CP12180 12V 18Ah (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

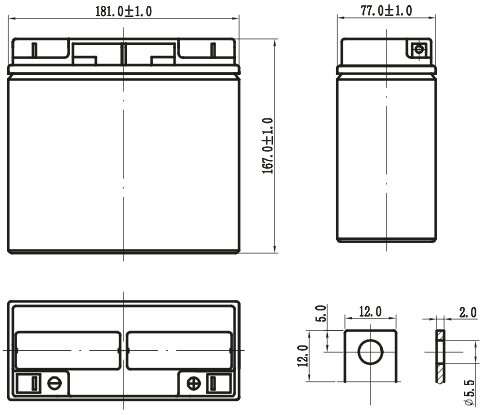
Component	Positive plate	Negative plate	Container	Cover	Safety valve	Terminal	Separator	Electrolyte
Raw material	Lead dioxide	Lead	ABS	ABS	Rubber	Copper	Fiberglass	Sulfuric acid

General Features

- Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance or water adding.
- 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.
- Valve Regulated Lead Acid (VRLA) battery

Dimensions and Weight

Length(mm / inch)	181 / 7.13
Width(mm / inch)	77 / 3.03
Height(mm / inch)	167 / 6.57
Total Height(mm / inch)	167 / 6.57
Approx. Weight(Kg / lbs)	5.5 / 12.1



terminal F3

Performance Characteristics

Nominal Voltage	12V
Number of cell	6
Design Life	5 years
Nominal Capacity 77ºF(25ºC)	
20 hour rate (0.9A, 10.5V)	18Ah
10 hour rate (1.75A, 10.5V)	17.5Ah
5 hour rate (3.17A, 10.5V)	15.85Ah
1 hour rate (13.13A, 9.6V)	13.13Ah
Internal Resistance	
Fully Charged battery 77ºF(25ºC)	≤14mOhms
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)	225A(5s)
Short Circuit Current	850A
Charge Methods: Constant Voltage Charge 77ºF(25ºC)	
Cycle use	14.4-14.8VPC
Maximum charging current	6.8A
Temperature compensation	-30mV/ºC
Standby use	13.5-13.8VPC
Temperature compensation	-20mV/ºC

Discharge Constant Current (Amperes at 77ºF 25ºC)

End Point Volts/Cell	5min	10min	15min	30min	1h	3h	5h	10h	20h
1.60V	67.0	45.1	34.3	20.2	13.1	4.98	3.32	1.82	0.94
1.65V	64.6	44.0	33.5	19.8	12.9	4.90	3.27	1.80	0.93
1.70V	62.2	42.9	32.6	19.3	12.7	4.82	3.22	1.78	0.92
1.75V	59.8	41.7	31.8	18.9	12.4	4.73	3.17	1.75	0.90
1.80V	57.4	40.6	30.9	18.4	12.2	4.65	3.12	1.73	0.89

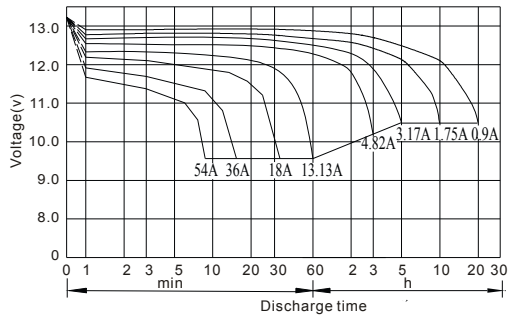
Discharge Constant Power (Watts at 77ºF 25ºC)

End Point Volts/Cell	5min	10min	15min	30min	45min	1h	2h	3h	5h
1.60V	117	79.0	61.0	36.0	27.4	22.0	13.1	9.10	6.16
1.65V	113	77.4	59.8	35.5	27.1	21.8	13.0	9.01	6.10
1.70V	110	75.8	58.5	35.0	26.7	21.5	12.8	8.92	6.04
1.75V	106	74.1	57.3	34.5	26.4	21.3	12.7	8.83	5.98
1.80V	102	72.5	56.0	34.0	26.0	21.0	12.5	8.74	5.92

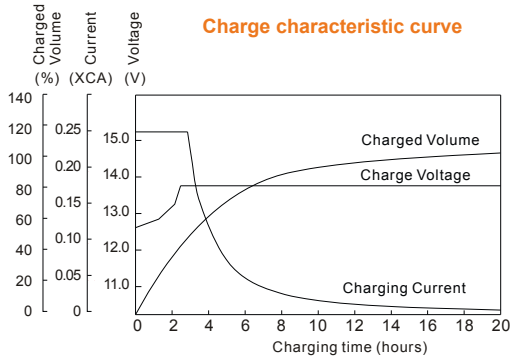
(Note)The above characteristics data are average values obtained within three charge/discharge cycles not the mimimum values.

