ALPHA POWER

VRLA AGM Battery

AP12-18[12V18Ah]

General Features

- Designed floating charging service life: 8 years (25ºC)
- Sealed and maintenance free operation
- Safety valve installation for explosion proof
- Low self-discharge characteristic
- Wide operating temperature range from 0ºC~40ºC
- Lead Aluminum calcium Tin alloy high energy, prevent corrosion

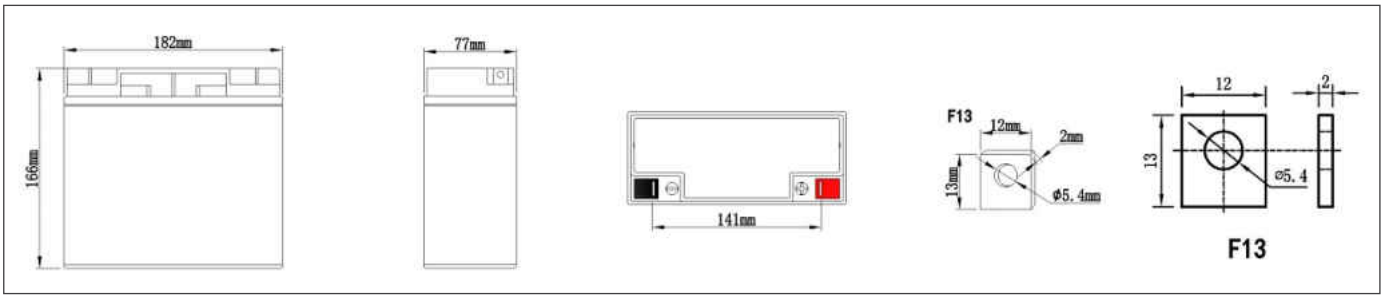
Application

- DC power supply
- UPS/EPS power supply
- Electrical devices & instruments
- Security and fire alarm systems
- Telecom stations and power stations
- Medical equipments
- Emergency lighting systems

Physical Specifications

Nominal Voltage	Nominal Capacity (20HR)	Dimension				Weight ±3%	Internal Resistance (In full charge status)	Standard Terminals
		L	W	H	TH			
12V	18AH	182±2mm	77±2mm	166±2mm	166±2mm	Approx 5.60kg (12.34lbs)	≈15.5 mΩ	F13 (standard)

Dimensions



Constant-Voltage Charge

Rated Capacity	
20 hour rate (0.85A)	17.50AH
10 hour rate (1.7A)	16.28AH
5 hour rate (2.84A)	14.20AH
27 minute rate (17A)	8.00AH
7 minute rate (51A)	5.95AH
Capacity affected by Temperature	
40ºC(104ºF)	103%
25ºC(77ºF)	100%
0ºC(32ºF)	86%

Cycle Application
1. Limit initial current less than 4.25A.
2. Charge until battery voltage (under charge) reaches 14.1V to 14.4V at 25ºC(77ºF).
3. Hold at 14.1V to 14.4V until current drop to under 0.102A for at least 3 hours.
4. Temperature compensation coefficient of charging voltage is -30mV/ºC.
Standby Service
1. Hold battery across constant voltage source of 13.6to 13.8 volts with current limit 4.25A continuously .When held at this voltage , the battery will seek its own current level and maintain itself in a fully charge status.
2. Temperature compensation coefficient of charging voltage is -18mV/ºC.

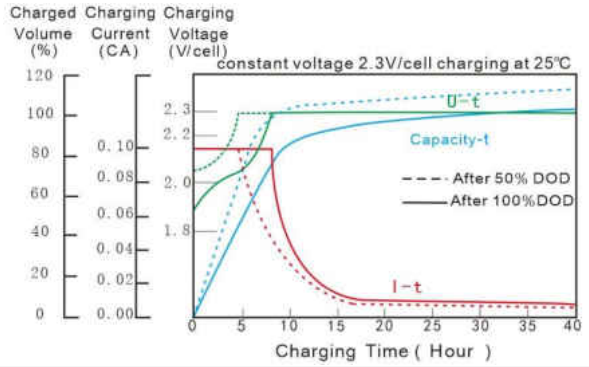
⚠ NOTE : The battery should be charged within 6 months of storage, Otherwise, permanent loss of capacity might occur as a result of sulfation

