

# DC12-230(12V230Ah)



## Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	230Ah@20hr-rate to 1.75V per cell @25°C
Weight	Approx. 67.0 Kg (Tolerance ±3.0%)
Internal Resistance	Approx. 3.0 mΩ
Terminal	F10 (M8)
Max. Discharge Current	2300A (5 sec)
Design Life	12 years (floating charge)
Max. Charging Current	69.0 A
Reference Capacity	C3 175.8AH C5 198.1AH C10 219.0AH C20 230.0AH
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



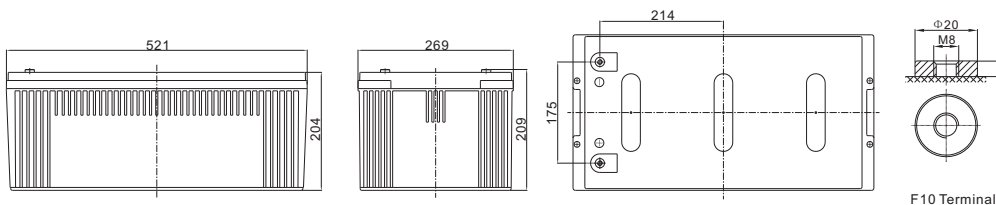
OHSAS 18001



MH 28539



## Dimensions



Length	521±2mm (20.5 inches)
Width	269±2mm (10.6 inches)
Height	204±2mm (8.03 inches)
Total Height	209±2mm (8.23 inches)
Terminal	Value
M5	6~7 N*m
M6	8~10 N*m
M8	10~12 N*m

F10 Terminal

Unit: mm

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

F.V/Time	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	403.3	248.0	139.7	83.19	64.80	50.83	43.24	27.73	23.00	11.92
1.65V	377.1	234.9	134.9	80.40	62.81	49.31	41.88	27.51	22.78	11.86
1.70V	354.7	222.7	130.6	78.26	60.15	47.79	40.75	27.08	22.34	11.71
1.75V	332.2	213.9	126.5	75.26	58.61	46.49	39.61	26.64	22.12	11.50
1.80V	304.2	206.0	120.9	72.68	57.50	45.40	39.10	26.20	21.90	11.39
1.85V	251.7	174.7	107.9	66.47	53.52	42.58	35.99	24.68	20.59	11.28

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

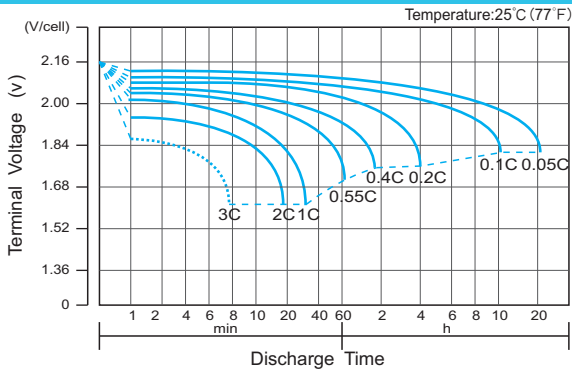
F.V/Time	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	703.5	450.6	262.2	157.3	123.0	97.97	81.84	54.05	45.11	23.80
1.65V	684.0	440.0	257.8	153.0	120.0	95.58	79.63	53.61	44.67	23.58
1.70V	647.4	418.8	250.2	149.2	115.4	92.54	77.64	52.96	43.81	23.37
1.75V	611.1	404.2	243.3	143.9	112.5	90.36	75.87	52.10	43.37	22.95
1.80V	564.9	391.1	233.3	140.7	111.9	88.63	74.85	51.24	42.94	22.73
1.85V	474.6	335.4	209.5	129.5	104.4	83.41	69.23	48.42	40.55	22.52

(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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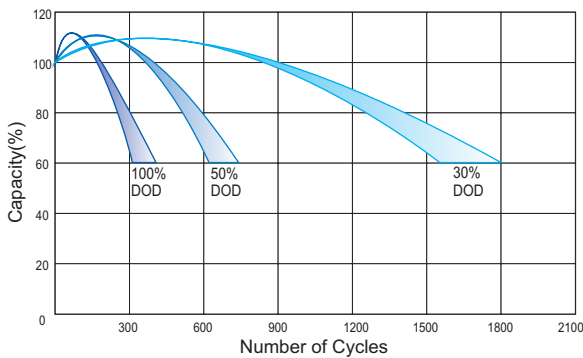
## Discharge Characteristics Curve



