



# SB SERIES-General Purpose

## SB12-200LL (12V200AH)

### Specification

Nominal Voltage/Capacity	12V/200AH(10HR)
Design life	10 years
Dimension	Length 522±3mm (20.55 inches)
	Width 238±2mm (9.37 inches)
	Container Height 218±2mm (8.58 inches)
	Total Height (with Terminal) 223±2mm (8.78 inches)
Approx Weight	Approx 59.1 kg (130.3lbs)
Terminal	F12(M8)
Container Material	ABS
Rated Capacity	214.0 AH/10.7A (20hr, 1.80V/cell, 25°C/77°F)
	200.0 AH/20.0A (10hr, 1.80V/cell, 25°C/77°F)
	173.5 AH/34.7A (5hr, 1.75V/cell, 25°C/77°F)
	141.3 AH/47.1A (3hr, 1.75V/cell, 25°C/77°F)
	129.0 AH/129.0A (1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	1000A (5s)
Internal Resistance	Approx 3.5mΩ
Operating Temp. Range	Discharge : -15~50°C (5~122°F)
	Charge : 0~40°C (32~104°F)
	Storage : -15~40°C (5~104°F)
Nominal Operating Temp. Range	25±3°C (77±5°F)
Cycle Use	Initial Charging Current less than 60.0A. Voltage 14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/°C
	No limit on Initial Charging Current Voltage 13.5V~13.8V at 25°C(77°F)Temp. Coefficient -20mV/°C
Standby Use	
Capacity affected by Temperature	40°C (104°F) 103%
	25°C (77°F) 100%
	0°C (32°F) 86%
Self Discharge	SB series batteries may be stored for up to 6 months at 25°C(77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter.



### 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	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	231	180	150	100	94.3	60.1	44.4	37.5	31.3	27.2	22.1	18.9	10.30
1.80V/cell	250	186	168	115	117	65.5	45.7	38.8	33.9	29.2	23.4	20.0	10.50
1.75V/cell	269	191	175	121	120	68.0	47.1	41.4	34.7	30.0	23.8	20.4	10.55
1.70V/cell	288	226	181	133	123	70.7	48.2	42.3	35.4	30.6	24.2	20.7	10.60
1.65V/cell	308	235	175	141	126	72.7	49.1	43.5	36.2	31.3	24.6	20.9	10.65
1.60V/cell	327	250	196	152	129	75.1	50.3	44.4	36.9	32.0	24.8	21.1	10.70

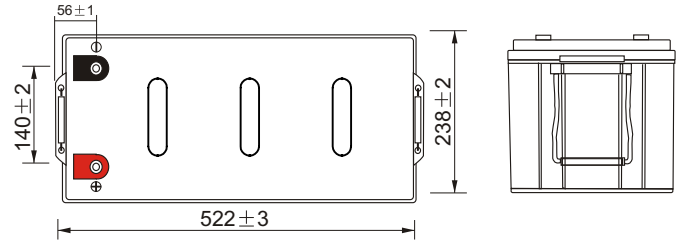
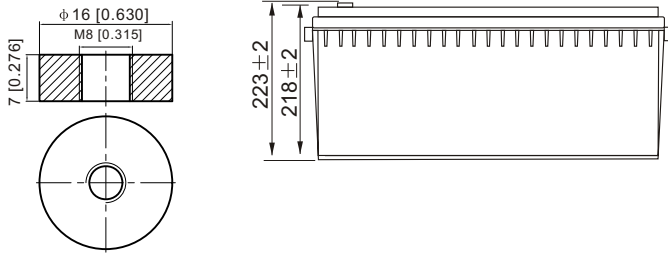
### Constant Power Discharge (Watts) at 25 °C (77°F)

F.V/Time	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	425	355	280	220	181	110	89.6	74.8	61.3	53.5	43.6	37.4	20.4
1.80V/cell	482	400	319	247	228	124	92.4	78.5	65.5	57.2	46.1	39.5	20.6
1.75V/cell	512	420	332	252	233	128	93.4	80.1	68.1	58.6	46.8	39.9	20.7
1.70V/cell	530	446	347	257	238	131	94.8	82.1	68.6	59.7	47.4	40.2	21.1
1.65V/cell	547	467	360	262	243	134	96.1	84.6	69.7	60.8	48.1	41.0	21.4
1.60V/cell	566	481	374	268	248	137	97.4	87.1	70.3	62.0	48.4	41.4	21.5

