

# 3FM180D-X 6V 180Ah(10hr)



The rechargeable batteries are lead-lead dioxide systems. The dilute sulfuric acid electrolyte is absorbed by separators and plates and thus immobilized. Should the battery be accidentally overcharged producing hydrogen and oxygen, special one-way valves allow the gases to escape thus avoiding excessive pressure build-up. Otherwise, the battery is completely sealed and is, therefore, maintenance-free, leak proof and usable in any position.

## Battery Construction

Component	Positive plate	Negative plate	Container	Cover	Safety valve	Terminal	Separator	Electrolyte
Raw material	Lead dioxide	Lead	ABS	ABS	Rubber	Pb	Fiberglass	Sulfuric acid

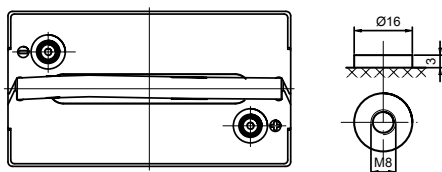
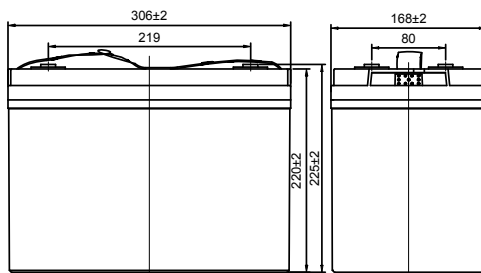
## General Features

- Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance or water adding.
- Not restricted for air transport-complies with IATA/ICAO Special Provision A67.
- UL-recognized component.
- Can be mounted in any orientation.
- Computer designed lead, calcium tin alloy grid for high power density.
- Long service life, float or cyclic applications.
- Maintenance-free operation.
- Low self discharge.

## Dimensions and Weight

Length(mm / inch)	306 / 12.0
Width(mm / inch)	164 / 6.46
Height(mm / inch)	220 / 8.66
Total Height(mm / inch)	225 / 8.86
Approx. Weight(Kg / lbs)	28.6 / 63.1

\* Weight deviation:  $\pm 3\%$



## Performance Characteristics

Nominal Voltage	6V
Number of cell	3
Design Life	10 years
Nominal Capacity 77°F(25°C)	
10 hour rate (18.0A, 5.4V)	180Ah
5 hour rate (32.8A, 5.25V)	164Ah
1 hour rate (127A, 4.80V)	127Ah
Internal Resistance	
Fully Charged battery 77°F(25°C)	$\leq 2.5\text{mOhms}$
Self-Discharge	
3% of capacity declined per month at 20°C(average)	
Operating Temperature Range	
Discharge	-20~60°C
Charge	-10~60°C
Storage	-20~60°C
Max. Discharge Current 77°F(25°C)	900A(5s)
Short Circuit Current	3050A
Charge Methods: Constant Voltage Charge 77°F(25°C)	
Cycle use	2.40-2.45VPC
Maximum charging current	54A
Temperature compensation	-15mV/°C
Standby use	2.20-2.30VPC
Temperature compensation	-10mV/°C

