6FM120 12V 120Ah (20hr) Sealed Lead Acid (SLA) Battery

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

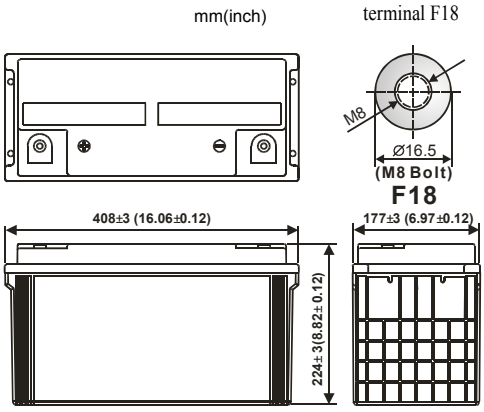
Component	Positive plate	Negative plate	Container&Cover	Safety valve	Terminal	Separator	Electrolyte
Raw material	Lead dioxide	Lead	ABS UL94 HB	Rubber	Copper	Fiberglass	Sulfuric acid

General Features

- Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance or water adding.
- Positive and negative plates in lead-calcium-tin alloy
- Stable quality & high reliability
- Sealed construction
- Maintenance-free operation
- Low pressure venting system
- Low self discharge
- High rate discharge
- Valve Regulated Lead Acid (VRLA) battery
- V0 Class Flame-Retardant ABS (UL94V-0) container and cover is optional
- Six months shelf life at 25ºC
- Design life 8-10 years depend on temperature, float charging*

Dimensions and Weight

Length(mm / inch)	408 / 16.06
Width(mm / inch)	177/ 6.97
Height(mm / inch)	224 / 8.82
Total Height(mm / inch	224 / 8.82
Approx. Weight(Kg / lbs)	35.5 / 78.1



Performance Characteristics

Nominal Voltage	12V
Number of cell	6
Design Life	8-10 years
Nominal Capacity 77ºF(25°C)	
10 hour rate (12A, 10.8V)	120Ah
5 hour rate (20.4A, 10.2V)	102Ah
1 hour rate (72A, 9.6V)	72Ah
Internal Resistance	
Fully Charged battery 77°F(25°C)	5.5mOhms
Self-Discharge	
3% of capacity declined per month at 25°C (average)	
Operating Temperature Range	
Discharge	-20~60ºC
Charge	-10~60ºC
Storage	-20~60ºC
Max. Discharge Current 77°F(25°C)	1,200A(5s)
Short Circuit Current	2,100A
Charge Methods: Constant Voltage Charge 77°F(25°C)	
Cycle use	14.4-14.8V
Maximum charging current	36A
Temperature compensation	-30mV/°C
Standby use	13.5-13.8V
Temperature compensation	-20mV/°C

Discharge Rates in Watts to Various End Voltage at 25ºC(77ºF)

End Voltage	1.80V	1.75V	1.70V	1.65V	1.60V
10 min	388	415	437	461	486
15 min	332	358	371	384	396
30 min	209	216	224	231	238
45 min	161	165	168	183	184
60 min	130	134	138	144	148
180 min	55.7	56.8	57.8	59.4	62.2
300 min	38.9	39.3	40.2	40.8	41.5
480 min	27.3	27.8	28.1	28.5	28.8
600 min	23.4	23.9	24.2	24.4	24.5

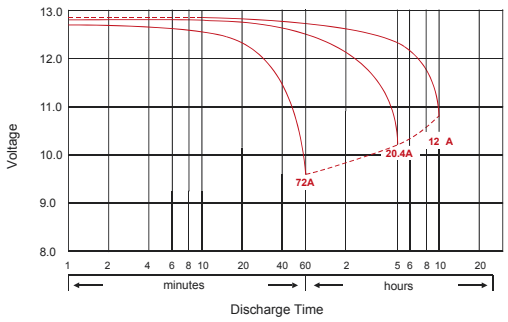
Discharge Rates in Amperes to Various End Voltage at 25ºC(77ºF)

End Voltage	1.80V	1.75V	1.70V	1.65V	1.60V
10 min	215	239	245	265	281
15 min	169	182	190	199	206
30 min	111	113	118	122	126
45 min	87.0	90.0	92.0	94.0	96.0
60 min	70.0	73.0	75.0	77.0	79.0
180 min	32.5	35.0	35.6	36.1	36.6
300 min	20.3	21.0	21.5	21.7	21.9
480 min	14.1	14.5	14.7	15.0	15.1
600 min	12.5	12.6	12.7	12.8	13.0

