



VRLA Battery

**MS3.2-12** 12V 3.2Ah

MS Series SLA Battery

**MHB MS Series--Small-size batteries**

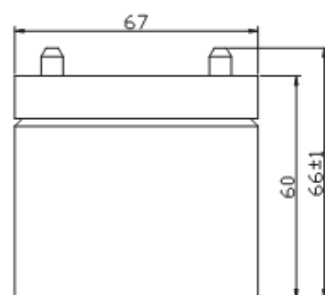
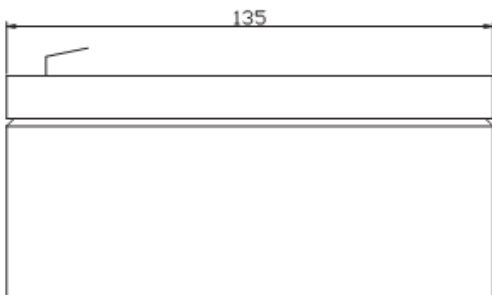
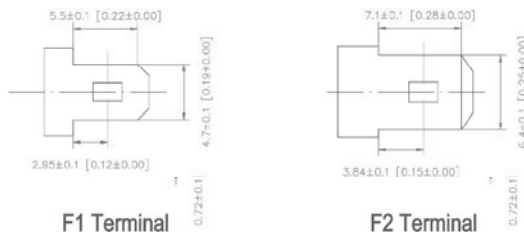
- 100% before shipment testing, stable and reliable long-term quality
- patented grid alloy formula and updated manufacturing technique
- completely sealed and maintenance-free, low self-discharge
- Excellent charging and re-charging acceptance
- Cycle use: More than 260 cycles at 100% DOD
- Floating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

- Component .....Raw material
- Positive .....Lead dioxide
- Negative .....Lead
- Container .....ABS
- Cover .....ABS
- Sealant .....Epoxy
- Safety valve .... Rubber
- Terminal .....Copper
- Separator .....Fiber glass
- Electrolyte .....Sulfuric acid



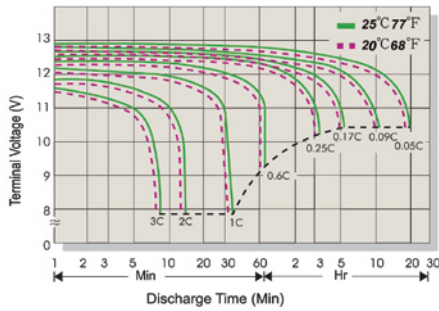
**Specification:**

Battery Model	MS 3.2 - 12 12V 3.2AH			
Designed Floating Life	3~5 Years			
Capacity@(40°C)	20HR (0.17A,1.75V)	10HR (0.32A,1.75V)	5HR (0.58A,1.75V)	1HR (2.20A,1.75V)
	3.20 AH	3.00AH	2.85AH	2.2AH
Dimensions	Length	Width	Height	Total Height
	134mm(5.28inches)	67mm(2.64inches)	61mm(2.40inches)	66mm (2.60inch)
Approx. Weight	1.30Kg (2.86 lbs) ± 5%			
Internal Resistance	Full charged at 25°C: ≤ 45 mΩ			
Self Discharge	2% 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(25°C)	Cycle use		Float use	
	14.4-15.0V(-30mV/°C), max. Current: 1.00A		13.6-13.8V (-20mV/°C)	

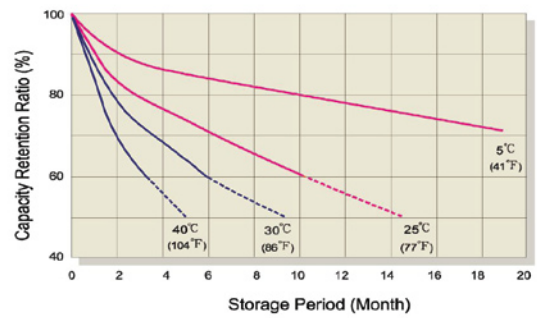
**FUJIAN MINHUA POWER SOURCE CO., LTD.**

