



# ACDC DYNAMICS 6FM65D Deep Cycle Batteries Instruction Manual

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**ACDC DYNAMICS 6FM65D Deep Cycle Batteries**



## Product Information

The Deep Cycle Batteries are designed for frequent cycling applications. They use a high-tin alloy positive plate, active paste materials, and a stronger electrolyte, resulting in a 30% longer life compared to normal batteries. These batteries are suitable for solar and wind energy systems.

## General Features

- Nominal Voltage: 12V
- Battery Model: 6FM65D/12Volt 65Ah
- Rated Capacity (10 Hour rate): 65Ah
- Cells Per Battery: 6
- Approx Weight: 19Kg
- Internal Resistance (Full charged at 25°C): Approx 5.5mΩ
- Max. Discharge Current: 520A (5s)
- Floating Design Life @ 25°C: 15 years

## Specification

- Capacity @ 25°C:
  - 10 Hour rate (6.5A/10.8V): 65Ah
  - 5 Hour rate (11A/10.8V): 55Ah
  - 3 Hour rate (16A/10.8V): 49Ah
  - 1 Hour rate (35A/10.5V): 36Ah
- Capacity affected by Temp (10 HR):
  - 40°C: 102%
  - 25°C: 100%
  - 0°C: 85%
  - -15°C: 65%
- Self Discharge @ 25°C:

- After 3 months storage: 91%
- After 6 months storage: 82%
- After 12 months storage: 64%
- Charge Method @ 25°C:
  - Cycle Use: 14.5-14.9V (Initial charging current less than 19.5A)
  - Float Use: 13.6-13.8V

## Product Usage Instructions

### Caution:

- Avoid short circuit
- Do not charge in a sealed container
- Keep sparks and flames away

### Constant Voltage Charge:

- Cycle Use: 14.5-14.9V
- Standby Use: 13.6-13.8V
- Initial Current: 19.5A

**Note:** For more information, visit [www.championpower.cn](http://www.championpower.cn)

### Discharge Characteristic Curve:

Refer to the provided graph for the discharge time at different voltages and currents.

### Relationship between Charging Voltage and Temperature:

Use the table to determine the charging voltage based on the temperature.

### Temperature Effects on Float Life:

Refer to the graph to understand the impact of temperature on the float life of the battery.

### Life Characteristics of Standby Use:

Refer to the graph to understand the life expectancy of the battery in standby use.

### Cycle Service Life in Relation to Depth of Discharge:

Refer to the graph to understand the cycle service life based on the depth of discharge.

For further assistance, contact National Sales Centre at 010 202 3400 or Technical Support at 010 202 3500. Visit [www.acdc.co.za](http://www.acdc.co.za) for more information.

