

RA12-160D (12V160Ah)

RA12-160D is AGM Deep cycle battery with 10 years floating design life, specially designed for frequent cyclic discharge usage. By using strong grid and specific paste plate, it makes battery have 30% more cyclic life time than standby series. It is applicable for solar energy system, golf cart, electric wheelchair, etc..



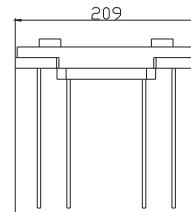
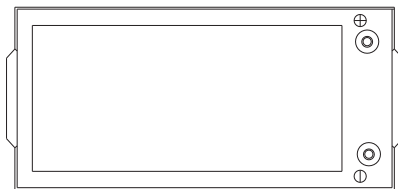
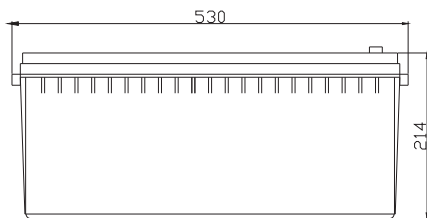
Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	160Ah@10hr-rate to 1.80V per cell @25°C
Weight	Approx. 53 Kg
Max. Discharge Current	1600 A (5 sec)
Internal Resistance	Approx. 4 mΩ
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
Float charging Voltage	13.6 to 13.8 VDC/unit Average at 25°C
Recommended Maximum Charging Current Limit	48 A
Equalization and Cycle Service	14.6 to 14.8 VDC/unit Average at 25°C
Self Discharge	RITAR Valve Regulated Lead Acid (VRLA) batteries can be stored for more than 6 months at 25°C. Self-discharge ratio less than 3% per month at 25°C. Please charge batteries before using.
Terminal	Terminal F12/F16
Container Material	A.B.S. (UL94-HB) , Flammability resistance of UL94-V1 can be available upon request.

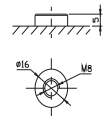


Dimensions

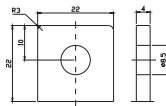
Unit: mm Dimension: 530(L)×209(W)×214(H)



Terminal F12



Terminal F16



Constant Current Discharge Characteristics: A (25°C)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
9.60V	461.7	344.8	290.3	180.3	104.0	62.23	43.01	35.25	28.85	19.87	16.80	9.243
10.0V	448.4	328.1	284.3	177.3	103.5	61.76	42.85	35.09	28.68	19.71	16.64	9.075
10.2V	435.1	316.5	279.8	175.7	102.6	61.29	42.52	34.92	28.51	19.55	16.48	8.907
10.5V	390.7	292.1	266.4	171.3	101.6	60.83	42.35	34.60	28.17	19.39	16.32	8.738
10.8V	352.7	266.3	245.6	163.8	99.20	59.74	41.20	33.78	27.67	19.07	16.16	8.570
11.1V	301.1	238.0	220.3	153.5	94.24	57.08	39.39	32.15	26.48	18.26	15.67	8.066

Constant Power Discharge Characteristics: W (25°C)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
9.60V	4776	3672	3193	2055	1202	733.5	511.9	420.2	344.2	237.3	200.8	110.8
10.0V	4682	3560	3142	2030	1199	729.6	512.0	419.7	343.3	236.2	199.6	108.9
10.2V	4628	3466	3106	2015	1190	725.2	509.8	418.7	342.2	234.6	197.8	106.9
10.5V	4214	3227	2963	1969	1179	719.9	507.8	414.8	338.1	232.7	195.8	104.9
10.8V	3838	2975	2739	1887	1157	710.8	494.0	405.4	332.0	228.8	193.9	102.8
11.1V	3371	2690	2465	1772	1108	684.4	472.6	385.8	317.7	219.1	188.1	96.8

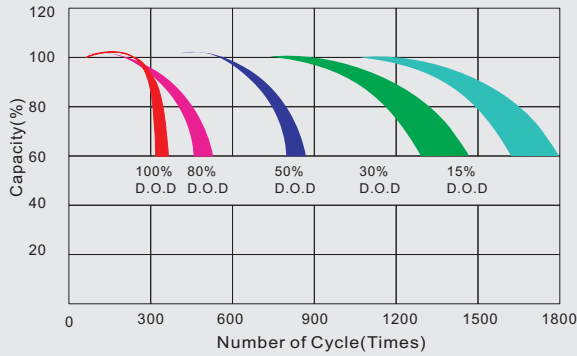
All mentioned values are average values.

