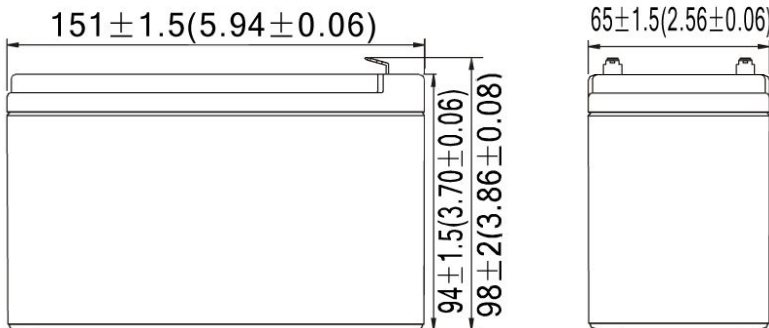
Construction:

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



F1 Terminal

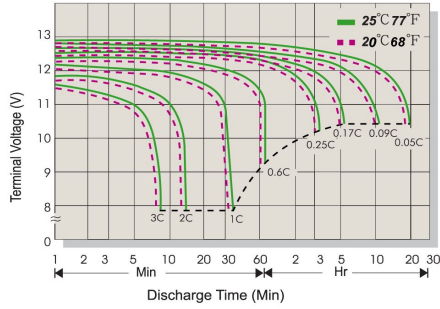
F2 Terminal



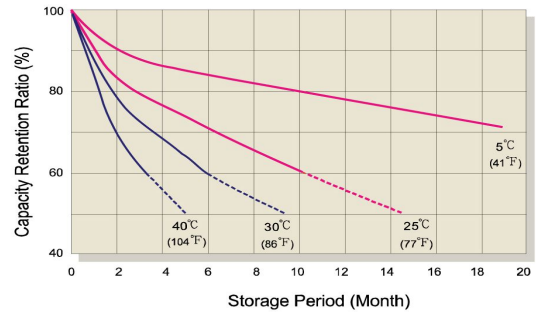
Speification:

Battery Model	MS 9-12 12V9.0AH			
Designed Floating Life	3~5 Years			
Capacity (25℃)	20HR(0.45A,10.5V)	10HR(0.80A,10.5V)	5HR(1.48A,10.5V)	1HR(4.31A,10.5V)
	9.00AH	8.00AH	7.40AH	4.31AH
Dimensions	Length	Width	Height	Total Height
	151mm (5.94inch)	65mm (2.56inch)	94mm (3.70inch)	98mm (3.86inch)
Approx. Weight	2.55Kg (5.62 lbs) ±5%			
Internal Resistance	Full charged at 25℃ : ≤23mΩ			
Self Discharge	3% of capacity declined per month at (25℃)			
Capacity Affected by Temp.(20HR)	40℃	25℃	0℃	-15℃
	102%	100%	85%	65%
Charge Voltage(25oC)	Cycle use		Float use	
	14.4-14.7V(-30mV/℃), max. Current: 2.70A		13.5-13.8V (-20mV/℃)	

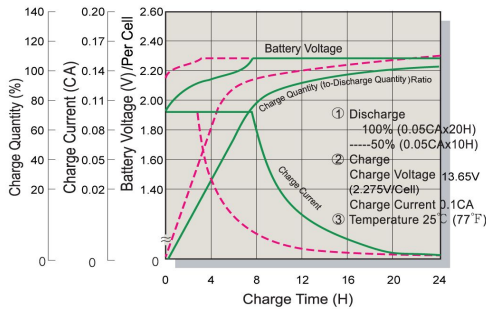
Terminal Voltage (V) and Discharge Time



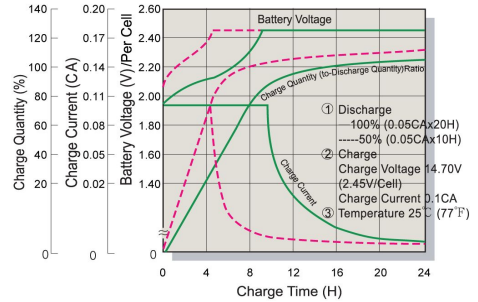
Capacity Retention Characteristic



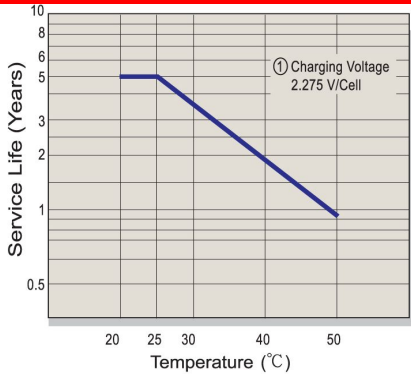
Battery Voltage and Charge Time for Standby Use



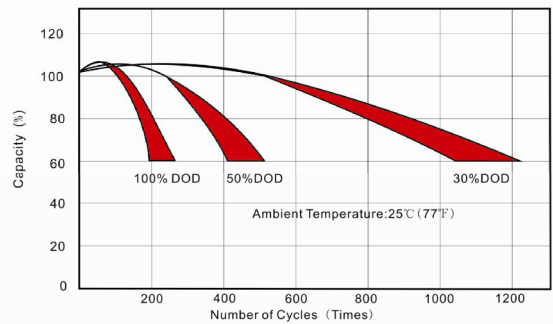
Battery Voltage and Charge Time for Cycle Use



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	25.69	18.51	14.16	8.95	5.19	2.98	2.28	1.817	1.560	1.272	0.834	0.433
1.80V/Cell	26.18	18.86	14.43	9.12	5.29	3.03	2.32	1.852	1.590	1.296	0.850	0.442
1.75V/Cell	26.67	19.22	14.70	9.29	5.39	3.09	2.36	1.887	1.620	1.320	0.866	0.450
1.70V/Cell	29.07	20.37	15.59	9.66	5.49	3.14	2.40	1.920	1.648	1.344	0.881	0.458
1.67V/Cell	32.01	22.10	16.91	10.20	5.54	3.18	2.43	1.940	1.666	1.358	0.891	0.463
1.60V/Cell	34.67	23.25	17.79	10.64	5.60	3.21	2.46	1.961	1.684	1.373	0.900	0.468

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	50.09	36.09	27.62	17.45	10.13	5.80	4.44	3.54	3.04	2.48	1.63	0.85
1.80V/Cell	51.05	36.78	28.14	17.78	10.32	5.91	4.52	3.61	3.10	2.53	1.66	0.86
1.75V/Cell	52.01	37.47	28.67	18.12	10.51	6.02	4.61	3.68	3.16	2.57	1.69	0.88
1.70V/Cell	56.69	39.72	30.39	18.84	10.70	6.13	4.69	3.74	3.21	2.62	1.72	0.89
1.67V/Cell	62.41	43.09	32.97	19.89	10.81	6.20	4.74	3.78	3.25	2.65	1.74	0.90
1.60V/Cell	67.61	45.34	34.00	20.74	10.93	6.26	4.79	3.82	3.28	2.68	1.76	0.91