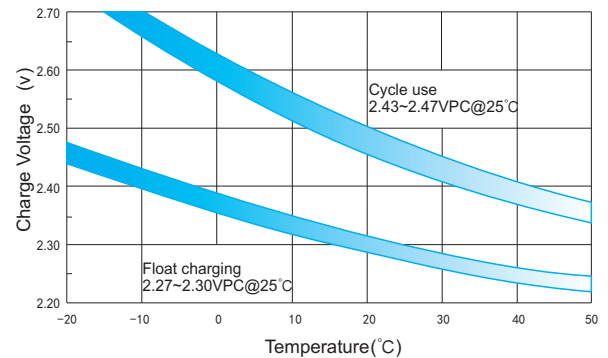
## Charge Characteristic Curve for Cycle Use(IU)



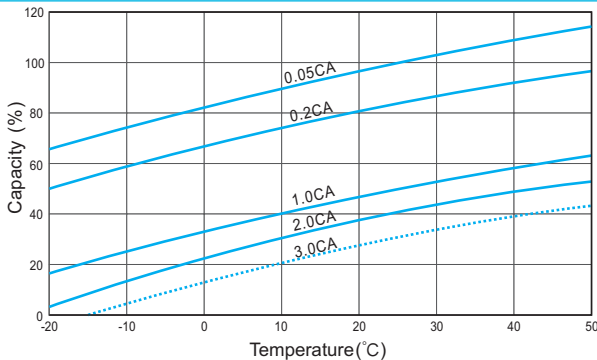
## Cycle Life in Relation to Depth of Discharge



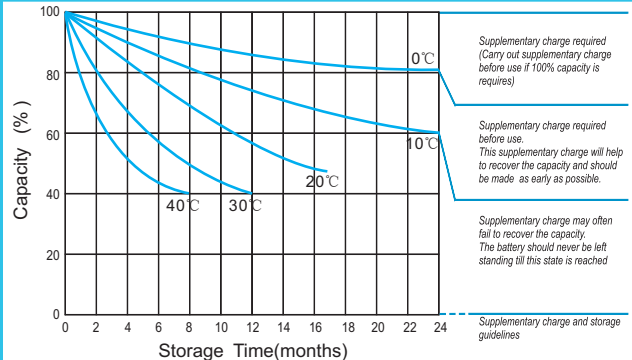
## Relationship Between Charging Voltage and Temperature



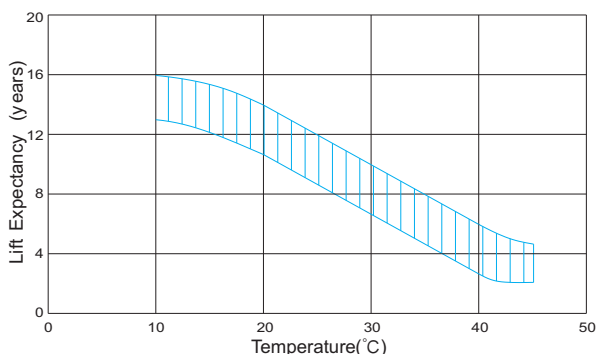
## Temperature Effects on Capacity



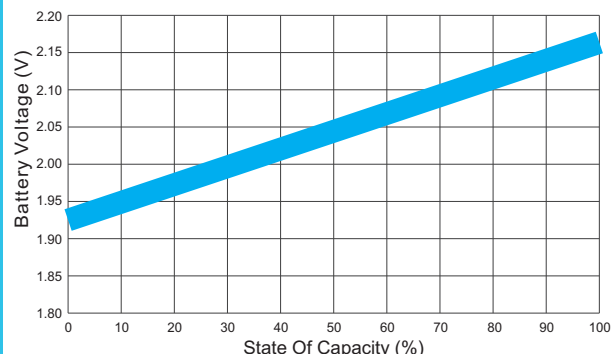
## Storage Characteristics



## 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.