

SPT12-18_(12V18AH)

Features

Maintenance-free operation
Compact design

Stable quality and high reliability
5 years design time (at 25°C)



Application

- Telecommunication system
- Alarm and security system
- Backup power for testing and measuring instruments
- UPS
- Emergency lighting
- Fire alarm and security systems
- Auto control system
- Electronic apparatus and equipment
- Communication power supply
- DC power supply

Specifications

Nominal Voltage	12V (6 cells)	Operating Temp.Range	Discharge: -15 50°C (5 122°F)
Nominal Capacity	18AH (20hr, 1.80V/cell, 25 °C/76°F)		Charge : 0 40°C (32 104°F)
	16.9AH (10hr, 1.80V/cell, 25 °C/77°F)	Storage : -15 40°C (5 104°F)	
	15.3AH (5hr, 1.75V/cell, 25 °C/77°F)	Nominal Operating Temp.Range	25 ± 3°C (77 ± 5°F)
Dimension	10.8AH (1hr, 1.60V/cell, 25°C/77°F)	Cycle Use	14.2~14.4V (25°C/77°F) Temp.Coecient -30mV/ °C
	Length 182±2mm	Standby Use	Initial Charging Current Less than5.4A
	Width 77±2mm		13.5~13.8V (25°C/77°F) Temp.Coecient -20mV/ °C
	Container Height 167.5± 2mm		No limit on Initial Charging Current
Total Height(with Terminal) 167.5± 2mm	Capacity aected by Temperature	40°C (104°F) 103%	
Approx Weight Approx 5.0Kg		25°C (77°F) 100%	
Terminal F3		0°C (32°F) 86%	
Container Material ABS	Self Discharge	Sunstone SPT series batteries may be stored for up to 6 months at 25°C (77°F) and then a freshening charge is required.	
Max. Discharge Current 250A (5S)		For higher temperatures the time interval will be shorter.	
Internal Resistance Approx 14.5mΩ			

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

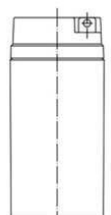
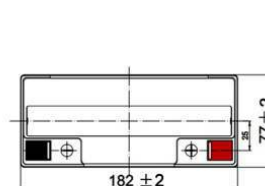
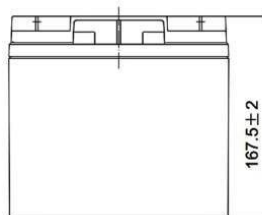
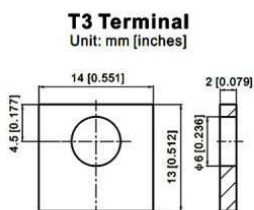
F.V/Time	5min	10min	15min	30min	45min	1h	2h	3h	5h	10h	20h
1.80V/cell	42.31	33.46	24.84	15.48	11.79	9.24	5.55	4.13	2.87	1.63	0.842
1.75V/cell	48.06	34.46	26.94	16.13	12.24	9.70	5.71	4.27	2.94	1.66	0.871
1.70V/cell	52.48	37.16	29.09	16.67	12.63	9.98	5.87	4.37	2.99	1.68	0.880
1.65V/cell	57.11	40.01	30.75	17.59	13.16	10.38	6.04	4.49	3.05	1.70	0.892
1.60V/cell	62.21	43.57	33.16	18.38	13.64	10.61	6.20	4.57	3.10	1.72	0.901

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

F.V/Time	5min	10min	15min	30min	45min	1h	2h	3h	5h	10h	20h
1.80V/cell	83.29	58.74	49.61	30.63	23.58	19.28	11.25	8.51	5.97	3.41	1.78
1.75V/cell	92.08	64.85	52.10	31.87	24.56	19.72	11.55	8.69	6.06	3.46	1.81
1.70V/cell	98.33	68.92	54.80	32.95	25.35	20.00	11.83	8.86	6.13	3.48	1.83
1.65V/cell	107.01	72.82	56.83	34.75	26.09	20.65	12.08	9.03	6.25	3.50	1.84
1.60V/cell	115.25	77.23	59.28	35.82	26.77	21.30	12.32	9.20	6.34	3.53	1.86

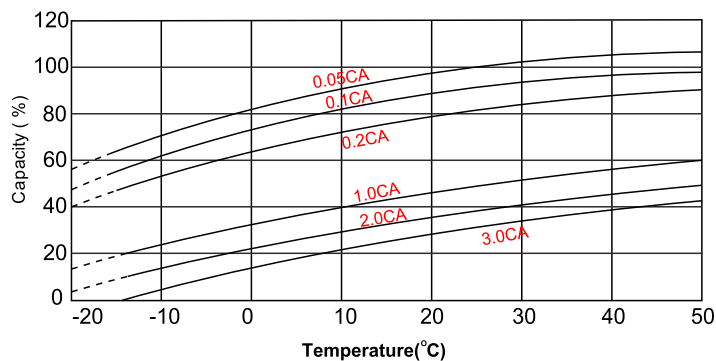
Note: The above characteristics data are average values obtained within three charge/discharge cycles, not the minimum values.

