



RA12-150FDG (12V150Ah)

RA12-150FDG 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	150Ah@20hr-rate to 1.75V per cell @25°C
Weight	Approx. 45.0 Kg
Max. Discharge Current	1500 A (5 sec)
Internal Resistance	Approx. 6mΩ
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	30A
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 F9
Container Material	A.B.S. (UL94-HB), Flammability resistance of UL94-V1 can be available upon request.



MH28539



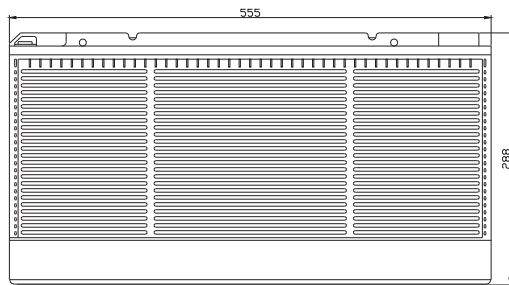
G4M20206-0910-E-16



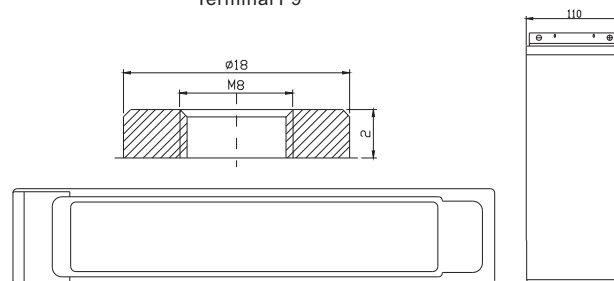
ISO9001:2000 Certificate

Dimensions

Unit: mm Dimension: 555(L)×110(W)×288(H)



Terminal F9



Constant Current Discharge Characteristics: A (25°C)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
9.60V	376.1	269.1	216.0	144.8	88.26	52.81	36.50	29.92	24.49	16.87	14.26	7.844
10.0V	365.2	256.1	211.6	142.5	87.85	52.42	36.36	29.78	24.34	16.73	14.13	7.702
10.2V	354.4	247.0	208.3	142.6	87.04	52.02	36.08	29.64	24.20	16.59	13.99	7.559
10.5V	322.0	230.7	200.6	140.4	86.22	51.62	35.94	29.36	23.91	16.46	13.85	7.417
10.8V	294.0	212.8	187.1	135.5	84.19	50.70	34.97	28.67	23.48	16.18	13.71	7.274
11.1V	253.9	192.4	169.8	128.2	79.98	48.45	33.43	27.29	22.47	15.50	13.30	6.846

Constant Power Discharge Characteristics: W (25°C)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
9.6V	3890	2866	2376	1650	1020	622.5	434.4	356.6	292.1	201.4	170.4	94.05
10.0V	3813	2778	2338	1632	1017	619.2	434.6	356.2	291.4	200.4	169.4	92.42
10.2V	3770	2705	2312	1636	1010	615.5	432.7	355.4	290.4	199.1	167.9	90.71
10.5V	3472	2549	2231	1613	1001	611.0	431.0	352.1	286.9	197.5	166.2	89.00
10.8V	3199	2377	2086	1561	982.1	603.2	419.2	344.0	281.8	194.2	164.6	87.29
11.1V	2842	2174	1900	1481	940.0	580.8	401.1	327.4	269.7	186.0	159.6	82.15

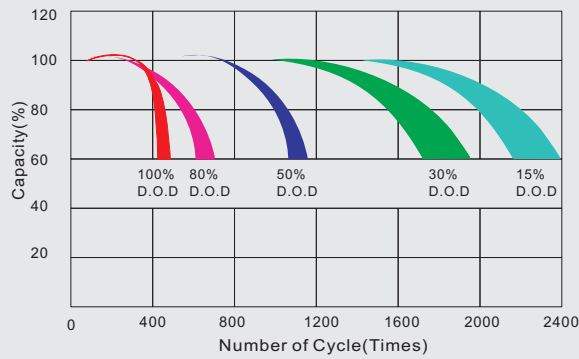
All mentioned values are average values.

RA12-150FDG

12V150Ah



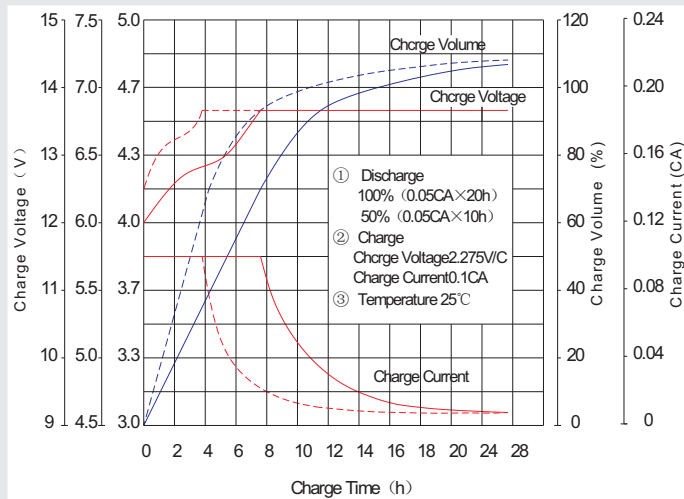
Life characteristics of cyclic use



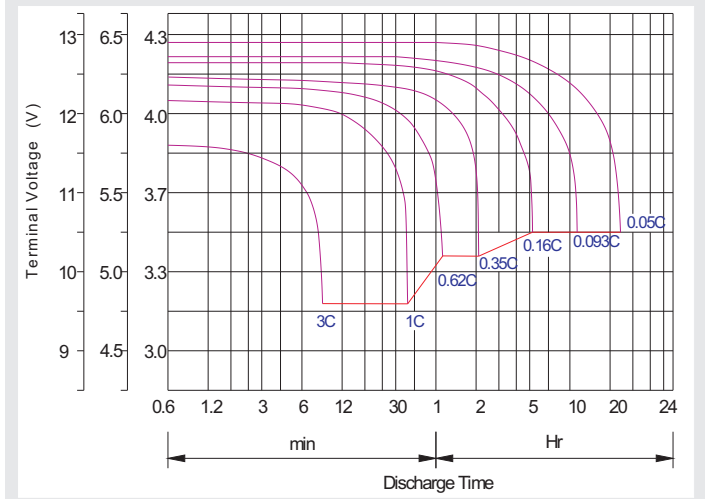
Storage characteristic



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