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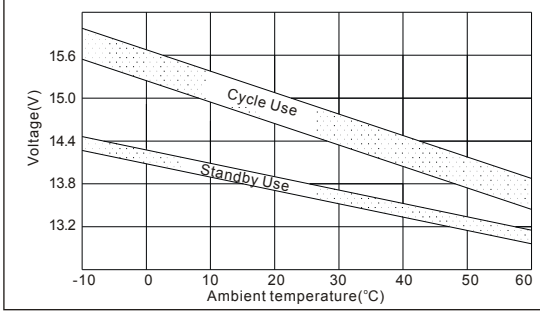
Discharge characteristic (25ºC)



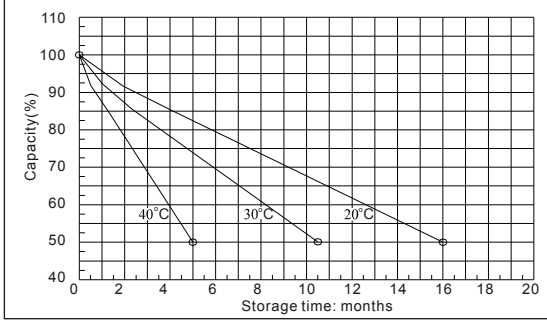
Charge characteristic curve



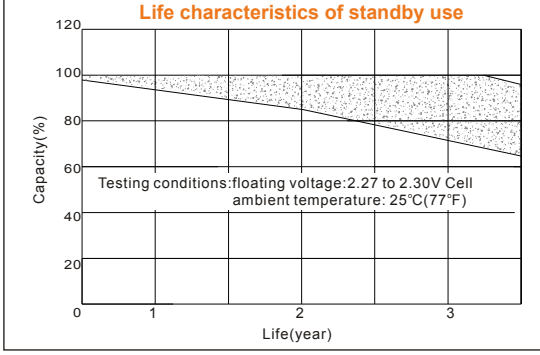
Relationship between charging voltage and temperature



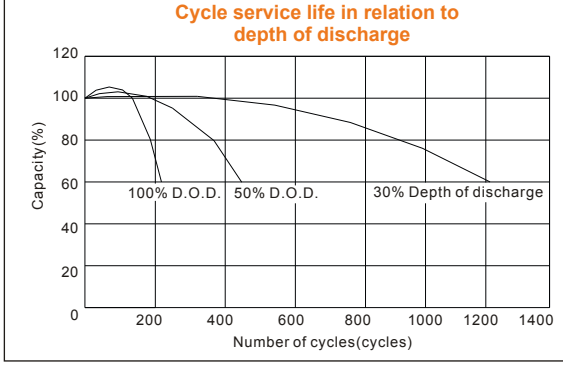
Self-discharge characteristic



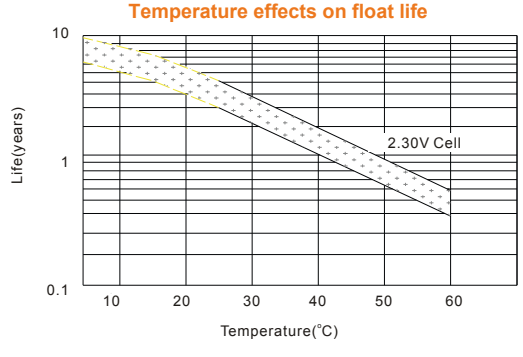
Life characteristics of standby use



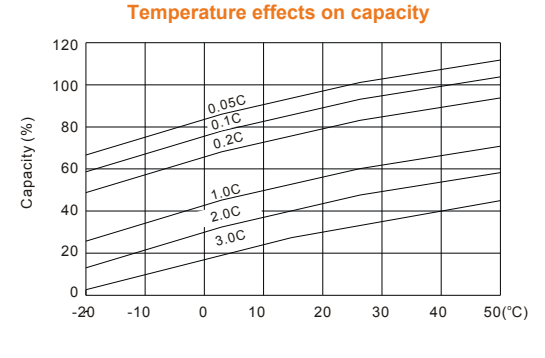
Cycle service life in relation to depth of discharge



Temperature effects on float life



Temperature effects on capacity



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