RA12-160D

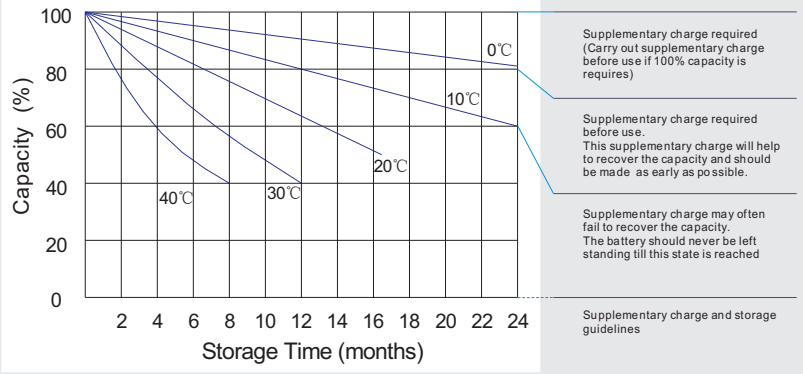
12V160Ah



Life characteristics of cyclic use



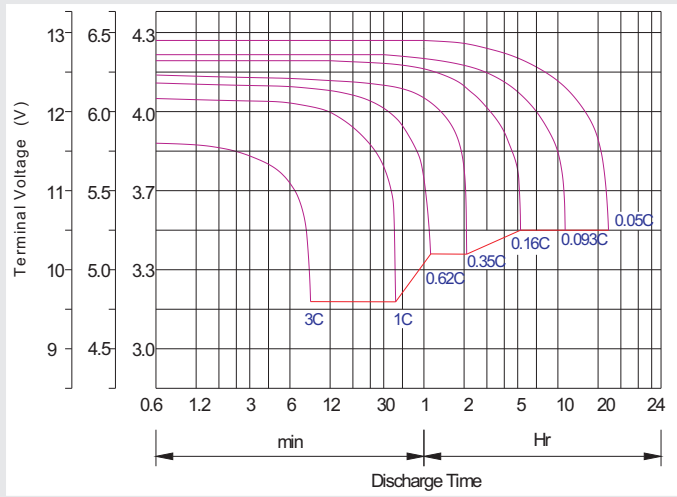
Storage characteristic



Charge characteristic curve for cyclic use



Discharge characteristic curve



Capacity Factors With Different Temperature

Battery Type		-20°C	-10°C	0°C	5°C	10°C	20°C	25°C	30°C	40°C	45°C
GEL Battery	6V&12V	50%	70%	83%	85%	90%	98%	100%	102%	104%	105%
	2V	60%	75%	85%	88%	92%	99%	100%	103%	105%	106%
AGM Battery	6V&12V	46%	66%	76%	83%	90%	98%	100%	103%	107%	109%
	2V	55%	70%	80%	85%	92%	99%	100%	104%	108%	110%

Discharge Current VS. Discharge Voltage

Final Discharge Voltage V/cell	1.75V	1.70V	1.60V
Discharge Current (A)	(A) ≤ 0.2C	0.2C < (A) < 1.0C	(A) ≥ 1.0C

Maintenance & Cautions

Cycle service
※ Avoid battery over discharge, especially battery series connection use.
※ Charged with recommend voltage, ensure battery can be full recharged.
In general, recharge capacity should be 1.1-1.15 times discharge capacity.
※ Effect of temperature on cycle charge voltage: -4mV/°C/Cell.
※ There are a number of factors that will affect the length of cyclic service.
The most significant are depth of discharge, ambient temperature, discharge rate, and the manner in which the battery is recharged.
Generally speaking, the most important factors is depth of discharge.

Charge the batteries at least once every six months, if they are stored at 25°C.

Charging Method:

Constant Voltage	-0.2Cx2h+2.4~2.45V/Cellx24h, Max. Current 0.3CA
Constant Current	-0.2Cx2h+0.1CAx12h
Fast	-0.2Cx2h+0.3CAx4.0h