



6FM90D/12Volt 90Ah

Deep Cycle Batteries

Deep cycle Series Battery is specially designed for frequent cycling applications. The series battery uses high-tin alloy positive plate, active paste materials and stronger electrolyte, which gives 30% longer life than normal battery. Suitable for solar and wind energy systems.



Application

- ☆ Emergency Power System
- ☆ Communication equipment
- ☆ Telecommunication systems
- ☆ Uninterruptible power supplies
- ☆ Electric toy car and wheelchairs, etc
- ☆ Power tools
- ☆ Alarm system
- ☆ Marine equipment
- ☆ Medical equipment
- ☆ Fire and Security System

General Features

- ☆ Heavy Duty Grid
- ☆ Mechanized assembly
- ☆ Non-spillable construction
- ☆ High Reliability and Stability
- ☆ Sealed and Maintenance-free
- ☆ Long Life and low self-discharge design

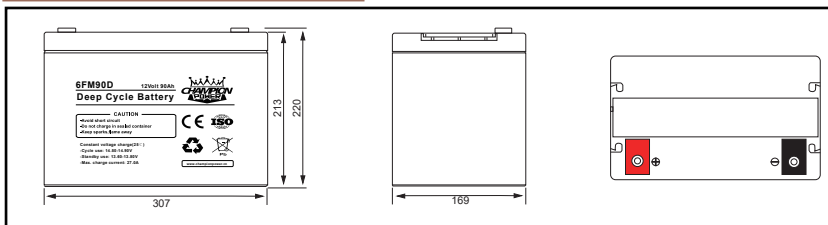
Construction

- ☆ Positive.....Lead dioxide
- ☆ Electrolyte.....Colloidal Sulfuric acid
- ☆ Separator.....Fiber glass
- ☆ Container.....ABS(UL94-HB) / Flame Retardant ABS (UL94-V0)
- ☆ Negative.....Lead
- ☆ Safety Valve.....EPDR
- ☆ Terminal.....Copper

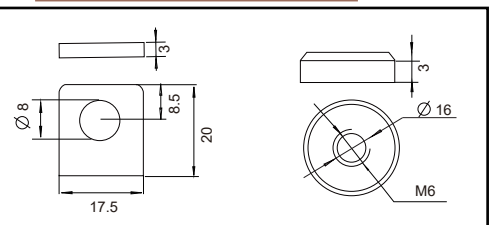
Specification

Battery Model	Nominal Voltage	12V			
	Rated capacity (10Hour rate)	90Ah			
	Cells Per battery	6			
Dimension	Length	Width	Height	Total Height	
	307mm	169mm	213mm	220mm	
Approx Weight	24.50Kg				
Internal Resistance	Full charged at 25°C (77°F): Approx 5.0mΩ				
Max. discharge current	720A(5s)				
Floating design life @ 25°C (77°F)	15 years				
Capacity @ 25°C (77°F)	10Hour rate(9A/10.8V)	5Hour rate(15.3A/10.5V)	3Hour rate(22.5A/10.5V)	1Hour rate(49.5A/10.5V)	
	90Ah	69Ah	54Ah	35Ah	
Capacity affected by Temp(10 HR)	40°C (104°F)	25°C (77°F)	0°C (32°F)	-15°C (5°F)	
	102%	100%	85%	65%	
Self Discharge @ 25°C (77°F)	After 3 months storage	After 6 months storage	After 12 months storage		
	93%	84%	65%		
Charge method @ 25°C (77°F)	Cycle Use	14.50-14.90V (Initial charging current less than 27.0A)			
	Float Use	13.60-13.80V			

Outer dimension (mm)



Terminal Type (mm)



Constant Current(Amp) and Constant Power(Watt) Discharge Table at 25°C (77°F)

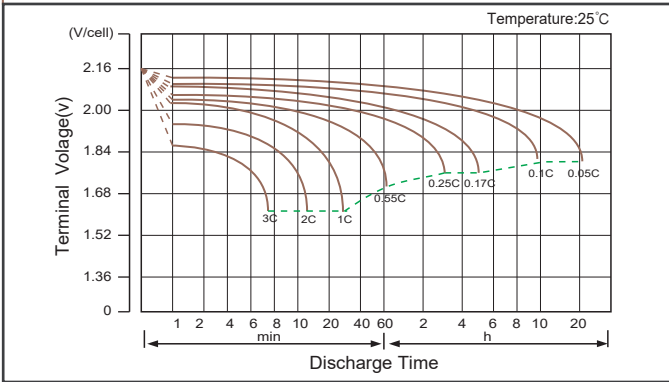
F.V / TIME		5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
9.60V	A	324.00	198.00	157.50	103.50	54.45	31.50	23.40	18.90	15.79	10.42	9.90	5.13
	W	3434.40	2102.76	1685.25	1117.80	593.51	343.35	257.40	207.90	173.66	115.72	109.89	57.71
10.20V	A	297.00	189.90	144.75	98.25	54.00	30.22	22.95	18.00	15.49	10.26	9.45	5.04
	W	3237.30	2107.89	1613.96	1105.31	607.50	341.54	259.34	204.30	175.78	116.45	107.26	57.20
10.50V	A	275.44	181.49	135.00	95.25	52.20	29.63	22.50	17.10	15.30	10.13	9.27	4.98
	W	3029.81	2041.81	1525.50	1085.85	595.08	339.21	257.63	196.65	175.95	116.44	106.61	57.24
10.80V	A	250.80	179.93	126.00	90.90	51.30	28.87	22.05	16.80	14.63	9.86	9.00	4.91
	W	2758.80	2051.18	1442.70	1049.90	592.52	333.51	255.78	195.72	170.38	114.90	104.85	57.25
11.10V	A	216.90	171.00	117.00	84.60	49.50	28.13	21.15	16.50	13.99	9.60	8.78	4.86
	W	2450.97	1975.05	1357.20	989.82	579.15	329.06	248.51	194.70	165.05	113.28	103.55	57.35

