6FM90 *12V 90Ah(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

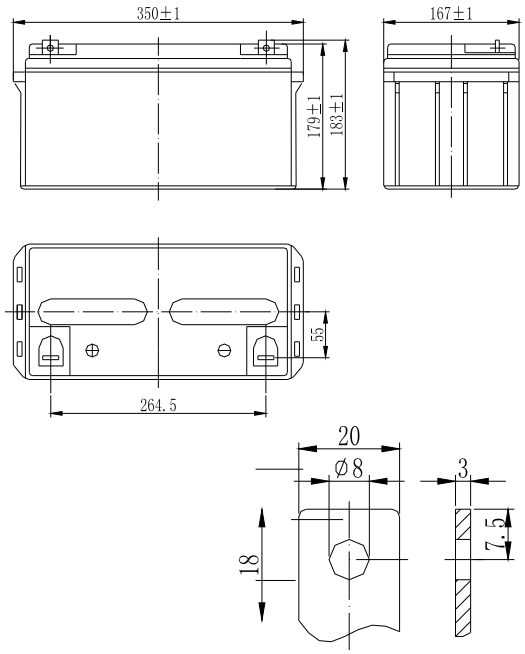
Component	Positive plate	Negative plate	Container	Cover	Safety valve	Terminal	Separator	Electrolyte
Raw material	Lead dioxide	Lead	ABS	ABS	Rubber	Copper	Fiberglass	Sulfuric acid

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) ..... 350 / 13.78
Width(mm / inch) ..... 167 / 6.57
Height(mm / inch) ..... 179 / 7.05
Total Height(mm / inch) ..... 183 / 7.20
Approx. Weight(Kg / lbs) ..... 25 / 55.1



Performance Characteristics

Nominal Voltage 12V
Number of cell 6
Design Life ..... 10 years

Nominal Capacity 77 F(25ºC)

10 hour rate (9.0A, 10.8V) 90Ah
5 hour rate (16.3A, 10.5V) 81.5Ah
1 hour rate (62A, 9.6V) 62Ah

Internal Resistance

Fully Charged battery 77ºF(25ºC) 5.1mOhms

Self-Discharge

3% of capacity declined per month at 20ºC(average)

Operating Temperature Range

Discharge ..... -20~60ºC
Charge ..... -10~60ºC
Storage ..... -20~60ºC

Max. Discharge Current 77ºF(25ºC) ..... 805A(5s)
Short Circuit Current 2020A

Charge Methods: Constant Voltage Charge 77ºF(25ºC)

Cycle use 14.4-14.7V
Maximum charging current 27A
Temperature compensation ..... -30mV/ºC
Standby use 13.6-13.8V
Temperature compensation ..... -20mV/ºC

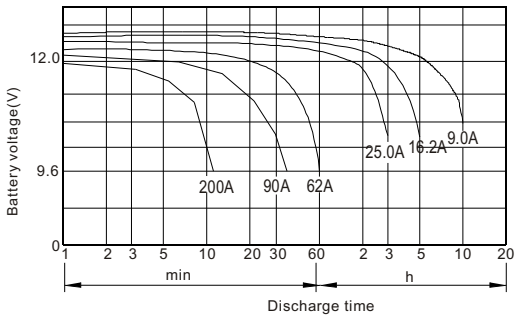
Discharge Constant Current (Amperes at 77ºF25ºC)

End Point Volts/Cell	5min	10min	15min	30min	45min	1h	2h	3h	5h
1.60V	290	220	176	102	76.4	62.7	36.3	27.2	17.4
1.65V	271	209	165	97.0	72.6	57.2	34.0	26.3	17.1
1.70V	255	188	155	92.0	69.0	56.8	33.2	25.2	16.9
1.75V	230	178	145	89.0	66.6	55.2	32.1	24.5	16.5
1.80V	205	165	134	85.5	63.3	53.0	30.7	23.3	15.9

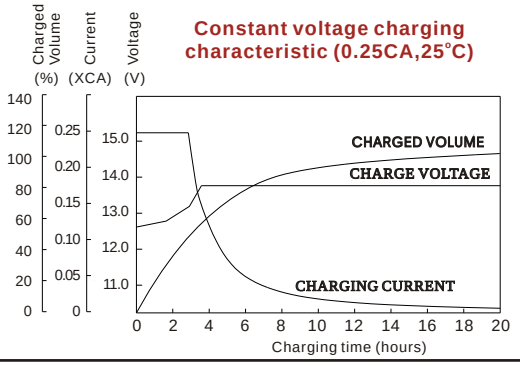
Discharge Constant Power (Watts at 77ºF25ºC)

