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SG12180FP 12V 18Ah

SG12180FP is a general purpose battery up to 5 years in standby service or more than 260 cycles at 100% discharge in cycle service. This battery is rechargeable, highly efficient, leak proof and maintenance free.



Specification

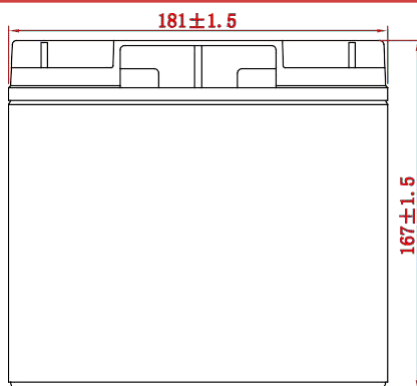
Cells Per Unit	6
Voltage Per Unit	12
Capacity	18Ah @ 20hr-rate to 1.75V per cell @25°C (77°F)
Weight	Approx. 5.2 kg(11.44 lbs)
Maximum Discharge Current	230A(5sec)
Internal Resistance	Approx. 9 mΩ
Operating Temperature Range	Discharge: -15°C~50°C (5°F~122°F) Charge: -15°C~40°C (5°F~104°F) Storage: -15°C~40°C (5°F~104°F)
Nominal Operating Temperature Range	25°C±3°C (77°F±5°F)
Float Charging Voltage	13.5 to 13.8 VDC/unit Average at 25°C (77°F)
Recommended Maximum Charging Current Limit	5.1A
Equalization and Cycle Service	14.4 to 14.8 VDC/unit Average at 25°C (77°F)
Self Discharge	This battery can be stored for more than 6 months at 25°C (77°F). Please charge batteries before using. For higher temperatures the time interval will be shorter.
Terminal	FP Terminal to accept M5 nut & bolt
Container Material	ABS(UL 94-HB) & Flammability resistance of (UL 94-V0) can be available upon request.



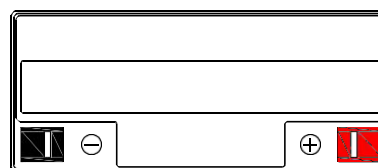
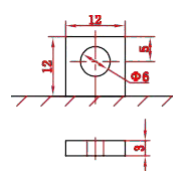
Dimensions :

Overall Height (H)	Container height (h)	Length (L)	Width (W)
Unit: mm 167±1.5	167±1.5	181±1.5	77±1

unit:mm



Terminal



Constant Current Discharge Characteristics Unit: A (25°C, 77°F)

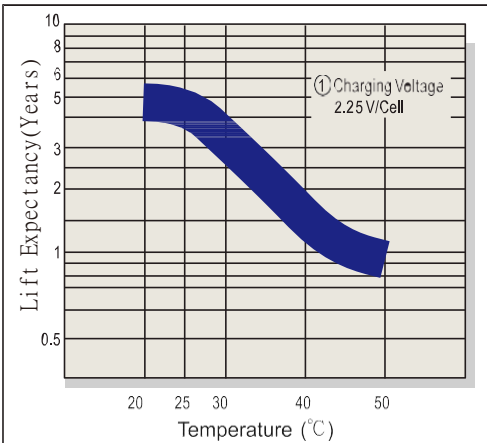
F.V/Time	5min	15min	30min	1h	3h	5h	10h	20h
1.60V	56.3	33.1	19.01	10.88	4.74	3.196	1.71	0.914
1.67V	55.2	32.2	18.84	10.76	4.71	3.17	1.697	0.91
1.7V	54.4	31.7	18.71	10.67	4.68	3.153	1.692	0.908
1.75V	51.8	30.2	18.32	10.4	4.6	3.099	1.67	0.9
1.8V	46.5	27.9	17.6	9.91	4.44	3.005	1.638	0.882
1.85V	36.1	23.5	16.24	9.07	4.04	2.797	1.548	0.846

Constant Power Discharge Characteristics Unit: W (25°C, 77°F)

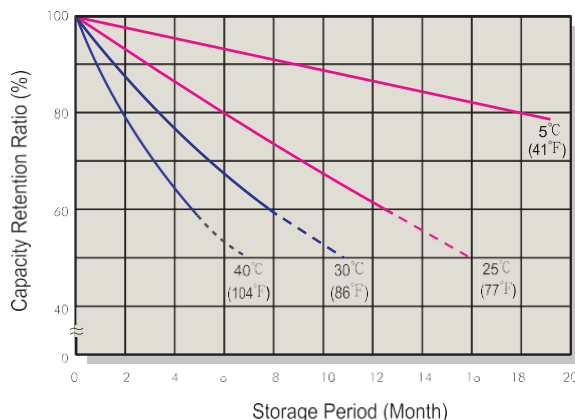
F.V/Time	5min	15min	30min	1h	3h	5h	10h	20h
1.60V	106	63.3	36.74	20.69	9.35	6.113	3.355	1.81
1.67V	101.3	60.3	36.46	20.5	9.27	6.086	3.336	1.805
1.70V	97.9	58.2	36.27	20.38	9.22	6.063	3.326	1.802
1.75V	89.5	53.8	35.63	20.05	9.06	5.964	3.283	1.787
1.80V	77.1	47.9	34.27	19.39	8.73	5.766	3.215	1.752
1.85V	60.1	40.2	31.62	18.02	8.05	5.458	3.062	1.687

Ratings presented herein are subject to revision without notice.

