

MHB MS Series--Small-size batteries

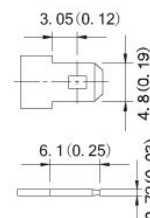
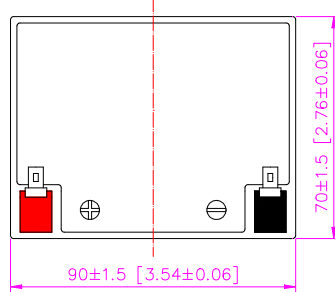
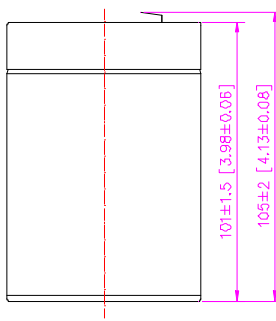
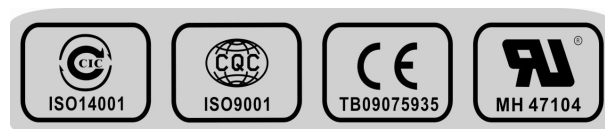
- 100% before shipment testing, stable and reliable long-term quality
- patented grid alloy formula and updated manufacturing technique
- completely sealed and maintenance-free, low self-discharge
- Excellent charging and re-charging acceptance
- Cycle use: More than 260 cycles at 100% DOD
- Floating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

Application:

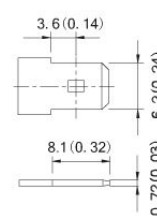
- Alarm System
- Cable Television
- Communication Equipment
- Emergency Power System
- Security System
- Medical Equipment
- UPS
- Power tools
- Control Equipment
- Toys

Construction:

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



F1 Terminal

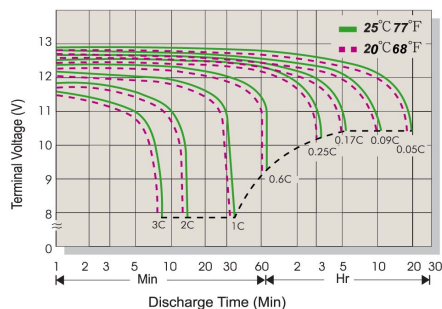


F2 Terminal

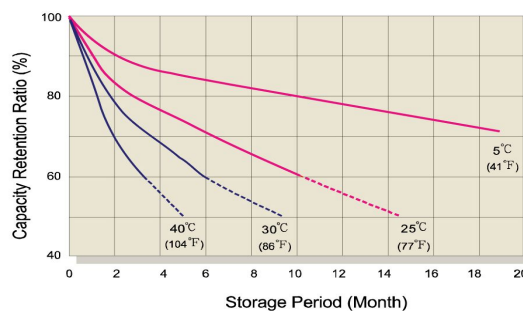
Speification:

Battery Model	MS 4-12 12V4.0AH			
Designed Floating Life	3~5 Years			
Capacity (25℃)	20HR(0.20A,10.5V)	10HR(0.385A,10.5V)	5HR(0.72A,10.5V)	1HR(2.40A,10.5V)
	4.00AH	3.85AH	3.60AH	2.40AH
Dimensions	Length	Width	Height	Total Height
	90mm (3.54inch)	70mm (2.76inch)	101mm (3.98inch)	105mm (4.13inch)
Approx. Weight	1.41Kg (3.151lbs) ± 5%			
Internal Resistance	Full charged at 25℃ : ≤40mΩ			
Self Discharge	2% of capacity declined per month at (25℃)			
Capacity Affected by Temp.(20HR)	40℃	25℃	0℃	-15℃
	102%	100%	85%	65%
Charge Voltage(25℃)	Cycle use		Float use	
	14.4-15.0V(-30mV/℃), max. Current: 1.20A		13.6-13.8V (-20mV/℃)	

