

# DC12-120SA(12V120Ah)



## Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	120Ah@20hr-rate to 1.75V per cell @25°C
Weight	Approx. 29.0 Kg (Tolerance ±3.0%)
Internal Resistance	Approx. 5.5 mΩ
Terminal	F5(M8)/F12(M8)
Max. Discharge Current	1200A (5 sec)
Design Life	12 years (floating charge)
Max. Charging Current	36.0 A
Reference Capacity	C3 91.7AH C5 103.4AH C10 114.3AH C20 120.0AH
Float Charging Voltage	13.6 V~13.8 V @ 25°C Temperature Compensation: -3mV/°C/Cell
Cycle Use Voltage	14.6 V~14.8 V @ 25°C Temperature Compensation: -4mV/°C/Cell
Operating Temperature Range	Discharge: -20°C~60°C Charge: 0°C~50°C Storage: -20°C~60°C
Normal Operating Temperature Range	25°C ±5°C
Self Discharge	RITAR Valve Regulated Lead Acid (VRLA) batteries can be stored for up to 6 months at 25°C and then recharging is recommended. Monthly Self-discharge ratio is less than 3% at 25°C. Please charged batteries before using.
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.



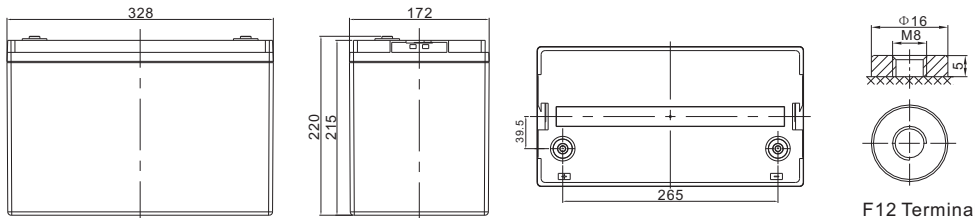
DC (Deep Cycle) series batteries provide superior high integrity and reliability. It is specially designed for frequent cyclic charge and discharging. By using strong grids, thick plate and specially active material are designed for repeated deep-discharge applications. The DC series batteries offer 30% more cyclic life than the standby series. It is suitable for solar and wind renewable energy storage, mobility and medical equipment and cable TV etc.



ISO 9001      ISO 14001      OHSAS 18001



## Dimensions



Length	328±2mm (12.9 inches)
Width	172±2mm (6.77 inches)
Height	215±2mm (8.46 inches)
Total Height	220±2mm (8.66 inches)
Terminal	Value
M5	6~7 N*m
M6	8~10 N*m
M8	10~12 N*m

F12 Terminal

Unit: mm

### Constant Current Discharge Characteristics : A(25°C)

F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	273.9	215.9	129.0	72.88	43.40	33.81	26.52	22.56	14.47	12.00	6.219
1.65V	252.3	201.9	122.2	70.40	41.95	32.77	25.73	21.85	14.36	11.89	6.186
1.70V	233.8	189.9	115.9	68.14	40.83	31.38	24.93	21.26	14.13	11.66	6.108
1.75V	214.5	177.9	111.3	66.00	39.26	30.58	24.25	20.67	13.90	11.54	6.000
1.80V	195.2	162.9	107.2	63.07	37.92	30.00	23.69	20.40	13.67	11.43	5.942
1.85V	152.8	134.8	90.9	56.30	34.68	27.92	22.21	18.78	12.87	10.74	5.887

### Constant Power Discharge Characteristics : WPC(25°C)

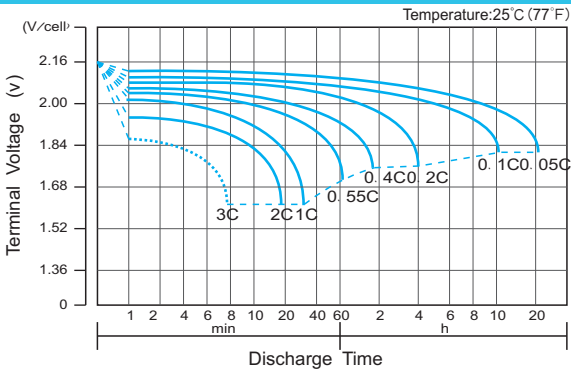
F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	466.4	376.7	234.5	136.8	82.06	64.20	51.11	42.70	28.20	23.53	12.42
1.65V	449.1	366.3	229.0	134.5	79.85	62.60	49.87	41.55	27.97	23.31	12.31
1.70V	419.1	346.7	218.0	130.5	77.85	60.20	48.28	40.51	27.63	22.85	12.19
1.75V	390.0	327.2	210.3	126.9	75.09	58.71	47.15	39.58	27.18	22.63	11.97
1.80V	359.3	302.5	203.5	121.7	73.38	58.38	46.24	39.05	26.73	22.40	11.86
1.85V	285.1	254.1	174.6	109.3	67.57	54.46	43.52	36.12	25.27	21.16	11.75

(Note) The above characteristics data are average values obtained within three charge/discharge cycle not the minimum values. The battery must be fully charged before the capacity test. The C<sub>20</sub> should reach 95% after the first cycle and 100% after the third cycle.