Dimensions unitmm[inches]

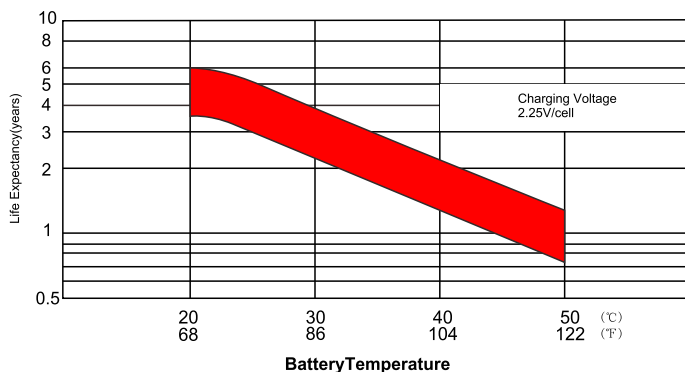


SPT12-18_(12V18AH)

Temperature Effects in Relation to Battery Capacity

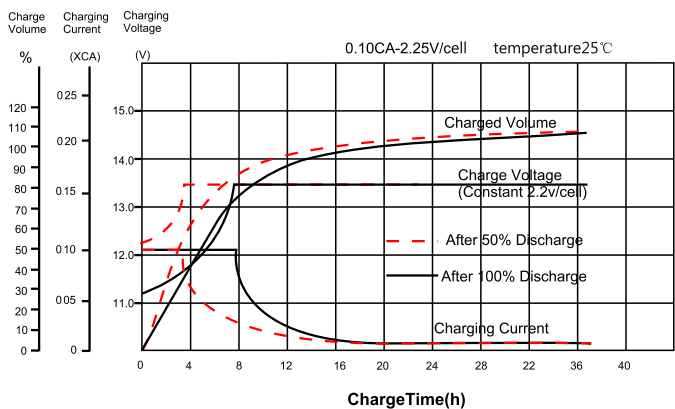


Effect of temperature on long term oat life



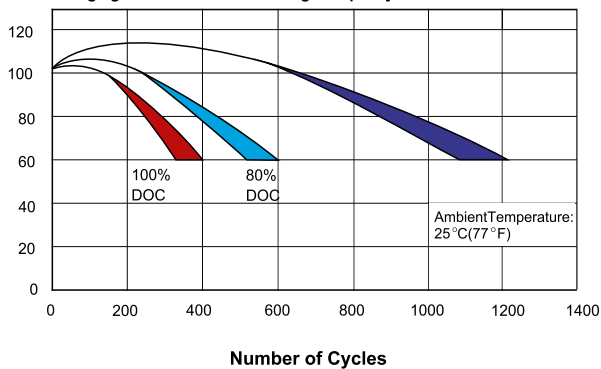
Float charging characteristics

Cycle Life in Relation to Depth of Discharge



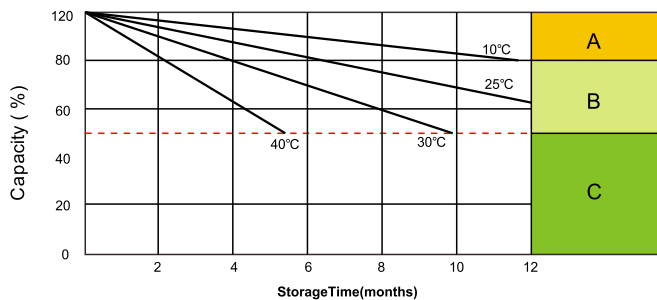
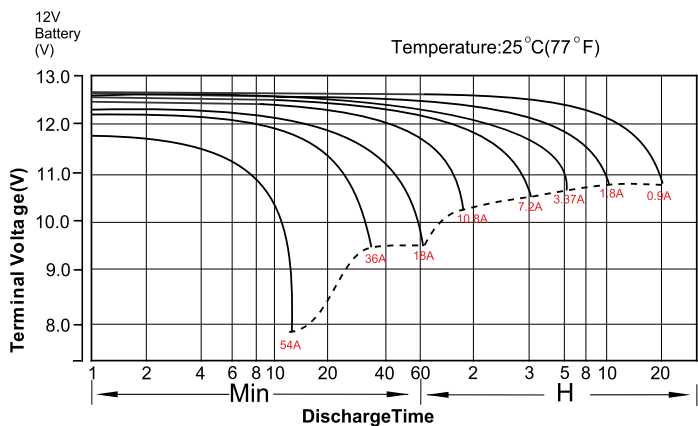
Testing condition

Discharging: current 0.17C(FV 1.7V/cell);
Charging: current 0.25C max, voltage 2.45V/cell;
Charging volume:125% of discharged capacity.



Discharge characteristics Curve

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.