Note: The above datas are average values. (Edition 2017-11)

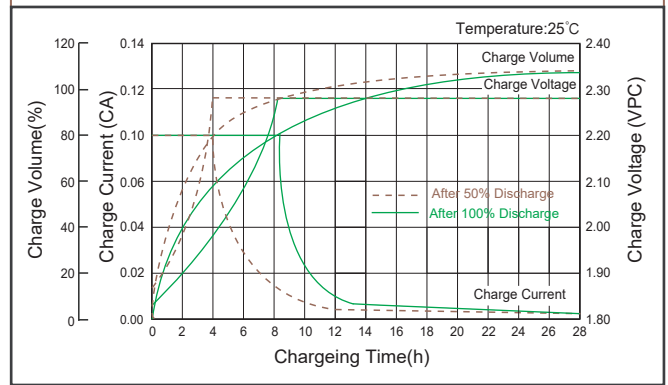


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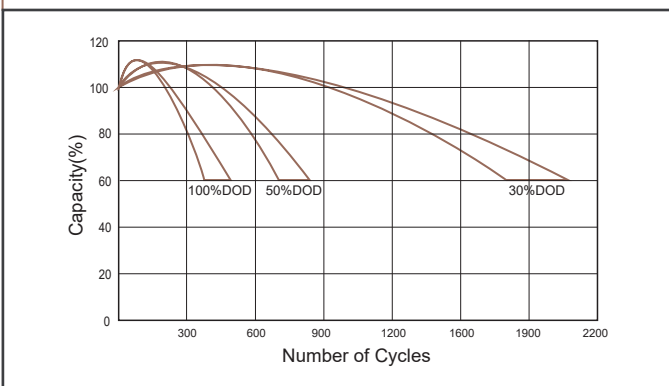
Discharge characteristic Curve



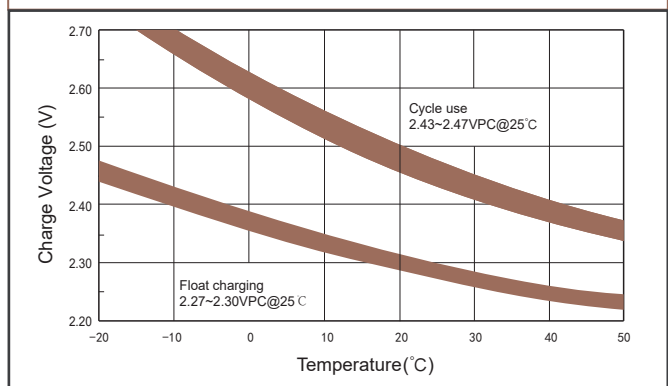
Charge Characteristic Curve For Standby Use



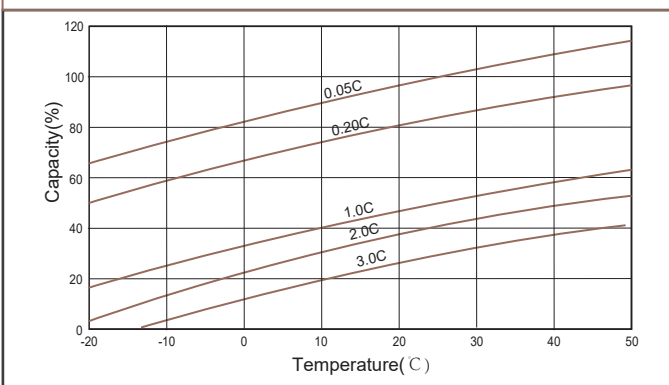
Cycle service life in relation to depth of discharge



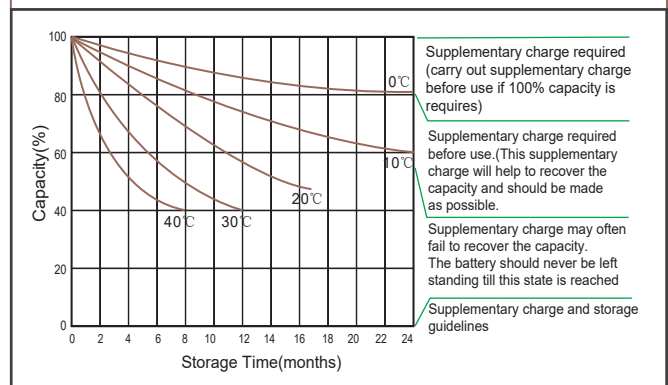
Relationship Between Charging Voltage And Temperature



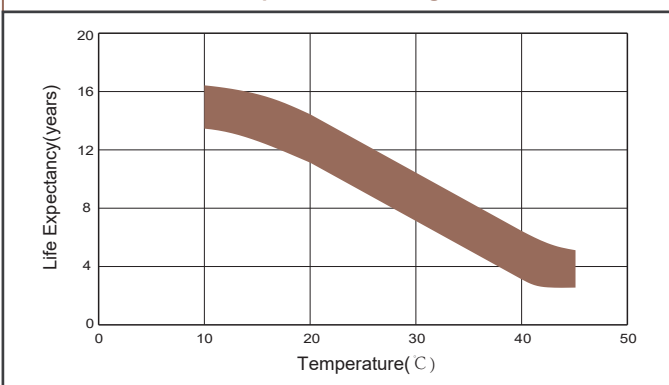
Temperature Effects On Capacity



Storage Characteristics



Effect Of emperature On Long Term Life



Relationship of OCV And State of Charge