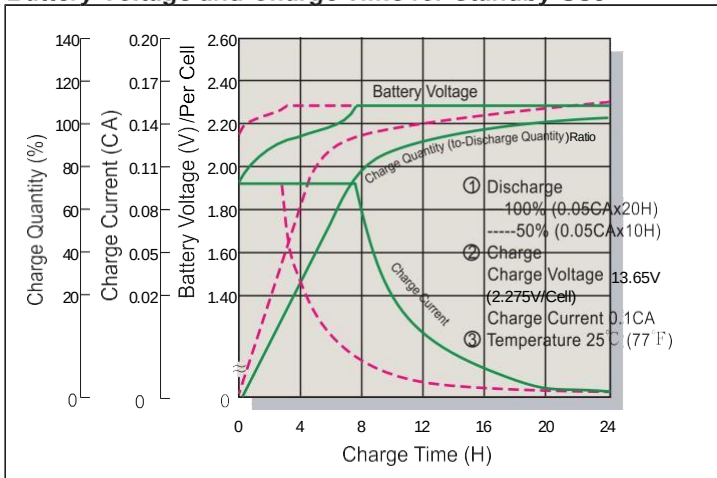
Trickle(or Float)Design Life



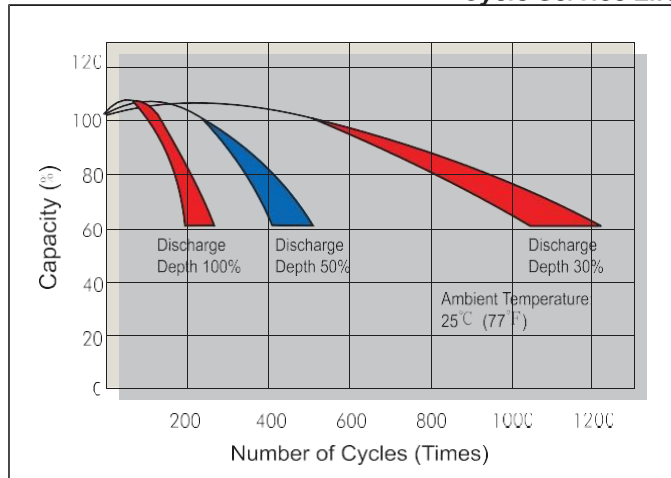
Capacity Retention Characteristic



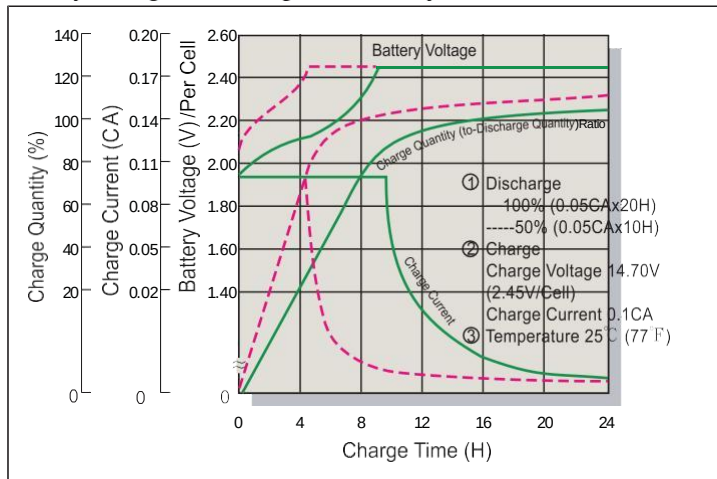
Battery Voltage and Charge Time for Standby Use



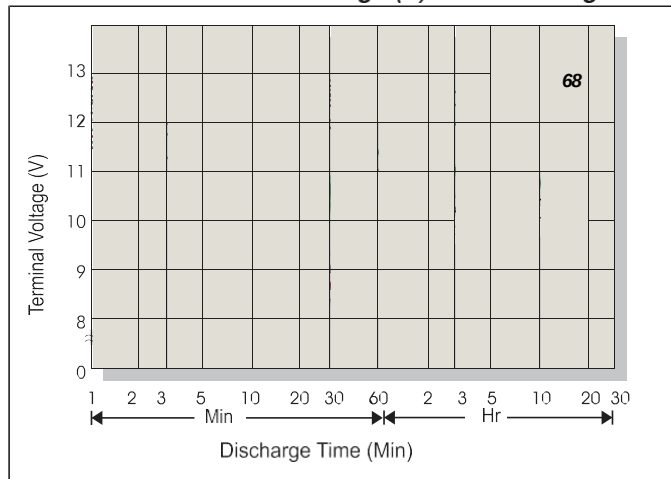
Cycle Service Life



Battery Voltage and Charge Time for Cycle Use



Terminal Voltage (V) and Discharge Time



Charging Procedures

Application	Charge Voltage(V/Cell)			Max.Charge Current
	Temperature	Set Point	Allowable Range	
Cycle Use	25°C(77°F)	2.45	2.40~2.50	0.3C
Standby	25°C(77°F)	2.275	2.25~2.30	

Discharge Current VS. Discharge Voltage

Final Discharge Voltage V/Cell	1.75	1.70	1.65	1.60
Discharge Current(A)	0.2C>(A)	0.2C<(A)<0.5C	0.5C<(A)<1.0C	(A)>1.0C

Effect of temperature on capacity (20HR)

Temperature	Dependency of Capacity (20HR)
40°C	102%
25°C	100%
0°C	85%
-15°C	65%

Self-discharge Characteristics

Charge Voltage(V/Cell)	Charge Voltage(V/Cell)
3 Months	91%
6 Months	82%
12 Months	64%