

Minhua MR Series Front Terminal Maintenance-free Battery

- The grid is made of special high tin alloy, which makes the grid have superior corrosion resistance.
- The unique lead paste formula and high temperature curing process makes the battery have good charging acceptance and high rate discharge performance.
- The design of terminal in the front, saving installation space, making installation more convenient.
- 100% precision capacity inspection before shipments, with excellent consistency
- The designed service life is more than 10 years in the float charging mode

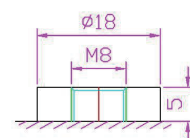
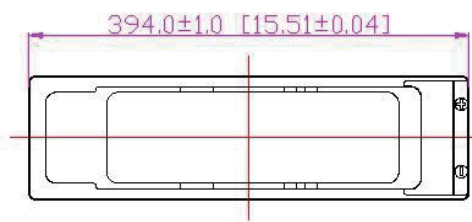
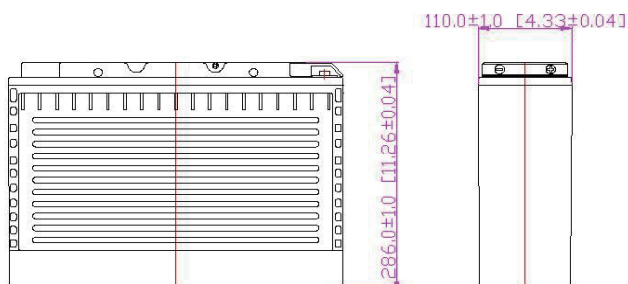
Application Area:

- Automatic alarm system
- Electrical automatic control system
- Uninterrupted power system
- Photovoltaic energy storage system
- General uninterruptible power system
- Centralized large-scale power system
- Distributed small-scale power system
- Financial system uninterruptible power system

Material:

- Component.....material
- Positive plate...Lead dioxide
- Negative plate..Spongy lead
- Battery case.....ABS Engineering plastics
- Sealant..... Epoxy resin
- Safety valve..... Fluorinated rubber
- Wire terminal..... Silver-plated copper
- Isolation plate..... Ultrafine glass fiber
- Electrolyte..... Analytical pure sulfuric

MR Series Front Terminal Maintenance-free Battery



M8 Bolt

B5 Terminal

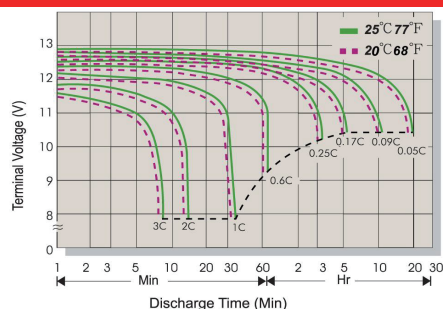
Technical Parameters:

Battery model	MR100-12B (12V100AH)			
Battery life designed	more than 10 years in the float charging mode			
Capacity designed (25°C)	20HR (5.460A, 10.8V)	10HR (10.000A, 10.8V)	5HR (19.660A, 10.5V)	1HR (65.820A, 10.5V)
	109.20AH	100.00AH	98.30AH	65.82AH
Battery size	Length	Width	Height	Total Height
	394mm	110mm	286mm	286mm
Battery weight	33.00 KG ±3%			
Nominal internal resistance	100% charging is completed at 25 ° C environment: ≤3.30mΩ			
Self-discharge rate	2% self-discharge rate per month, at 25°C environment			
Capacity at different Temperatures(20HR)	40°C	25°C	0°C	-15°C
	102%	100%	85%	65%
Charging voltage (25°C)	Circulation mode		Floating charge mode	
	14.4-15.0V (-30mV/°C), Max Charge Current : 25.00A		13.5-13.8V (-20mV/°C)	

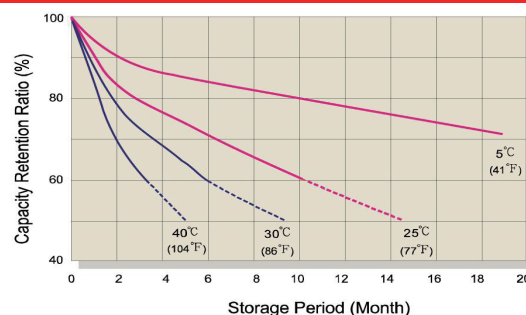
FUJIAN MINHUA POWER SOURCE CO., LTD.