Battery Discharge Table

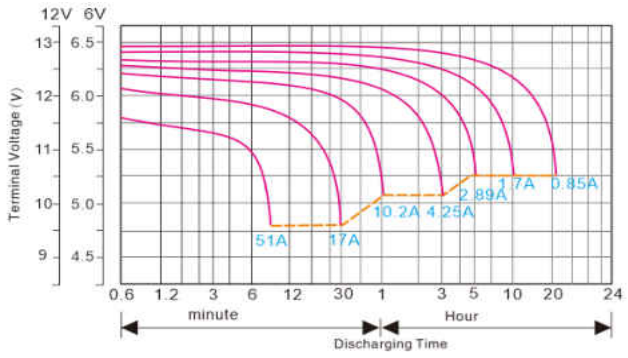
End Voltage (V)	Minute (M)					Hour (H)							
	5	10	15	30	45	1	1.5	2	3	5	8	10	20
Constant Current Discharge Data Sheet (Amperes at 25ºC)													
10.20	62.9	40.9	32.1	16.4	11.9	10.2	8.12	6.04	4.56	2.91	1.95	1.62	0.870
10.50	62.3	40.5	31.8	16.3	11.8	10.2	7.98	5.81	4.41	2.86	1.93	1.61	0.860
10.80	61.7	40.1	31.4	16.0	11.6	10.1	7.84	5.58	4.26	2.81	1.91	1.59	0.850
Constant Power Discharge Data Sheet (Watt at 25ºC)													
10.20	693	500	405	229	166.6	126.7	97.20	73.12	52.19	34.40	24.23	19.61	10.56
10.50	664	483	393	224	162.8	124.7	95.78	72.09	51.01	34.01	24.03	19.31	10.41
10.80	630	465	380	217	158.6	122.7	94.35	71.06	50.13	33.61	23.79	18.99	10.26

Performance Characteristics

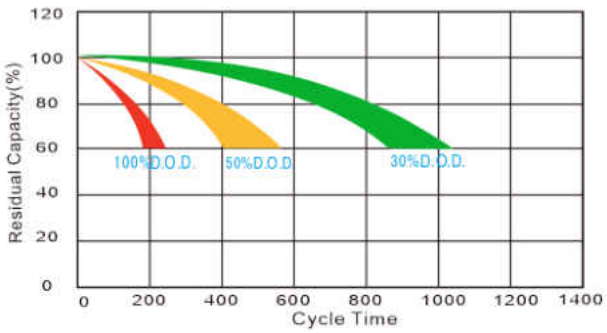
Charge Characteristics (25ºC/77ºF)



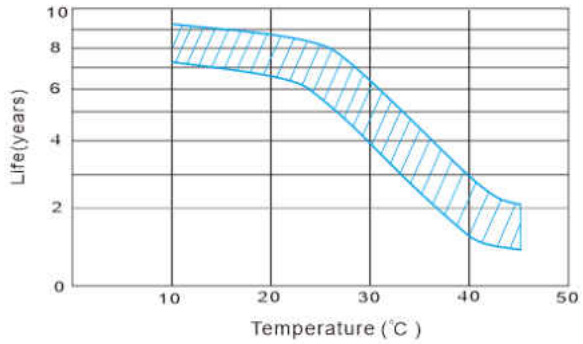
Discharge Characteristic (25ºC/77ºF)



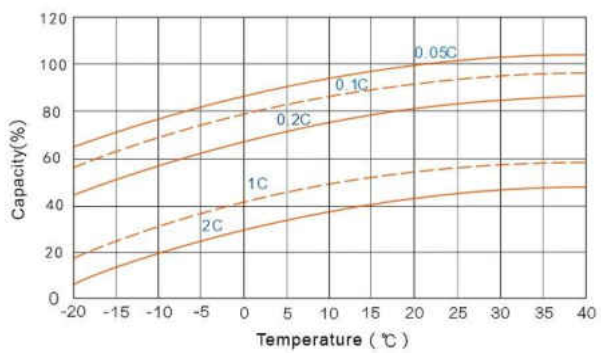
Cycle Life in Relation to Depth of Discharge



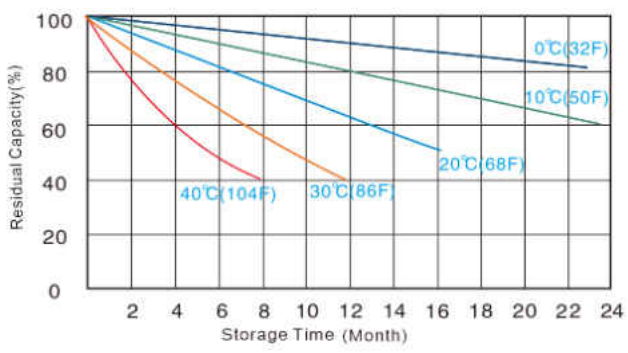
Temperature vs Float Life



Capacity Curve At Different Temperature



Self Discharge Characteristics



sales@alphapower.me
www.alphapower.me