



SB SERIES-General Purpose

SB12-120LL (12V120AH)

Specification

Nominal Voltage /Capacity	12V/120AH(10HR)	
Design life	10 years	
Dimension	Length	410 ± 1mm (16.14 inches)
	Width	176 ± 1mm (6.93 inches)
	Container Height	224 ± 1mm (8.82 inches)
	Total Height (with Terminal)	224 ± 1mm (8.82 inches)
Approx Weight	Approx 33.5 kg (73.90lbs)	
Terminal	F12 (M8)	
Container Material	ABS	
Rated Capacity	126.0 AH/6.30A	(20hr, 1.80V/cell, 25°C/77°F)
	120.0 AH/12.0A	(10hr, 1.80V/cell, 25°C/77°F)
	96.0 AH/19.2A	(5hr, 1.75V/cell, 25°C/77°F)
	84.0 AH/28.0A	(3hr, 1.75V/cell, 25°C/77°F)
	73.3 AH/73.3A	(1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	950A (5s)	
Internal Resistance	Approx 4.4mΩ	
Operating Temp. Range	Discharge	-20 ~ 60°C
	Charge	-10 ~ 60°C
	Storage	-15 ~ 40°C
Nominal Operating Temp. Range	25 ± 3°C (77 ± 5°F)	
Cycle Use	Initial Charging Current less than 36.0A. Voltage	
	14.4V~14.7V at 25°C(77°F)Temp. Coefficient -30mV/°C	
Standby Use	No limit on Initial Charging Current Voltage	
	13.20V~13.62V at 25°C(77°F)Temp. Coefficient -20mV/°C	
Capacity affected by Temperature	40°C (104°F)	103%
	25°C (77°F)	100%
	0°C (32°F)	86%
Self Discharge	3% of capacity declined per month at 20°C(average)	



Applications

- ◆ All purpose
- ◆ Uninterruptable Power Supply (UPS)
- ◆ Electric Power System (EPS)
- ◆ Emergency backup power supply
- ◆ Emergency light
- ◆ Railway signal
- ◆ Aircraft signal
- ◆ Alarm and security system
- ◆ Electronic apparatus and equipment
- ◆ Communication power supply
- ◆ DC power supply
- ◆ Auto control system

Constant Current Discharge (Amperes) at 25 °C (77°F)

F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.80V/cell	203	177	144	104	67.2	67.0	40.2	27.2	24.5	18.9	17.5	14.4	12.0	6.30
1.75V/cell	217	184	154	106	69.7	69.1	41.7	28.0	25.0	19.2	18.0	14.7	12.1	6.35
1.70V/cell	231	193	163	110	72.5	71.3	43.2	28.7	25.5	19.7	18.5	14.7	12.2	6.38
1.65V/cell	244	201	169	114	74.5	72.8	44.1	29.3	25.8	20.1	18.8	14.9	12.3	6.41
1.60V/cell	258	209	180	117	77.8	73.3	46.1	29.9	26.3	20.3	19.2	15.2	12.4	6.43

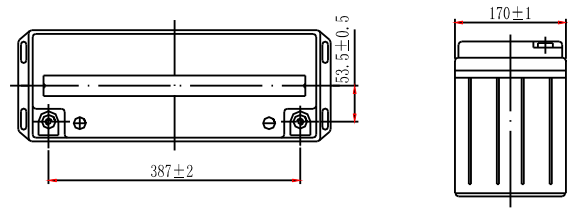
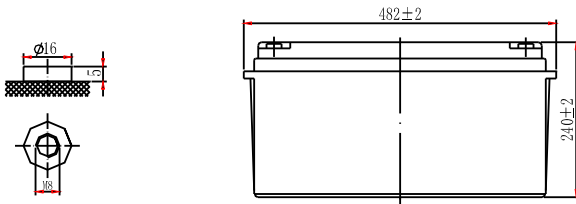
Constant Power Discharge (Watts) at 25 °C (77°F)

F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.80V/cell	367	319	270	198	146	134	75	55.0	47.7	39.6	34.8	28.1	23.5	12.5
1.75V/cell	392	331	285	204	149	139	77	56.0	48.9	40.0	35.4	28.5	24.0	12.6
1.70V/cell	414	343	300	211	153	143	79	56.6	50.0	40.2	36.2	29.0	24.3	12.7
1.65V/cell	437	354	308	218	156	145	80	57.3	50.7	40.5	36.7	29.3	24.5	12.8
1.60V/cell	460	367	322	225	159	147	82	58.0	52.5	40.7	37.0	29.5	24.9	12.9