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

## **Specification**

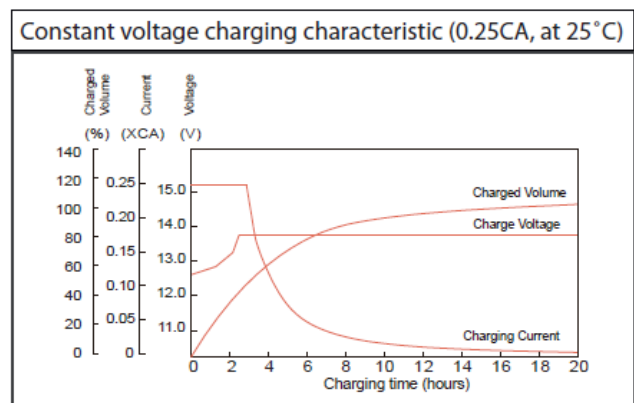
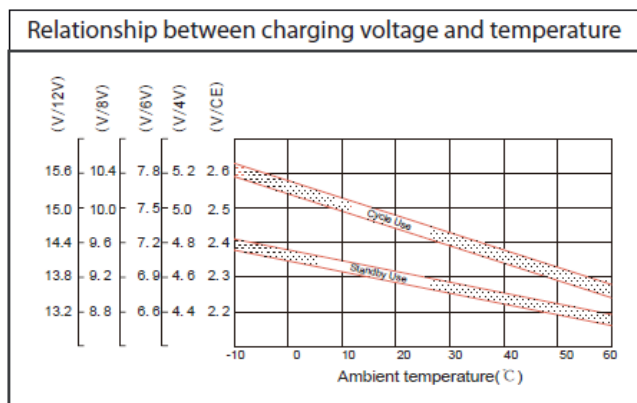
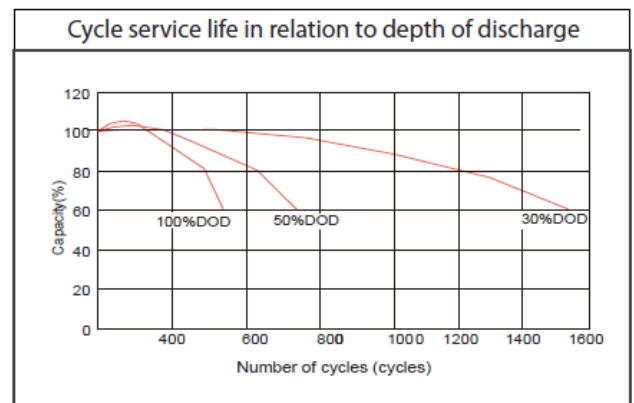
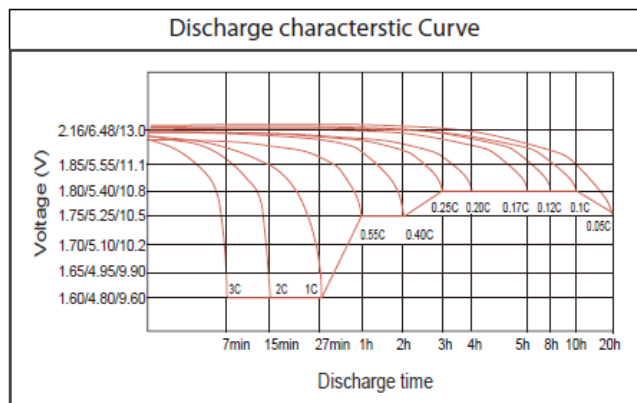
Battery Model	Nominal Voltage			12V							
	Rated capacity (10Hour rate)			65Ah							
	Cells	Per battery		6							
Dimension	Length			Width		Height		Total Height			
	350mm±1			167mm±1		178mm±2		181mm±2			
Approx Weight	19Kg										
Internal Resistance				Full charged at 25	(77		): Approx 5.5m				
Max.discharge current	520A(5s)										
Floating design life @ 25 (77 )	15 years										
Capacity @ 25 (77 )	10Hour rate(6.5 A/10.8V)			5Hour rate(11A/10.8V)		3Hour rate(16A/10.8V)		1Hour rate(35 A/10.5V)			
	65Ah			55Ah		49Ah		36Ah			
Capacity affected by Temp(10 HR)	40	(104	)	25 (77 )		0 (32 )		-15	(5	)	
	102%			100%		85%		65%			
Self Discharge @ 25 (77 )	After 3 months storage			After 6 months storage		After 12 months storage					
	91%			82%		64%					
Charge method @ 25 (77 )	Cycle Use			14.5-14.9V (Initial charging current less than 19.5A)							
	Float Use			13.6-13.8V							

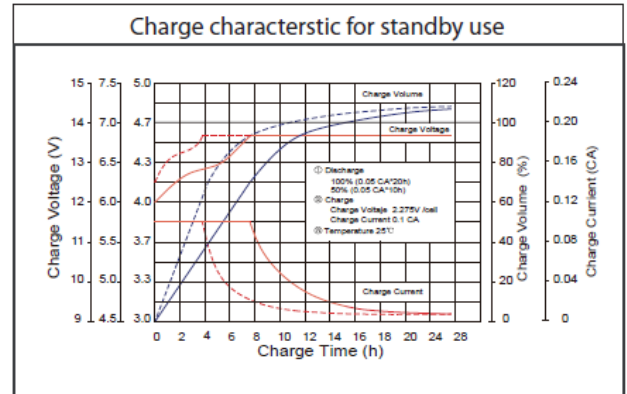
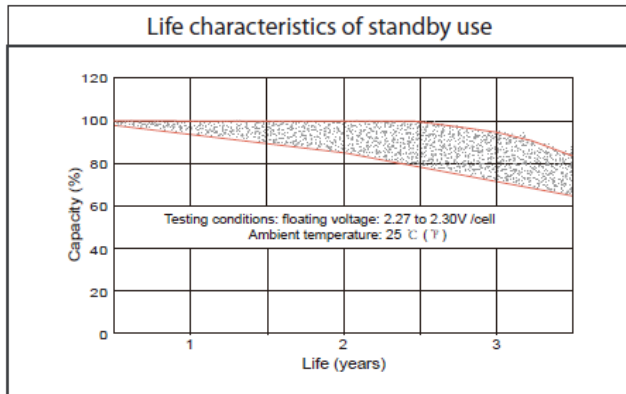
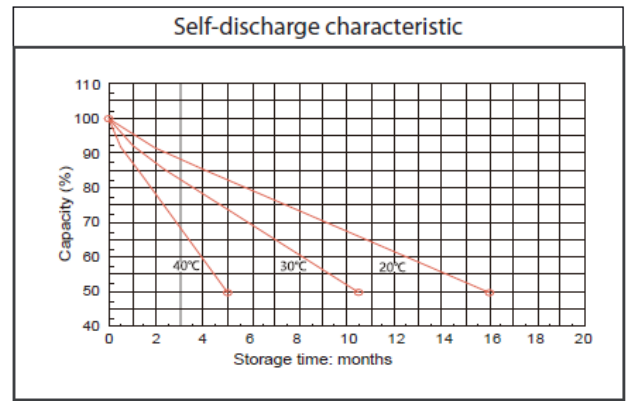
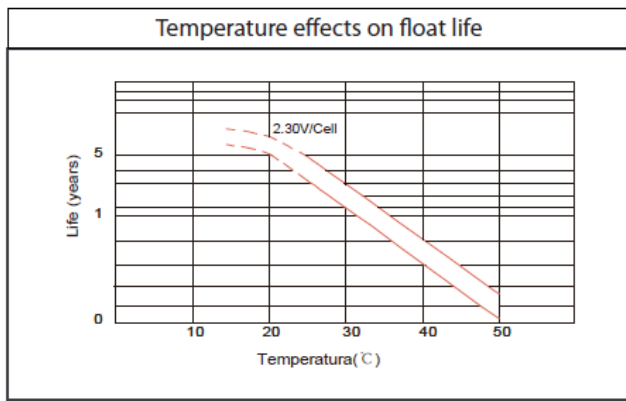
## Dimension

