



RA12-105FDG (12V105Ah)

RA12-105FDG is GEL Deep cycle battery superiorly designed for frequent cyclic discharge applications under extreme temperature. By using strong grid to insure reliable performance under frequent cyclic discharge use. 400 cycles could be available at 100% DOD. Offering extra-durable cyclic performance, high efficiency of recovery, that is more suitable for solar, mobility, E-toll, marine, deep discharge UPS etc..



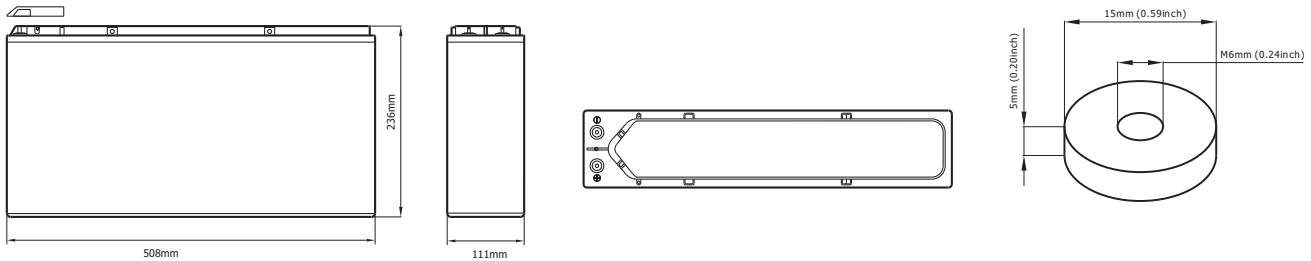
Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	105Ah@20hr-rate to 1.75V per cell @25°C
Weight	Approx. 32.5 Kg
Max. Discharge Current	1050 A (5 sec)
Internal Resistance	Approx. 7.5 mΩ
Operating Temperature Range	Discharge: -40°C~60°C Charge: -20°C~50°C Storage: -40°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	21A
Equalization and Cycle Service	14.2 to 14.4VDC/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 F8
Container Material	A.B.S. (UL94-HB), Flammability resistance of UL94-V1 can be available upon request.

MH28539
G4M20206-0910-E-16
ISO9001:2000 Certificate

Dimensions

Unit: mm Dimension: 508(L)×111(W)×236(H)



Constant Current Discharge Characteristics: A (25°C)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
9.60V	263.25	188.39	151.23	101.34	61.782	36.969	25.553	20.942	17.142	11.808	9.984	5.4911
10.0V	255.64	179.25	148.12	99.744	61.497	36.691	25.455	20.845	17.041	11.712	9.888	5.3913
10.2V	248.06	172.92	145.80	99.835	60.927	36.413	25.259	20.748	16.940	11.616	9.792	5.2914
10.5V	225.37	161.46	140.45	98.290	60.357	36.135	25.161	20.554	16.738	11.520	9.696	5.1916
10.8V	205.78	148.97	130.97	94.881	58.931	35.487	24.476	20.069	16.436	11.328	9.600	5.0917
11.1V	177.73	134.68	118.83	89.738	55.984	33.912	23.399	19.100	15.730	10.848	9.3117	4.7922

Constant Power Discharge Characteristics: W (25°C)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
9.60V	2722.8	2006.3	1663.5	1155.3	713.93	435.74	304.08	249.63	204.50	140.98	119.31	65.838
10.0V	2669.2	1944.8	1636.8	1142.1	712.22	433.44	304.19	249.31	203.98	140.30	118.55	64.695
10.2V	2638.7	1893.5	1618.4	1145.1	706.72	430.82	302.86	248.77	203.28	139.39	117.50	63.497
10.5V	2430.5	1784.2	1561.8	1129.4	700.36	427.69	301.68	246.45	200.86	138.23	116.35	62.299
10.8V	2239.4	1664.0	1460.3	1093.0	687.44	422.24	293.47	240.83	197.23	135.93	115.20	61.101
11.1V	1989.6	1521.9	1329.7	1036.5	658.02	406.56	280.79	229.20	188.76	130.17	111.74	57.507

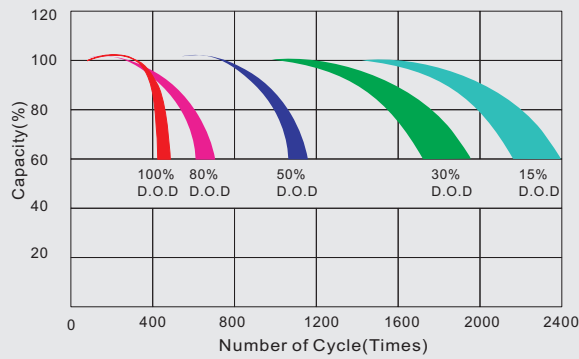
All mentioned values are average values.

RA12-105FDG

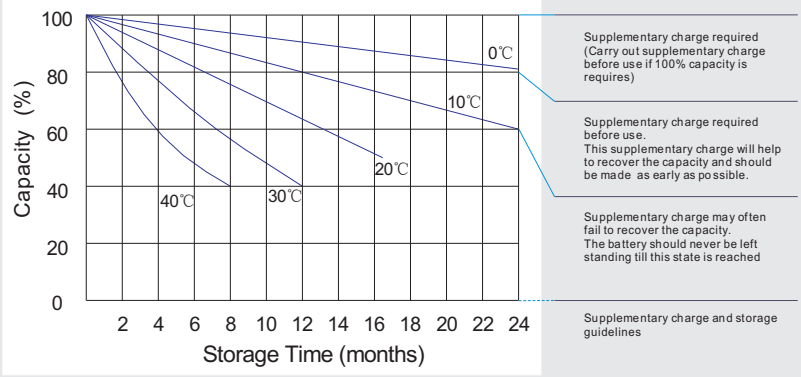
12V105Ah



Life characteristics of cyclic use



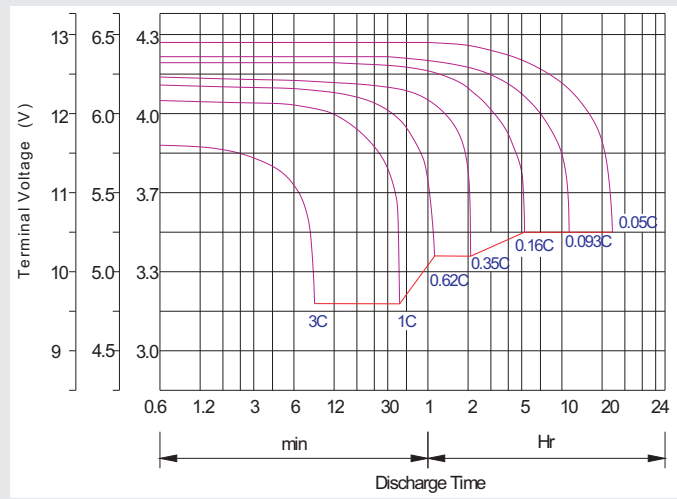
Storage characteristic



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