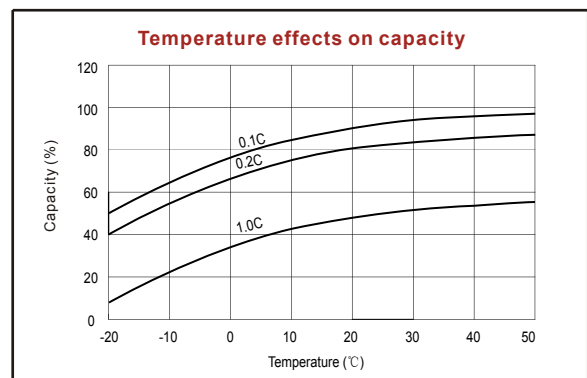
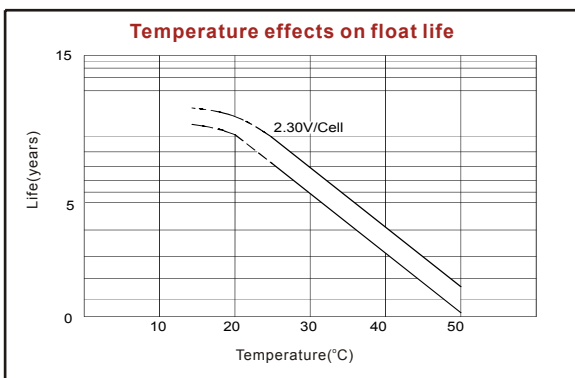
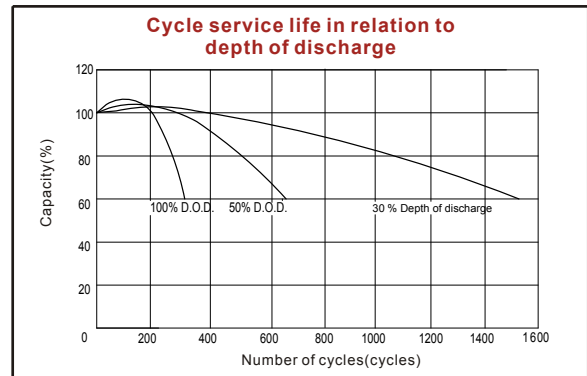
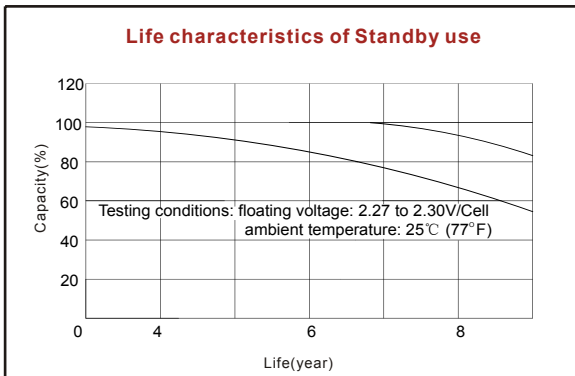
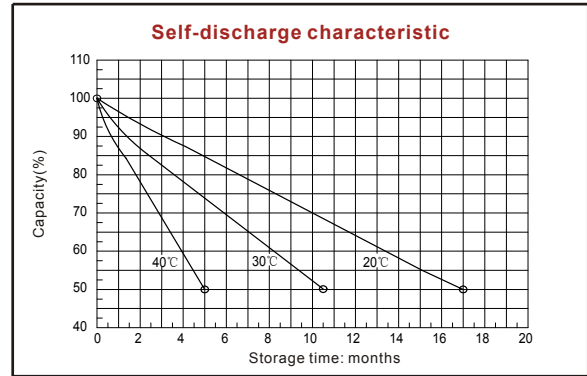
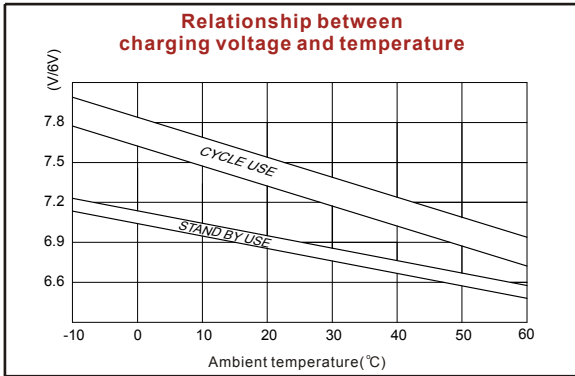
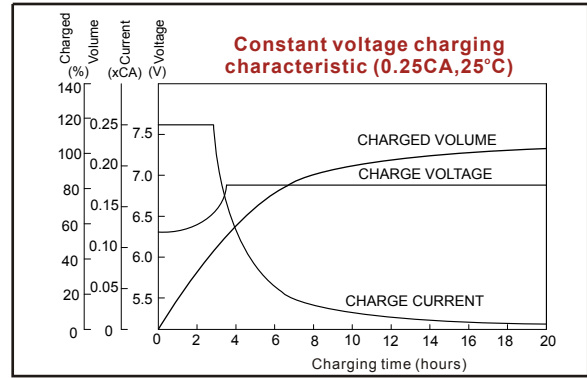
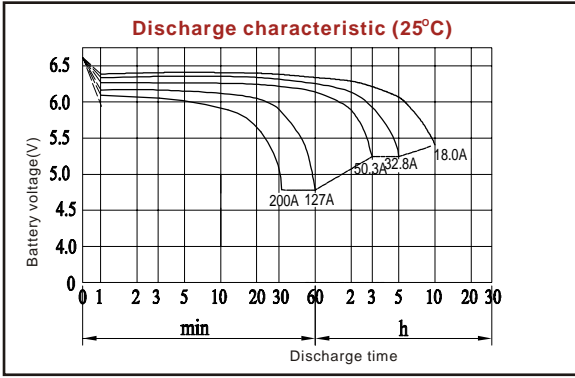
## Discharge Constant Current (Amperes at 77°F25°C)

End Point Volts/Cell	30min	45min	1h	3h	5h	10h
1.60V	220	159	127	52.5	34.0	18.6
1.65V	211	155	125	51.8	33.6	18.5
1.70V	202	151	123	51.1	33.2	18.4
1.75V	193	147	121	50.3	32.8	18.2
1.80V	183	143	118	49.5	32.3	18.0

## Discharge Constant Power (Watts at 77°F25°C)

End Point Volts/Cell	30min	45min	1h	2h	3h	5h
1.60V	397	292	251	146	107	66.9
1.65V	383	284	246	144	106	66.2
1.70V	369	276	241	142	105	65.5
1.75V	354	267	235	140	104	64.8
1.80V	339	258	229	137	103	64.0

(Note)The above characteristics data are average values obtained within three charge/discharge cycles not the minimum values.  
All data shall be changed without notice, Vision reserves the right to explain and update the information contained hereinto.



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