Outer Dimension(mm)	Terminal Type(mm)
<p>The image contains several technical drawings of the SFM65D battery. On the left is a front view showing a length of 350mm and a height of 178mm. Next to it is a side view showing a width of 167mm. To the right of the side view is a top view showing a length of 350mm and a width of 167mm. Further right is a detailed view of the terminal block, showing a width of 17.5mm and a height of 7.5mm. On the far right is a detailed view of the terminal post, showing a diameter of 16mm and a height of 3mm. The terminal post is labeled M6.</p>	

## 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	234.0 0	143.0 0	113.7 5	74.75	39.00	22.75	16.90	13.65	11.40	7.53	7.15	3.71
	W	2480. 40	1518. 66	1217. 13	807.3 0	425.1 0	247.9 8	185.9 0	150.1 5	125.4 2	83.57	79.37	41.68
10.20 V	A	214.5 0	143.5 4	104.5 4	70.96	40.30	21.83	16.58	13.00	11.19	7.41	6.83	3.64
	W	2338. 05	1593. 31	1165. 64	798.2 8	453.3 8	246.6 7	187.3 0	147.5 5	126.9 5	84.10	77.46	41.31
10.50 V	A	198.9 3	137.1 5	97.50	68.79	39.00	21.40	16.25	12.35	11.05	7.31	6.70	3.59
	W	2188. 20	1542. 94	1101. 75	784.2 2	444.6 0	244.9 8	186.0 6	142.0 3	127.0 8	84.09	76.99	41.34
10.80 V	A	181.1 3	131.0 8	91.00	65.65	37.70	20.85	15.93	12.13	10.56	7.12	6.50	3.55
	W	1992. 47	1494. 35	1041. 95	758.2 6	435.4 4	240.8 7	184.7 3	141.3 5	123.0 5	82.98	75.73	41.35
11.10 V	A	156.6 5	123.5 0	84.50	61.10	35.75	20.31	15.28	11.92	10.10	6.93	6.34	3.51
	W	1770. 15	1426. 43	980.2 0	714.8 7	418.2 8	237.6 6	179.4 8	140.6 2	119.2 0	81.81	74.78	41.42

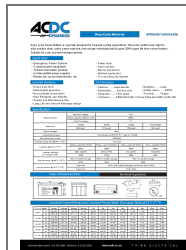




National Sales Centre – 010 202 3400 | Technical – 010 202 3500

[www.acdc.co.za](http://www.acdc.co.za)

## Documents / Resources



**[ACDC DYNAMICS 6FM65D Deep Cycle Batteries](#)** [pdf] Instruction Manual  
6FM65D, 6FM65D Deep Cycle Batteries, Deep Cycle Batteries, Cycle Batteries, Batteries

## References

- [ACDC Dynamics Online](#)
- [Industrial Vrla Battery,LifePo4 Lithium Battery-Champion Power](#)