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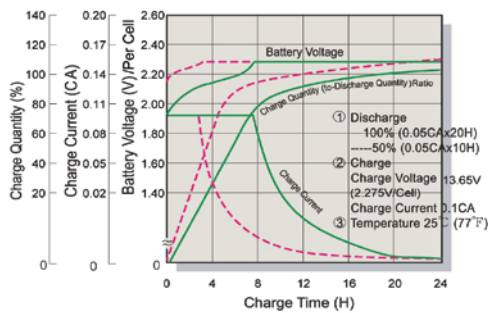
### Terminal Voltage (V) and Discharge Time



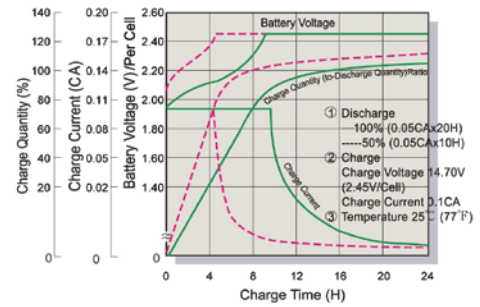
### Capacity Retention Characteristic



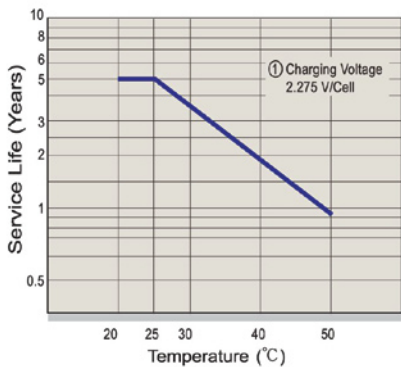
### Battery Voltage and Charge Time for Standby Use



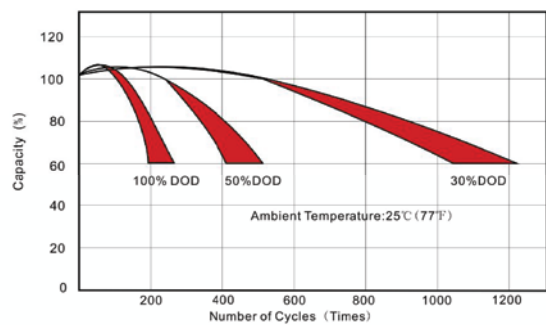
### Battery Voltage and Charge Time for Cycle Use



### Tickle(or Float) Service Life



### Cycle Service Life



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

F.V/Time	5Min	10Min	15Min	30Min	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V/Cell	12.4	8.18	6.18	3.80	2.12	1.17	0.86	0.69	0.58	0.39	0.32	0.17
1.65V/Cell	11.9	8.02	5.94	3.71	2.06	1.15	0.85	0.68	0.58	0.38	0.31	0.17
1.70V/Cell	11.4	7.82	5.67	3.61	1.99	1.12	0.83	0.67	0.57	0.38	0.31	0.17
1.75V/Cell	10.4	7.31	5.30	3.49	1.93	1.10	0.82	0.63	0.57	0.37	0.31	0.17
1.80V/Cell	9.95	6.99	4.94	3.39	1.85	1.07	0.81	0.62	0.54	0.37	0.30	0.16
1.85V/Cell	9.21	6.58	4.59	3.30	1.79	1.04	0.76	0.61	0.52	0.36	0.29	0.16

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

F.V/Time	5Min	10Min	15Min	30Min	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60 Volt	129	88.0	65.8	41.0	23.2	13.0	9.65	7.80	6.70	4.43	3.63	2.00
1.65 Volt	126	87.9	64.7	40.9	23.2	12.9	9.65	7.77	6.69	4.43	3.63	1.98
1.70 Volt	122	87.6	63.3	40.8	23.0	12.9	9.64	7.76	6.69	4.41	3.62	1.95
1.75 Volt	114	83.0	60.5	40.1	22.3	12.7	9.52	7.43	6.62	4.41	3.62	1.94
1.80 Volt	112	80.8	57.0	39.1	21.5	12.5	9.54	7.32	6.37	4.32	3.56	1.95
1.85 Volt	104	76.2	53.5	38.7	20.9	12.3	9.07	7.30	6.18	4.27	3.54	1.91