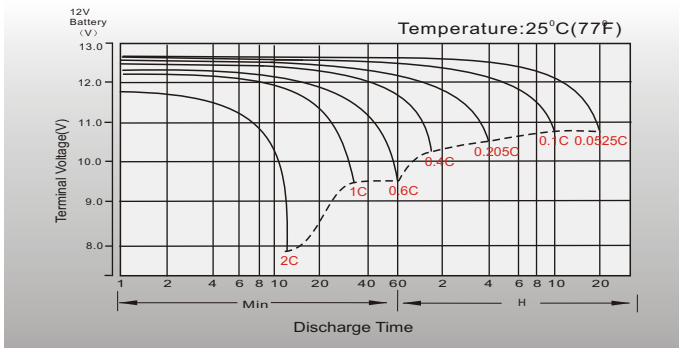
# Dimensions

## F12 Terminal

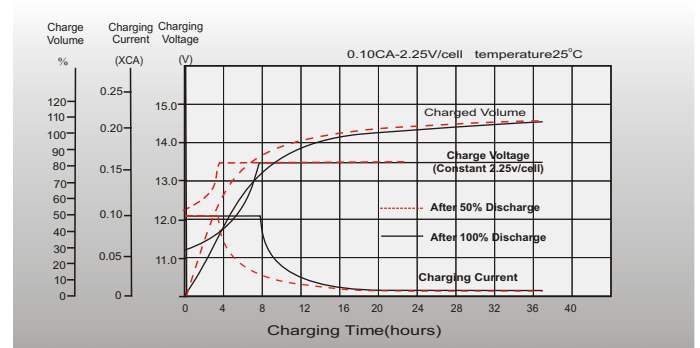
Unit: mm [inches]



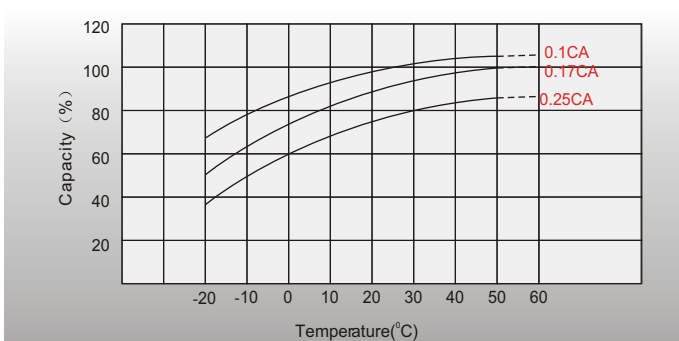
## Discharge Characteristics



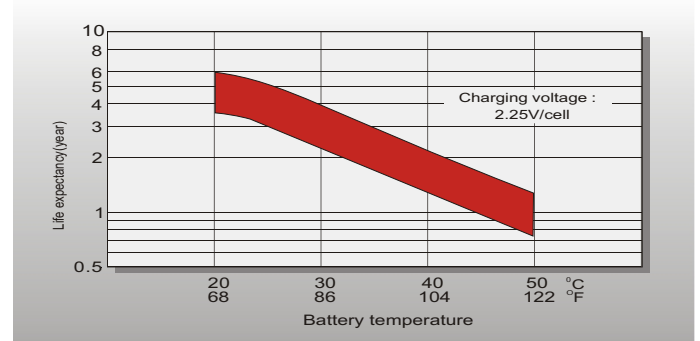
## Float Charging Characteristics



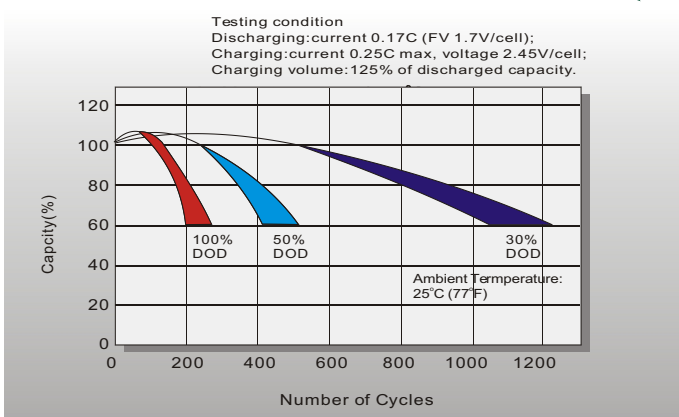
## Temperature Effects in Relation to Battery Capacity



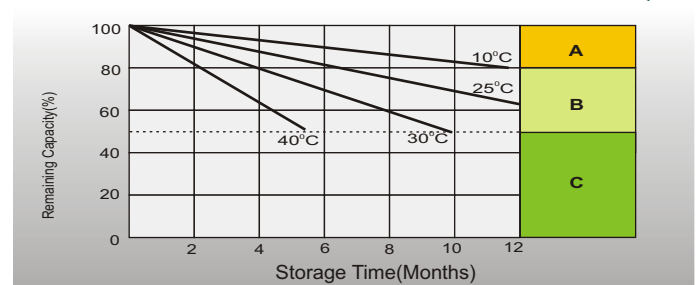
## Effect of Temperature on Long Term Float Life



## 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.