



valve regulated
sealed lead acid type
rechargeable battery



SB12-24(12V24AH)

Specification

Nominal Voltage	12V
Nominal Capacity(20HR)	24.0AH
Dimensions	Length 166±2mm (6.54 inches)
	Width 175±2mm (6.93 inches)
	Container Height 125±2mm (4.92 inches)
	Total Height (with Terminal) 125±2mm (4.92 inches)
	Approx Weight Approx 7.8 kg (17.2lbs)
Terminal	T12
Container Material	ABS Standard ABS UL94 HB Optional ABS UL94 V0
Rated Capacity	24.0 AH/1.20A (20hr, 1.80V/cell, 25°C/77°F)
	22.3 AH/2.23A (10hr, 1.80V/cell, 25°C/77°F)
	20.4 AH/4.08A (5hr, 1.75V/cell, 25°C/77°F)
	18.4 AH/6.12A (3hr, 1.75V/cell, 25°C/77°F)
	15.1 AH/15.1A (1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	360A (5s)
Internal Resistance	Approx 14mΩ
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 7.2A. Voltage 14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/°C
	Standby Use No limit on Initial Charging Current Voltage 13.5V~13.8V 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	SUN 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.
Life expectancy	3-5 years at 25°C with charge voltage 2.25V/cell.



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

		ETL SEMKO
ISO14001	ISO9001	G104071

Comform to:
IEC60896-21&22 and/or IEC61427

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

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	45.7	35.1	29.1	25.1	19.4	14.32	12.07	7.14	5.58	4.54	3.70	3.21	2.59	2.16	1.19
1.80V/cell	61.3	44.8	35.1	29.7	22.9	16.7	13.52	7.79	6.01	4.85	3.97	3.45	2.75	2.23	1.20
1.75V/cell	69.2	49.3	38.4	32.0	23.8	17.3	14.14	8.08	6.12	4.96	4.08	3.54	2.80	2.29	1.21
1.70V/cell	76.2	53.7	41.0	33.6	24.8	18.0	14.59	8.28	6.29	5.09	4.18	3.61	2.84	2.34	1.23
1.65V/cell	84.0	58.0	43.6	35.7	26.1	18.4	14.93	8.40	6.56	5.26	4.30	3.69	2.88	2.39	1.25
1.60V/cell	92.6	62.9	46.6	38.0	27.6	19.2	15.07	8.76	6.76	5.43	4.44	3.77	2.91	2.41	1.26

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

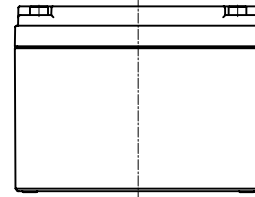
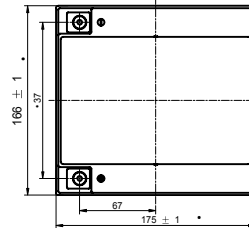
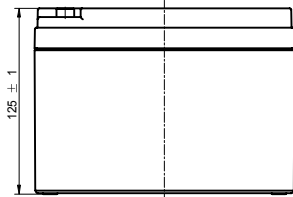
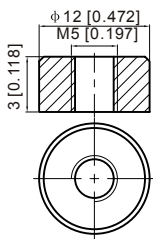
F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	83.6	64.8	54.3	47.4	37.0	27.5	23.3	13.9	10.9	8.88	7.26	6.32	5.12	4.28	2.35
1.80V/cell	111.0	81.9	64.7	55.2	43.0	31.8	25.9	15.0	11.6	9.43	7.76	6.75	5.41	4.41	2.37
1.75V/cell	122.5	88.5	69.8	58.8	44.3	32.6	27.0	15.5	11.8	9.60	7.93	6.91	5.49	4.52	2.39
1.70V/cell	131.1	94.3	73.4	61.3	45.9	33.8	27.8	15.9	12.1	9.84	8.12	7.04	5.56	4.61	2.44
1.65V/cell	142.5	100.8	77.5	64.7	48.0	34.4	28.2	16.0	12.6	10.1	8.32	7.18	5.64	4.70	2.47
1.60V/cell	153.6	107.0	81.5	68.1	50.3	35.6	28.3	16.6	12.9	10.4	8.56	7.31	5.68	4.74	2.48



