6FM100 12V 100Ah (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

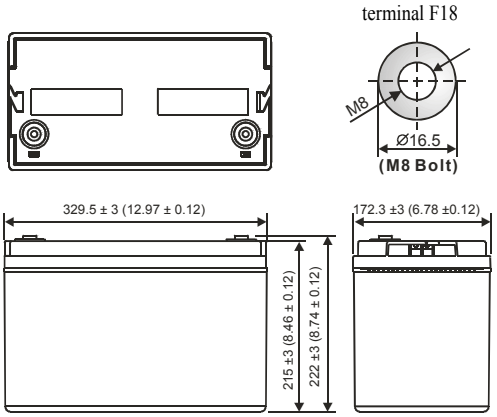
Component	Positive plate	Negative plate	Container	Cover	Safety valve	Terminal	Separator	Electrolyte
Raw material	Lead dioxide	Lead	ABS	ABS	Rubber	Copper	Fiberglass	Sulfuric acid

General Features

- Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance or water adding.
- Positive and negative plates in lead-calcium-tin alloy
- Stable quality & high reliability
- Sealed construction
- Maintenance-free operation
- UL-recognized component.
- Low pressure venting system
- Low self discharge
- High rate discharge
- Valve Regulated Lead Acid (VRLA) battery
- Six months shelf life at 25ºC
- Design life 12 years at 25ºC

Dimensions and Weight

Length(mm / inch)	329.5 / 12.97
Width(mm / inch)	172.3 / 6.78
Height(mm / inch)	215 / 8.46
Total Height(mm / inch	222 / 8.74
Approx. Weight(Kg / lbs)	31.3 / 68.9



Performance Characteristics

Nominal Voltage	12V
Number of cell	6
Design Life	12 years
Nominal Capacity 77ºF(25°C)	
10 hour rate (10.0A, 10.8V)	100Ah
5 hour rate (17A, 10.2V)	85Ah
1 hour rate (60A, 9.6V)	60Ah
Internal Resistance	
Fully Charged battery 77°F(25°C)	4mOhms
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	30A
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	1.85V	1.80V	1.75V	1.70V	1.65V	1.60V
10 min	342	370	397	414	433	465
15 min	285	315	345	358	373	383
20 min	250	272	299	303	319	333
30 min	207	222	230	234	235	238
60 min	123	132	140	141	143	145
180 min	49.9	53.2	55.2	55.6	56.7	58.2
300 min	33.4	35.5	37.3	37.7	38.0	38.3
600 min	18.8	19.2	19.3	19.7	20.0	20.2
1200 min	9.75	9.9	10.1	10.4	10.5	10.6

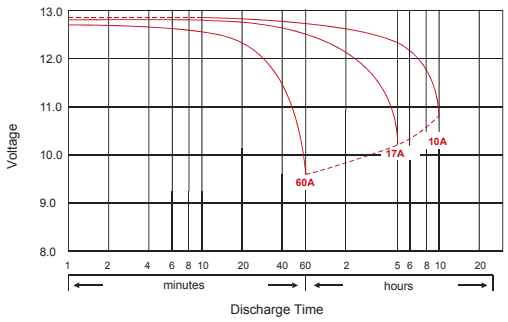
Discharge Rates in Amperes to Various End Voltage at 25ºC(77ºF)

End Voltage	1.85V	1.80V	1.75V	1.70V	1.65V	1.60V
10 min	176	199	221	238	249	263
15 min	151	168	182	194	202	212
20 min	133	146	161	165	174	184
30 min	107	114	120	121	122	123
60 min	59.1	64.3	68.0	70.4	71.6	73.5
180 min	27.3	28.1	28.6	29.5	29.7	30.1
300 min	16.9	18.1	18.5	18.7	19.1	19.2
600 min	9.40	10.2	10.3	10.4	10.5	10.6
1200 min	5.05	5.16	5.22	5.43	5.49	5.54

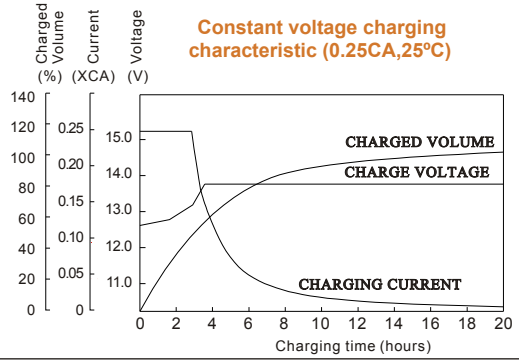
(Note)The above characteristics data are average values.