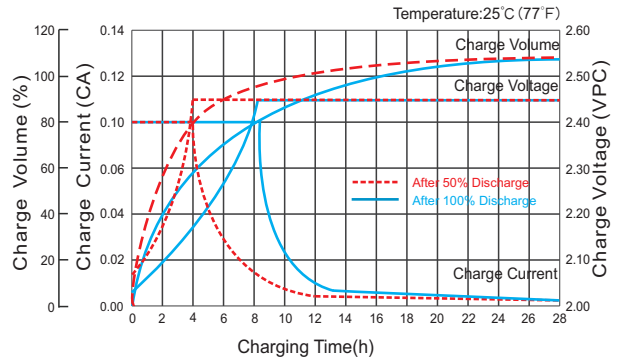
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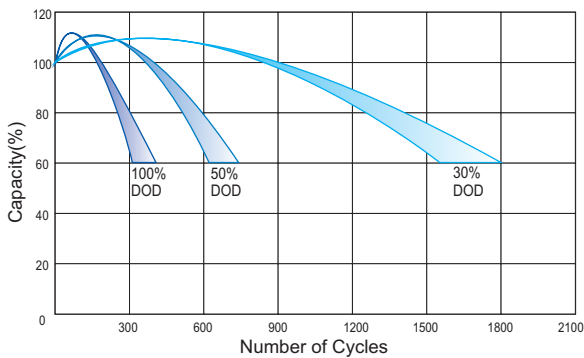
## Discharge Characteristics Curve



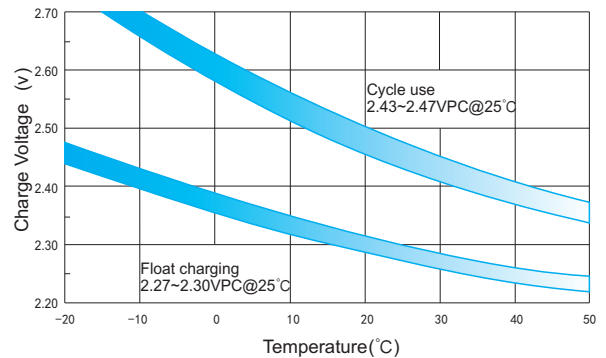
## Charge Characteristic Curve for Cycle Use(IU)



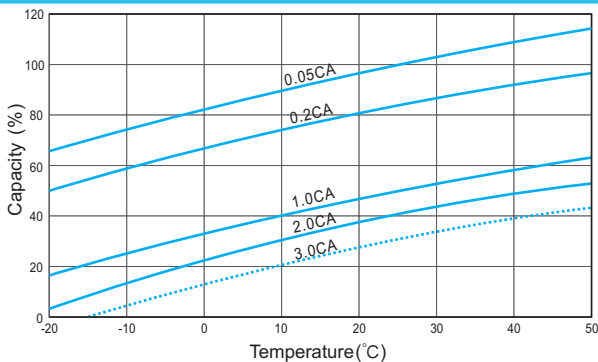
## Cycle Life in Relation to Depth of Discharge



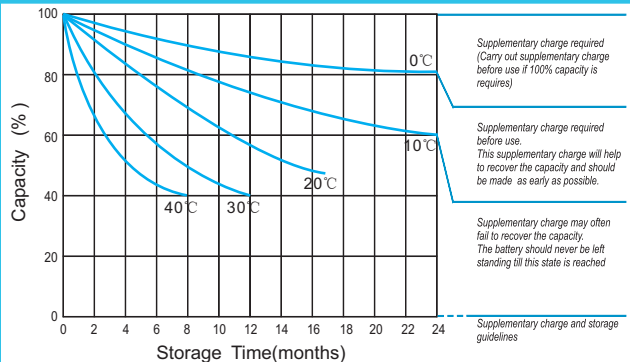
## Relationship Between Charging Voltage and Temperature



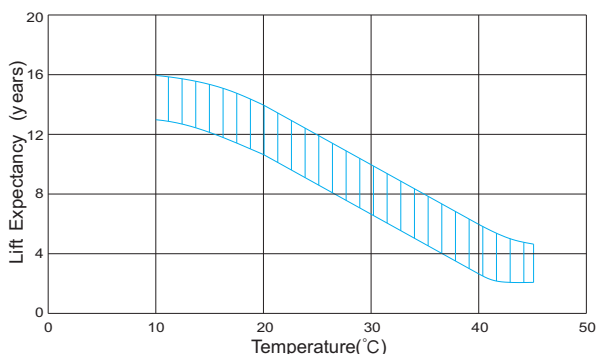
## Temperature Effects on Capacity



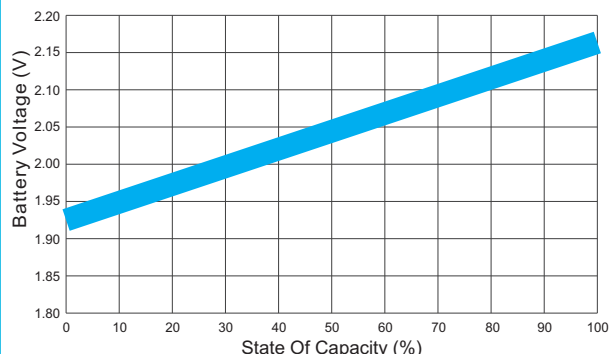
## Storage Characteristics



## Effect of Temperature on Long Term Life



## Relationship of OCV And State of Charge(20°C)



(Note) All above information shall be changed without prior notice, Ritar reserves the right to explain and update the latest information.