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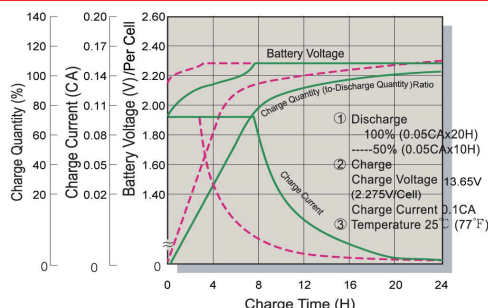
Discharge characteristics under constant current in different discharge rates



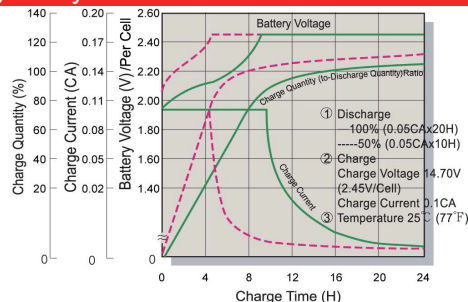
Capacity retention rate at different temperatures



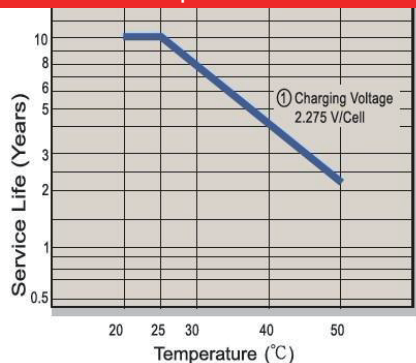
Correlation between charging time and battery voltage in floating charge mode



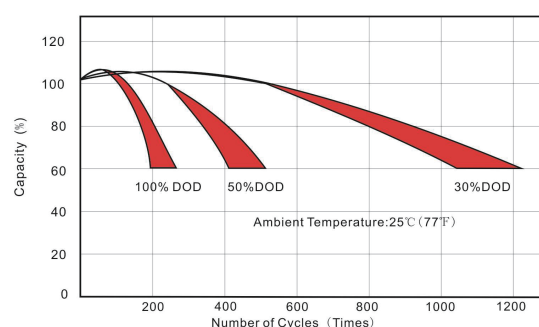
Correlation between charging time and battery voltage in cyclic mode



The life time characteristics in floating charge mode at different temperatures



Cycle life characteristics at different discharge depths



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	365.93	216.02	169.78	110.67	64.59	37.34	28.67	23.54	19.29	15.73	10.11	5.36
1.80V/Cell	372.92	220.14	173.02	112.79	65.82	38.05	29.22	23.99	19.66	16.03	10.00	5.46
1.75V/Cell	379.92	224.27	176.27	114.90	67.06	38.76	29.77	24.44	20.03	16.33	10.50	5.57
1.70V/Cell	414.11	237.73	186.84	119.49	68.24	39.45	30.29	24.87	20.38	16.62	10.68	5.66
1.67V/Cell	455.90	257.91	202.71	126.16	68.97	39.87	30.62	25.14	20.60	16.79	10.80	5.72
1.60V/Cell	493.89	271.37	213.28	131.56	69.71	40.30	30.95	25.41	20.82	16.98	10.92	5.79

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	713.57	421.23	331.07	215.81	125.95	72.81	55.91	45.91	37.62	30.67	19.72	10.45
1.80V/Cell	727.20	429.28	337.39	219.93	128.36	74.20	56.98	46.79	38.34	31.26	19.50	10.65
1.75V/Cell	740.83	437.33	343.72	224.06	130.76	75.59	58.05	47.67	39.06	31.84	20.48	10.85
1.70V/Cell	807.51	463.57	364.34	233.00	133.07	76.92	59.07	48.50	39.75	32.40	20.84	11.04
1.67V/Cell	889.00	502.92	395.28	246.01	134.49	77.74	59.70	49.02	40.17	32.75	21.06	11.16
1.60V/Cell	963.09	529.16	415.90	256.54	135.94	78.58	60.34	49.55	40.61	33.10	21.29	11.28