

#### MHB MM Series—Medium-size Battery

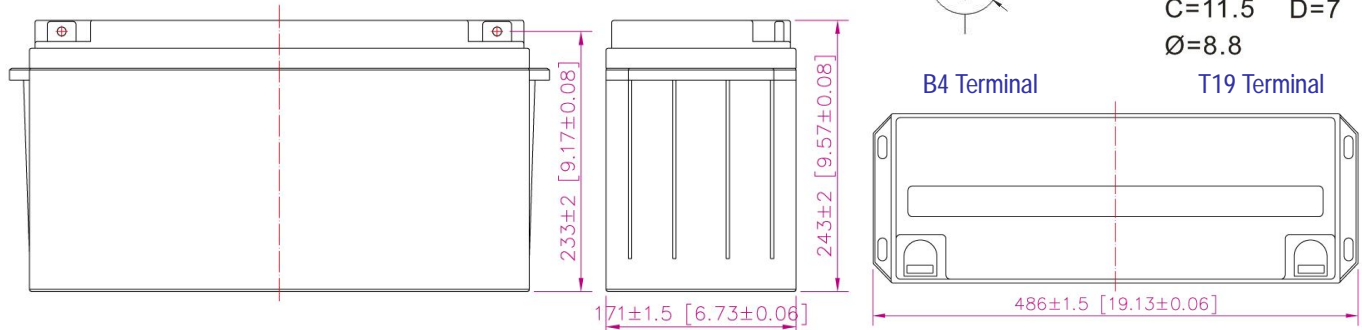
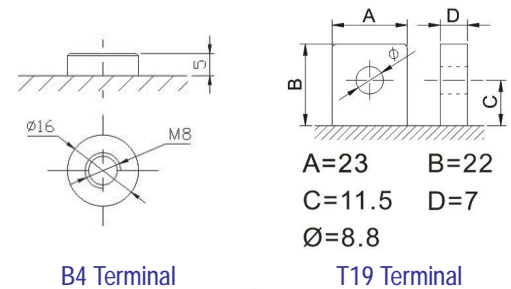
- High performance, completely maintenance-free, low self-discharge
- 100% precise quality testing, stable quality and high reliable performance
- Unique grid alloy formula and updated manufacturing technique
- Floating & standby use: up to 8 years
- Cycle use 1: Up to 260 cycles at 100% DOD
- Cycle use 2: Up to 500 cycles at 50% DOD

#### Application:

- Telecommunications
- Alarm and security system
- Uninterruptable Power Supply (UPS)
- Communication power supply
- Electric Power System (EPS)
- DC power supply
- Emergency backup power supply
- Auto control system

#### Construction:

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

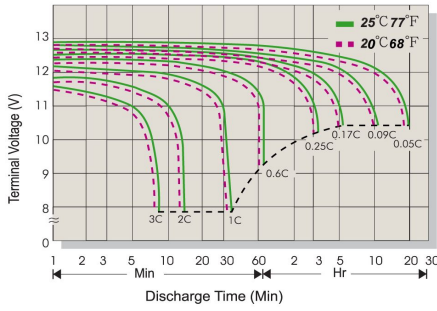


#### Speification:

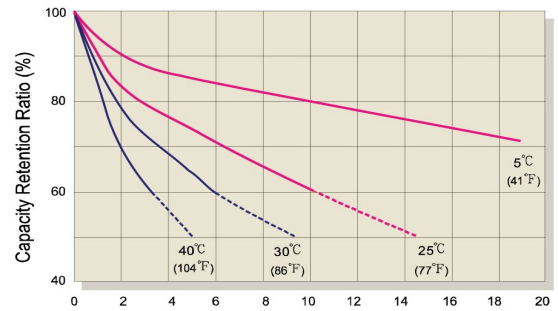
Battery Model	MM 140-12 12V140AH			
Designed Floating Life	Up to 10 Years			
Capacity (25°C)	20HR(7.43A,10.8V)	10HR(14.0A,10.8V)	5HR(27.2A,10.5V)	1HR(91.2A,10.5V)
	148.6AH	140.0AH	27.2AH	91.2AH
Dimensions	Length	Width	Height	Total Height
	486mm (19.13inch)	171mm (6.73inch)	243mm (9.57inch)	243mm (9.57inch)
Approx. Weight	39.80Kg (87.76 lbs)			
Internal Resistance	Full charged at 25°C: ≤6.5mΩ			
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	
	14.4-14.6V(-30mV/°C), max. Current:45.0A		13.6-13.8V (-20mV/°C)	