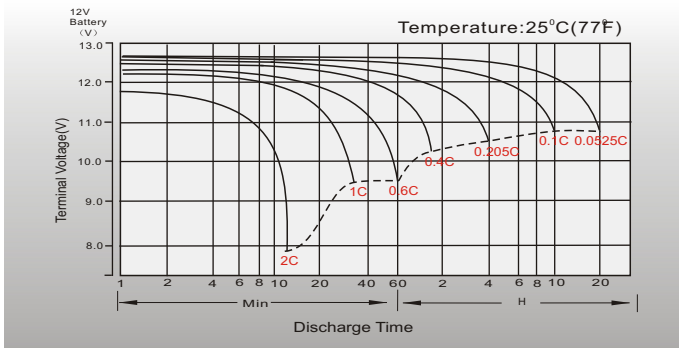
Dimensions

F12 Terminal

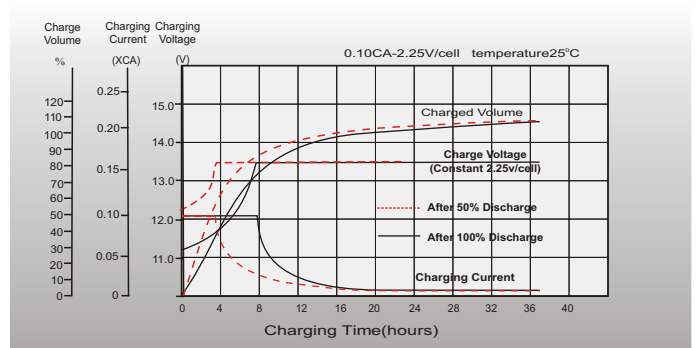
Unit: mm [inches]



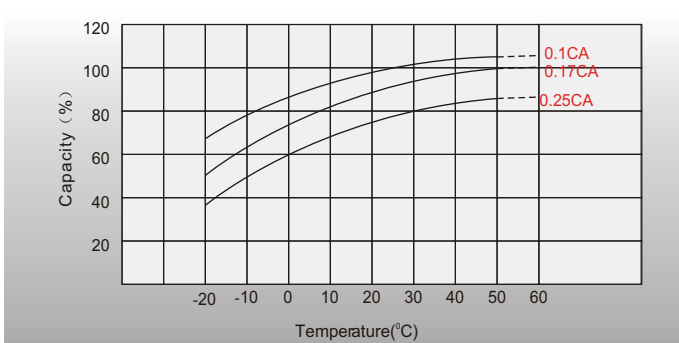
Discharge Characteristics



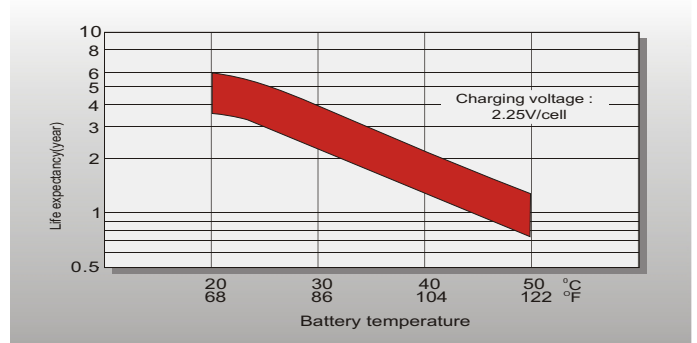
Float Charging Characteristics



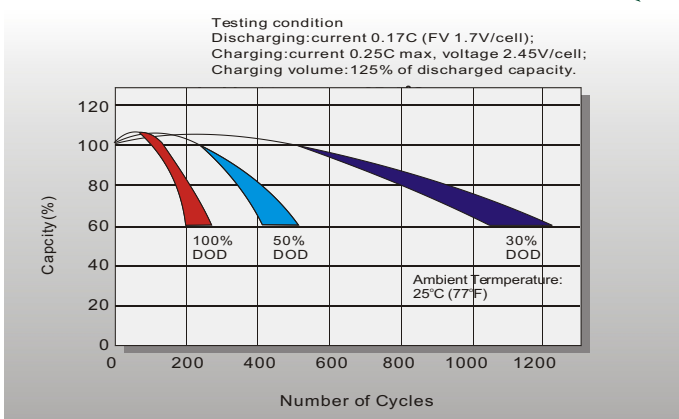
Temperature Effects in Relation to Battery Capacity



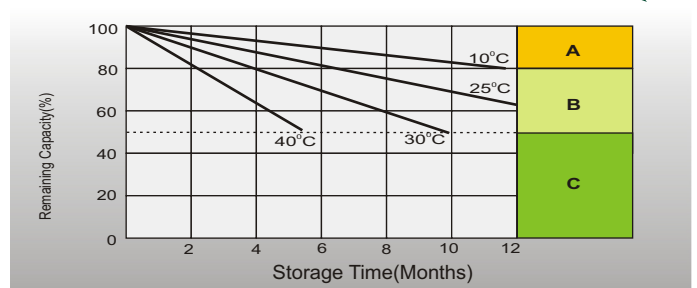
Effect of Temperature on Long Term Float Life



Cycle Life in Relation to Depth of Discharge



Self Discharge Characteristics



- A** No supplementary charge required
(Carry out supplementary charge before use if 100% capacity is required.)
- B** Supplementary charge required before use. Optional charging way as below:
1. Charged for above 3 days at limited current 0.25CA and constant voltage 2.25V/cell.
2. Charged for above 20 hours at limited current 0.25CA and constant voltage 2.45V/cell.
3. Charged for 8-10 hours at limited current 0.05CA.
- C** Supplementary charge may often fail to recover the capacity.
The battery should never be left standing till this is reached.