

VRLA AGM Battery

BT-HSE-120-12 [12V120Ah]



General Features

- Designed floating charging service life: 12 years (25°C).
- AGM technology for efficient gas recombination of up to 99%.
- Sealed and maintenance free operation, safety valve for explosion proof.
- Low self-discharge characteristic, ≤ 3% of capacity per month at 20°C (average).
- Wide operating temperature range with charge from -10°C~60°C, discharge from -20°C~60°C, storage from -20°C~60°C.
- Flat Plates in Lead Aluminum Calcium Tin alloy high energy, prevent corrosion.
- ABS flame retardant case, classified to UL94-V0 is available on request.

Applications

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

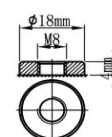
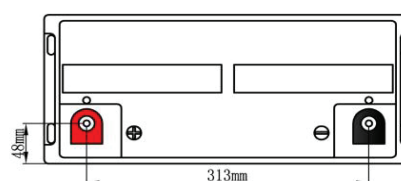
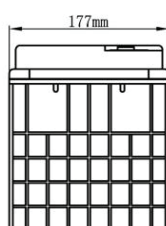
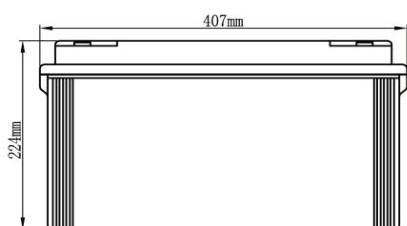
Battery Construction

Component	Battery Container	Safety valve	Terminal	Separator	Electrolyte
Raw material	ABS	Rubber	Copper alloy	Fiberglass	Sulfuric acid

Physical Specifications

Nominal Voltage/ No. of cell	Nominal Capacity (10HR)	Dimension (±3mm)				Weight (±3%)	Internal Resistance (In full charge status)	Standard Terminals
		L	W	H	TH			
12V/6 cells	120Ah	407 mm	177mm	224 mm	224 mm	Apx. 34.5 kg (76.06 lbs)	≤ 4.9 mΩ	T16 (standard)

Dimensions



Constant-Voltage Charge

Rated Capacity at 77°F(25°C)	
20 hour rate (6.31A to 10.8V)	126Ah
10 hour rate (12.0A to 10.8V)	120Ah
5 hour rate (20.4A to 10.5V)	102Ah
3 hour rate (29.3A to 10.5V)	87.9Ah
1 hour rate (73.5A to 10.2V)	73.5Ah
Capacity affected by Temperature	
40°C(104°F)	103%
25°C(77°F)	100%
0°C(32°F)	86%

Cycle Application

1. Limit initial current less than 36A
2. Charge until battery voltage (under charge) reaches 14.1V to 14.7V at 25°C(77°F)
3. Hold at 14.1V to 14.7V until current drop to under 0.5A for at least 3 hours
4. Temperature compensation coefficient of charging voltage is -30mV/°C

Standby Service

1. Hold battery across constant voltage source of 13.5 to 13.8 volts at 25°C(77°F) with current limit 36A 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/°C

Max. discharge current (5s): 970A

Short Circuit Current: 2250A

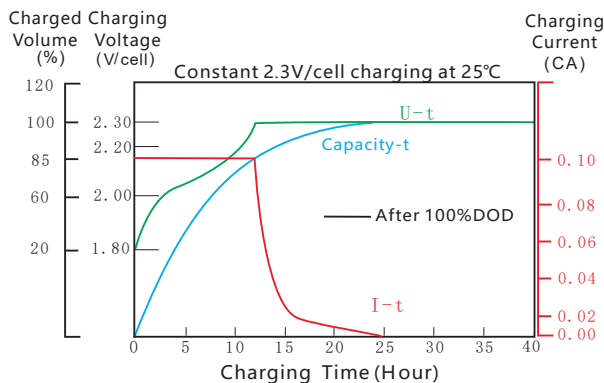
NOTE: All data shall be changed without notice. Saite reserves the right to explain and update the information contained hereinto. The battery should be charged within 6 months of storage, Otherwise, permanent loss of capacity might occur as a result of sulfation

Battery Discharge Table

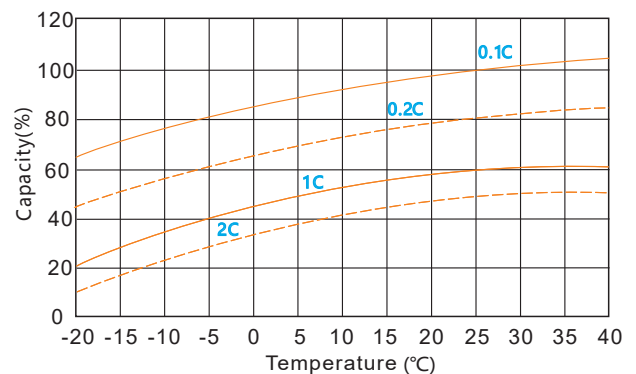
End Volts/ Cell	Minute (M)			Hour (H)							
	10	15	30	1	1.5	2	3	5	8	10	20
Constant Current Discharge Data Sheet (@25°C) Unit: A											
1.60V	295	233	131	77.0	61.0	51.2	32.3	22.0	15.0	12.5	6.57
1.65V	282	223	125	75.3	59.8	50.0	31.3	21.5	14.7	12.4	6.51
1.70V	269	213	120	73.5	58.5	48.8	30.3	21.0	14.5	12.3	6.44
1.75V	255	202	114	71.8	57.3	47.6	29.3	20.4	14.2	12.1	6.38
1.80V	242	192	108	70.0	56.0	46.4	28.3	19.9	13.9	12.0	6.31
Constant Power Discharge Data Sheet (@25°C) Unit: W											
1.60V	525	436	281	164	120	89.3	66.7	43.2	32.7	25.2	13.6
1.65V	502	416	269	160	117	87.3	65.1	42.1	32.0	24.9	13.4
1.70V	479	397	256	156	114	85.2	63.6	41.1	31.4	24.7	13.3
1.75V	455	378	244	152	111	83.1	62.0	40.0	30.8	24.4	13.2
1.80V	432	358	231	149	108	81.0	60.5	39.0	30.2	24.2	13.0

Performance Characteristics

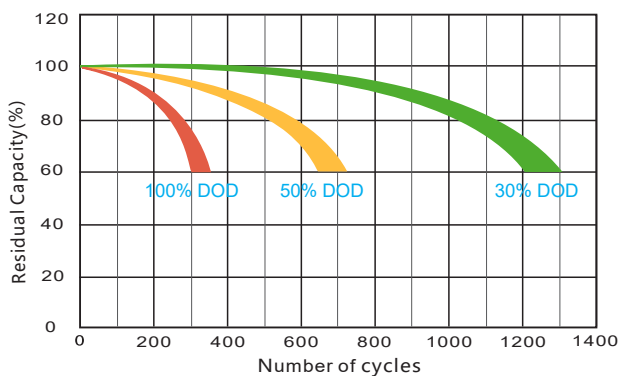
Charge Characteristic (25°C/77°F)



Capacity Curve at Different Temperature



Cycle Life in Relation to Depth of Discharge



Self Discharge Characteristic