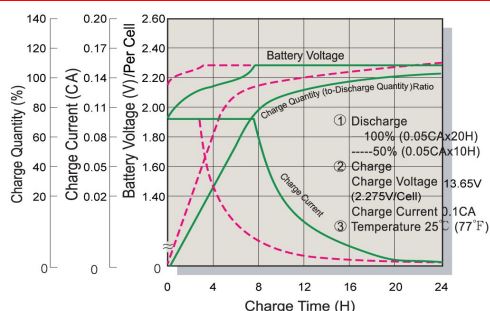
Terminal Voltage (V) and Discharge Time



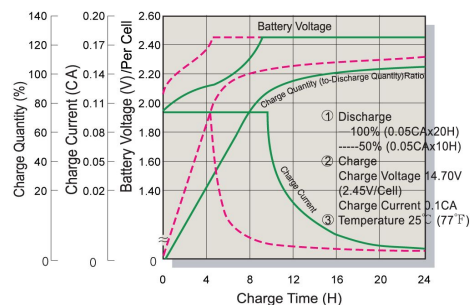
Capacity Retention Characteristic



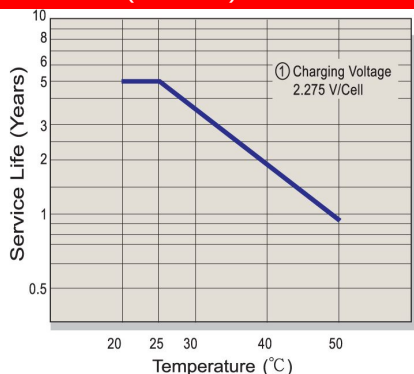
Battery Voltage and Charge Time for Standby Use



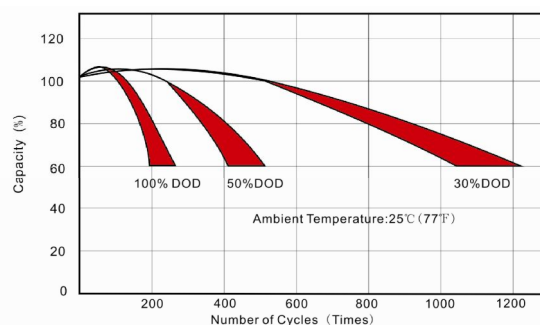
Battery Voltage and Charge Time for Cycle Use



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	11.42	8.53	6.29	3.98	2.31	1.32	1.01	0.808	0.693	0.565	0.371	0.193
1.80V/Cell	11.64	8.70	6.41	4.05	2.35	1.35	1.03	0.823	0.707	0.576	0.378	0.196
1.75V/Cell	11.85	8.86	6.53	4.13	2.40	1.37	1.05	0.838	0.720	0.587	0.385	0.200
1.70V/Cell	12.92	9.39	6.93	4.29	2.44	1.40	1.07	0.853	0.733	0.597	0.392	0.204
1.67V/Cell	14.22	10.19	7.52	4.53	2.46	1.41	1.08	0.862	0.740	0.604	0.396	0.206
1.60V/Cell	15.41	10.72	7.91	4.73	2.49	1.43	1.09	0.872	0.748	0.610	0.400	0.208

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	22.26	16.64	12.27	7.76	4.50	2.58	1.97	1.57	1.35	1.10	0.72	0.38
1.80V/Cell	22.69	16.96	12.51	7.90	4.59	2.63	2.01	1.60	1.38	1.12	0.74	0.38
1.75V/Cell	23.11	17.28	12.74	8.05	4.67	2.68	2.05	1.64	1.40	1.14	0.75	0.39
1.70V/Cell	25.20	18.31	13.51	8.37	4.75	2.72	2.08	1.66	1.43	1.16	0.76	0.40
1.67V/Cell	27.74	19.87	14.65	8.84	4.81	2.75	2.11	1.68	1.44	1.18	0.77	0.40
1.60V/Cell	30.05	20.91	15.42	9.22	4.86	2.78	2.13	1.70	1.46	1.19	0.78	0.41