End Point Volts/Cell	5min	10min	15min	30min	45min	1h	2h	3h	5h
1.60V	520	376	310	191	147	119	66.4	48.7	32.5
1.65V	508	367	305	182	141	113	65.0	48.5	32.1
1.70V	456	348	286	173	131	109	62.6	47.1	31.7
1.75V	429	346	283	169	129	104	60.5	45.7	30.9
1.80V	395	317	269	165	127	102	59.6	45.5	30.5

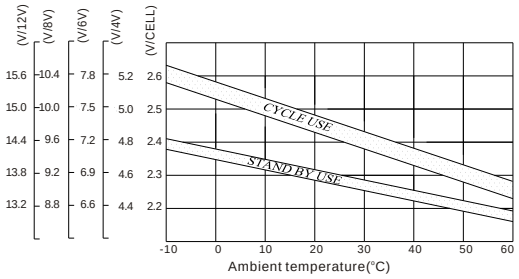
Discharge characteristic (25°C)



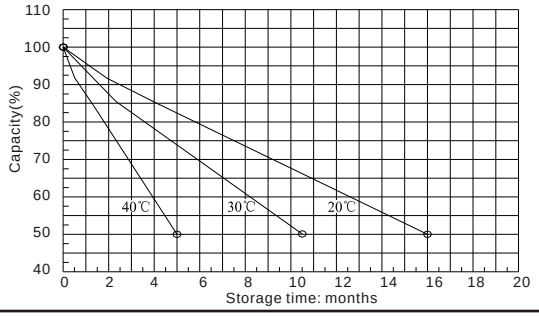
Constant voltage charging characteristic (0.25CA,25°C)



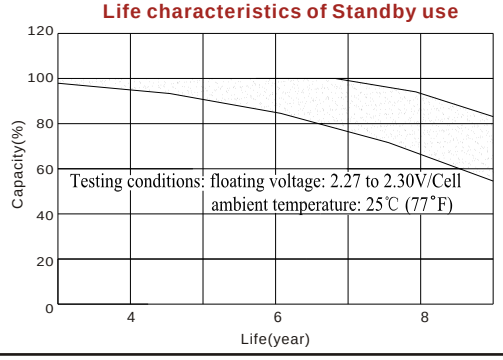
Relationship between charging voltage and temperature



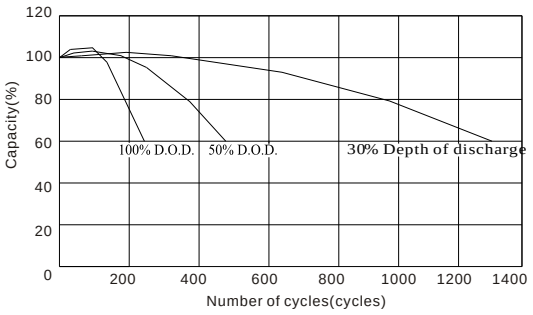
Self-discharge characteristic



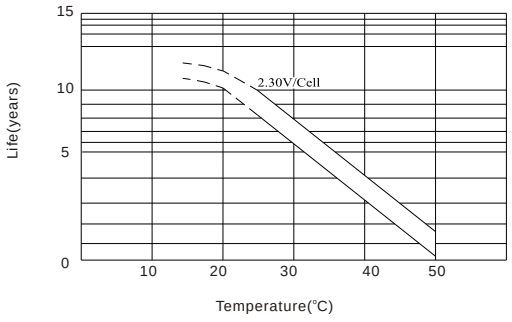
Life characteristics of Standby use



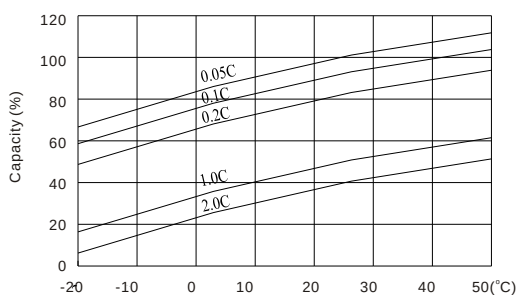
Cycle service life in relation to depth of discharge



Temperature effects on float life



Temperature effects on capacity



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