



# RA12-110FG (12V110Ah)

RA12-110FG is GEL Standby battery with 10 + years floating design life time .The solid Gel protects no way to suffer electrolyte stratification and ensure mild corrosion, its special separator eradicates infection between plates to prevent short circuit. it offers extra-durable performance under extreme temperature.



## Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	110Ah@20hr-rate to 1.75V per cell @25°C
Weight	Approx. 33 Kg
Max. Discharge Current	1100 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	22 A
Equalization and Cycle Service	14.2 to 14.4 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 F9
Container Material	A.B.S. (UL94-HB), Flammability resistance of UL94-V1 can be available upon request.



MH28539



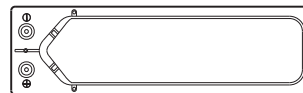
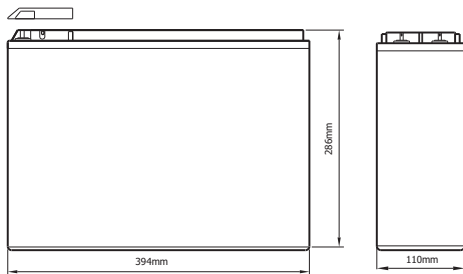
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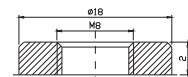
ISO9001:2000 Certificate

## Dimensions

Unit: mm Dimension: 394(L)×109(W)×285(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	275.8	197.4	158.4	106.2	64.72	38.73	26.77	21.94	17.96	12.37	10.46	5.753
10.0V	267.8	187.8	155.2	104.5	64.43	38.44	26.67	21.84	17.85	12.27	10.36	5.648
10.2V	259.9	181.2	152.7	104.6	63.83	38.15	26.46	21.74	17.75	12.17	10.26	5.543
10.5V	236.1	169.2	147.1	103.0	63.23	37.86	26.36	21.53	17.54	12.07	10.16	5.439
10.8V	215.6	156.1	137.2	99.40	61.74	37.18	25.64	21.03	17.22	11.87	10.06	5.334
11.1V	186.2	141.1	124.5	94.01	58.65	35.53	24.51	20.01	16.48	11.36	9.755	5.020

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

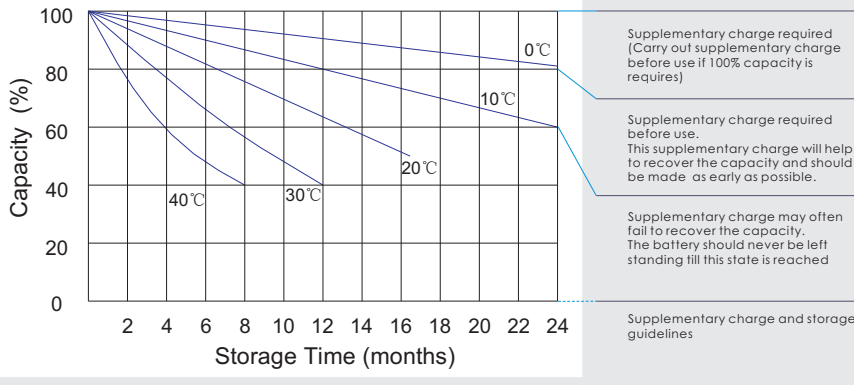
F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
9.60V	2852	2102	1743	1210	747.9	456.5	318.6	261.5	214.2	147.7	125.0	68.97
10.0V	2796	2037	1715	1196	746.1	454.1	318.7	261.2	213.7	147.0	124.2	67.78
10.2V	2764	1984	1695	1200	740.4	451.3	317.3	260.6	213.0	146.0	123.1	66.52
10.5V	2546	1869	1636	1183	733.7	448.1	316.0	258.2	210.4	144.8	121.9	65.27
10.8V	2346	1743	1530	1145	720.2	442.3	307.4	252.3	206.6	142.4	120.7	64.01
11.1V	2084	1594	1393	1086	689.4	425.9	294.2	240.1	197.7	136.4	117.1	60.25

All mentioned values are average values.

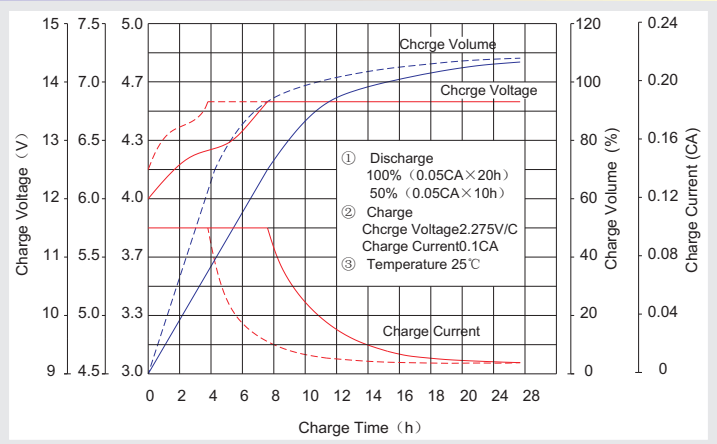
### Effect of temperature on long term float life



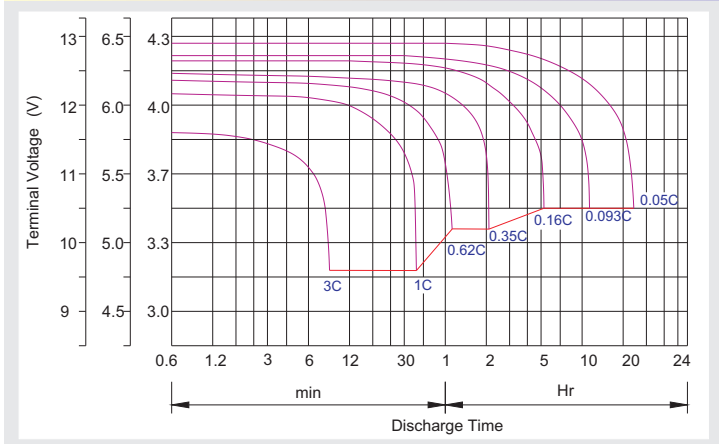
### Storage characteristic



### Charge characteristic Curve for standby 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

<b>Float Service:</b>
※ Every month, recommend inspection every battery voltage.
※ Every three months, recommend equalization charge for one time.
Equalization charge method:
Discharge: 100% rate capacity discharge.
Charge: Max. current 0.2CA, constant voltage 2.35-2.4V/Cell charge 24h.
※ Effect of temperature on float charge voltage: -3mV/°C/Cell.
※ Length of service life will be directly affected by the number of discharge cycles, depth of discharge, ambient temperature and charging voltage.

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

Charging Method:

Constant Voltage	-0.2Cx2h+2.35-2.4V/cellx24h, Max. Current 0.2CA
Constant Current	-0.2Cx2h+0.1CAx12h
Fast	-0.2Cx2h+0.3CAx4.0h