## FUJIAN MINHUA POWER SOURCE CO., LTD.

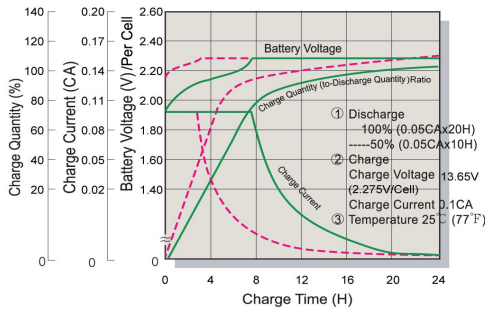
### Terminal Voltage (V) and Discharge Time



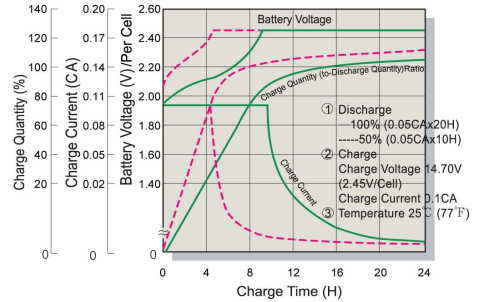
### Capacity Retention Characteristic



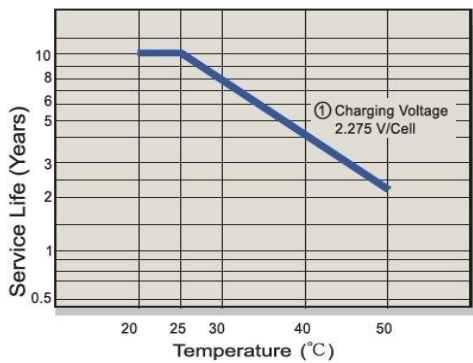
### Battery Voltage and Charge Time for Standby Use



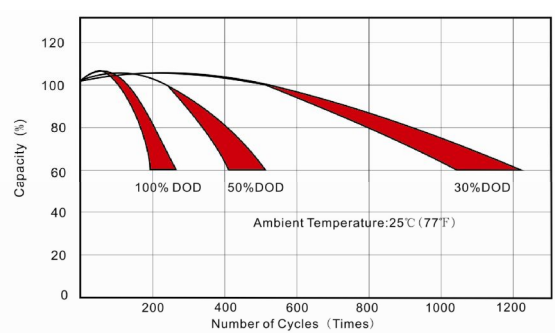
### Battery Voltage and Charge Time for Cycle Use



### 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	497.67	293.78	230.90	150.51	87.84	50.78	38.99	32.02	26.24	21.39	13.75	7.29
1.80V/Cell	507.18	299.39	235.31	153.39	89.52	51.75	39.74	32.63	26.74	21.80	14.00	7.43
1.75V/Cell	516.68	305.01	239.72	156.26	91.20	52.72	40.48	33.24	27.24	22.21	14.28	7.57
1.70V/Cell	563.19	323.31	254.10	162.50	92.80	53.65	41.20	33.83	27.72	22.60	14.53	7.70
1.67V/Cell	620.02	350.76	275.68	171.58	93.80	54.22	41.64	34.19	28.02	22.84	14.69	7.78

### 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	970.46	572.88	450.25	293.50	171.29	99.02	76.04	62.44	51.17	41.71	26.82	14.22
1.80V/Cell	989.00	583.82	458.86	299.11	174.57	100.91	77.49	63.63	52.14	42.51	27.30	14.49
1.75V/Cell	1007.5	594.76	467.46	304.72	177.84	102.80	78.94	64.82	53.12	43.31	27.85	14.76
1.70V/Cell	1098.1	630.45	495.50	316.87	180.97	104.61	80.33	65.97	54.06	44.07	28.34	15.02
1.67V/Cell	1209.0	683.98	537.58	334.58	182.91	105.73	81.19	66.67	54.63	44.54	28.64	15.18