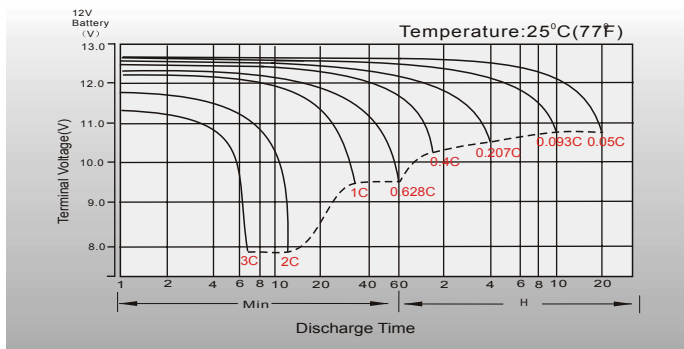
Dimensions

T12 Terminal

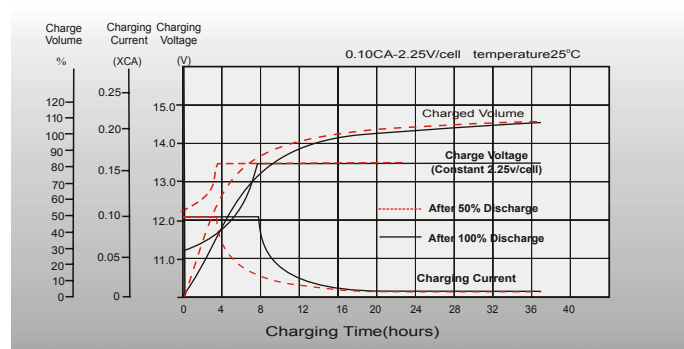
Unit: mm [inches]



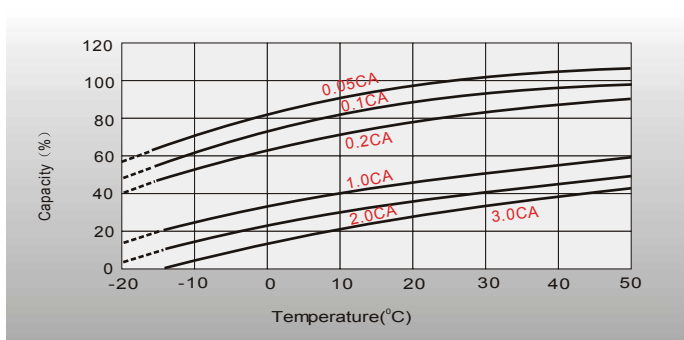
Discharge Characteristics



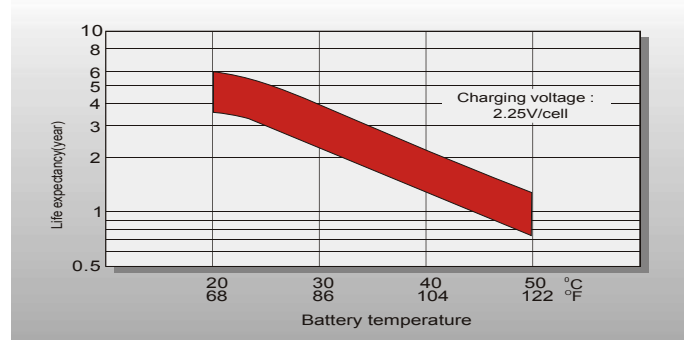
Float Charging Characteristics



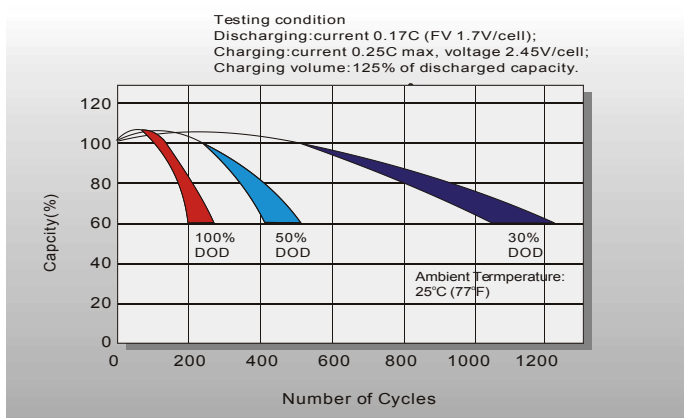
Temperature Effects in Relation to Battery Capacity



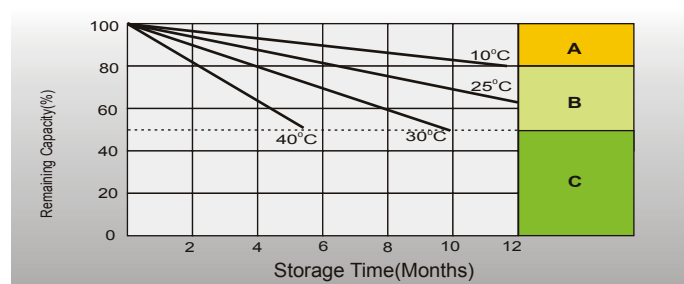
Effect of Temperature on Long Term Float Life



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 20hours at limited current 0.25CA and constant voltage 2.45V/cell.
 3. Charged for 8-10hours 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.