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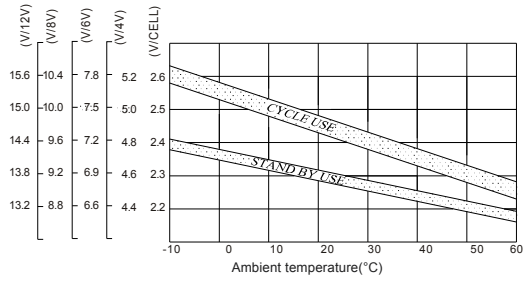
Discharge characteristic (25ºC)



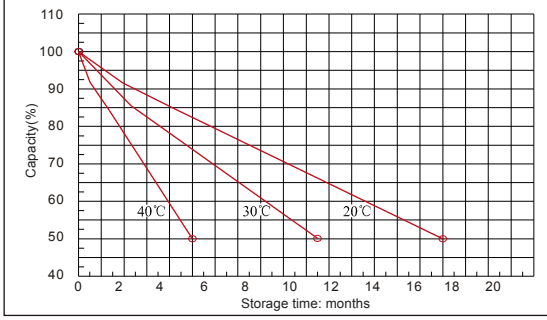
Constant voltage charging characteristic (0.25CA,25ºC)



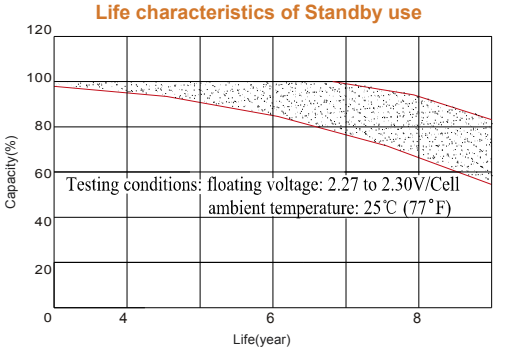
Relationship between charging voltage and temperature



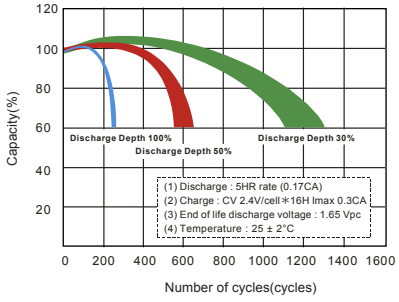
Self-discharge characteristic



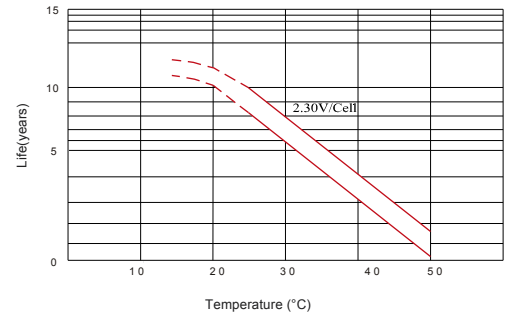
Life characteristics of Standby use



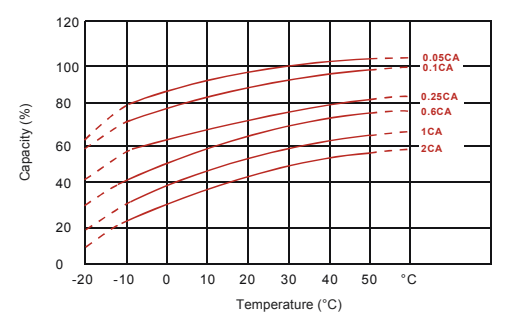
Cycle service life in relation to depth of discharge



Temperature effects on float life



Temperature effects on capacity



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