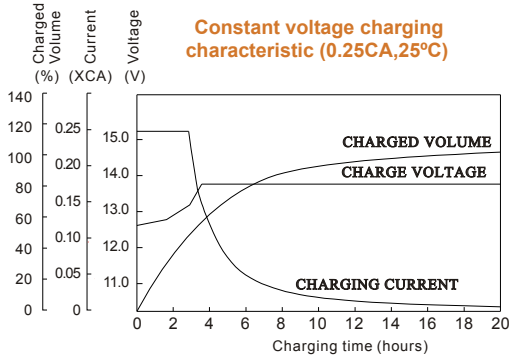
(Note)The above characteristics data are average values.

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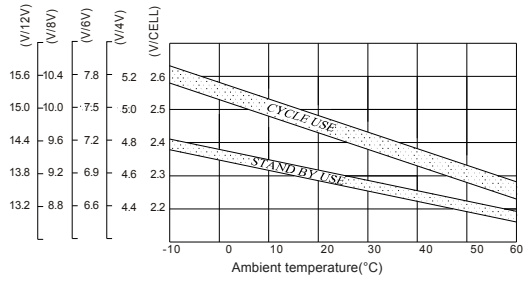
Discharge characteristic (25ºC)



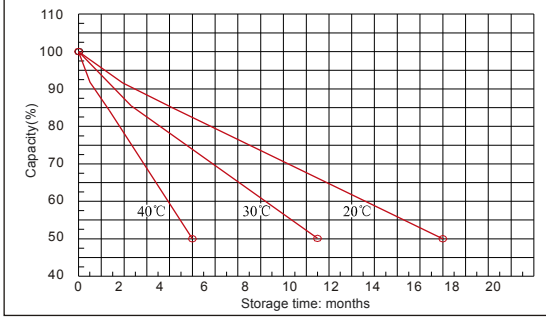
Constant voltage charging characteristic (0.25CA,25ºC)



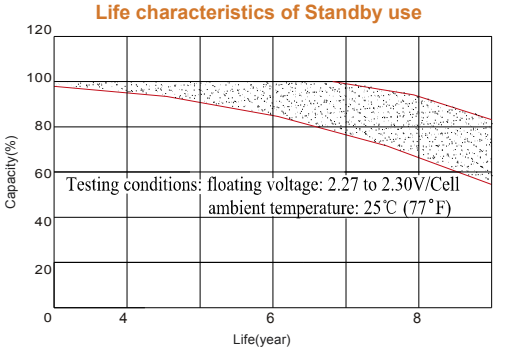
Relationship between charging voltage and temperature



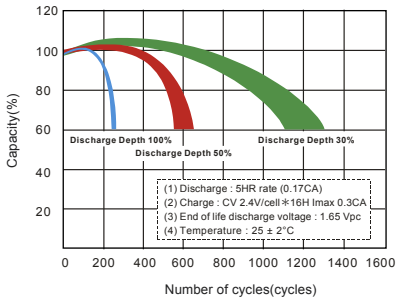
Self-discharge characteristic



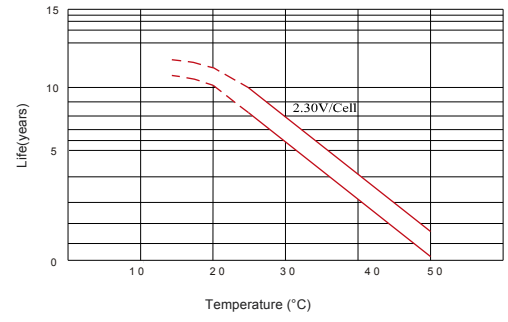
Life characteristics of Standby use



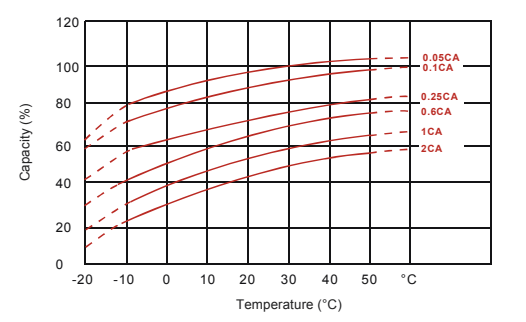
Cycle service life in relation to depth of discharge



Temperature effects on float life



Temperature effects on capacity



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