



# RA12-70 (12V70Ah)

RA12-70 is a general purpose battery with 10 years floating design life, meet with IEC, JIS .BS and Eurobat standard. With heavy duty grid, thickness plates, special additives, RA series battery have long and reliable standby service life. Our RA Series batteries keep high consistent for better performance in series usage.



## Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	70Ah@10hr-rate to 1.75V per cell @25°C
Weight	Approx. 22.5 Kg
Max. Discharge Current	700A (5 sec)
Internal Resistance	Approx. 6 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	21A
Equalization and Cycle Service	14.6 to 14.8 VDC/unit Average at 25°C
Self Discharge	RITAR 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 F11/F5
Container Material	A.B.S. (UL94-HB), Flammability resistance of UL94-V1 can be available upon request.



MH28539



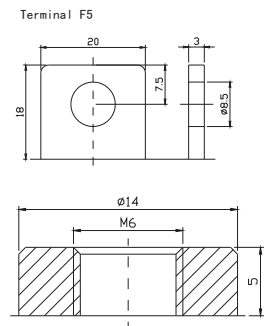
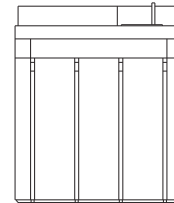
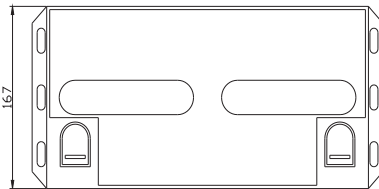
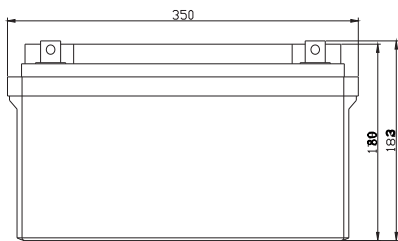
G4M20206-0910-E-16



ISO9001:2000 Certificate

## Dimensions

Unit: mm Dimension: 350(L)×167(W)×180(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	220.15	162.09	124.49	80.500	45.500	25.416	18.270	15.120	12.376	8.6952	7.3521	3.8881
10.0V	213.78	154.22	121.93	79.170	45.290	25.225	18.200	15.050	12.303	8.6246	7.2814	3.8174
10.2V	207.45	148.78	120.02	78.470	44.870	25.034	18.060	14.980	12.230	8.5539	7.2107	3.7467
10.5V	186.28	137.29	114.27	76.510	44.450	24.843	17.990	14.840	12.085	8.4832	7.1400	3.6760
10.8V	168.13	125.19	105.34	73.150	43.400	24.397	17.500	14.490	11.866	8.3418	7.0693	3.6053
11.1V	146.36	111.89	94.483	68.530	41.230	23.314	16.730	13.790	11.357	7.9883	6.8572	3.3933

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

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
9.6V	2147.3	1602.9	1339.6	863.04	520.38	292.38	210.84	174.72	143.27	100.90	82.670	43.667
10.0V	2089.9	1531.0	1311.7	852.26	517.86	291.24	210.42	174.30	142.40	100.48	81.822	43.243
10.2V	2027.0	1480.0	1293.9	842.29	514.08	288.56	209.16	173.46	141.96	99.628	81.398	42.819
10.5V	1825.3	1367.6	1233.8	823.14	509.04	285.89	207.90	172.20	140.65	98.780	80.550	42.395
10.8V	1641.9	1241.7	1133.6	785.63	496.44	281.68	202.86	167.58	138.47	96.660	79.702	41.971
11.1V	1417.3	1102.7	1012.3	736.16	470.40	268.69	192.78	159.60	131.48	93.269	77.159	40.275

All mentioned values are average values.



### Effect of temperature on long term float life



### Storage characteristic



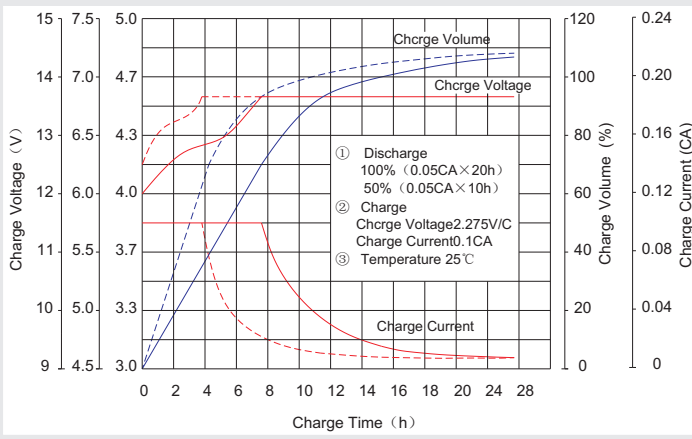
Supplementary charge required (Carry out supplementary charge before use if 100% capacity is required)

Supplementary charge required before use. This supplementary charge will help to recover the capacity and should be made as early as possible.

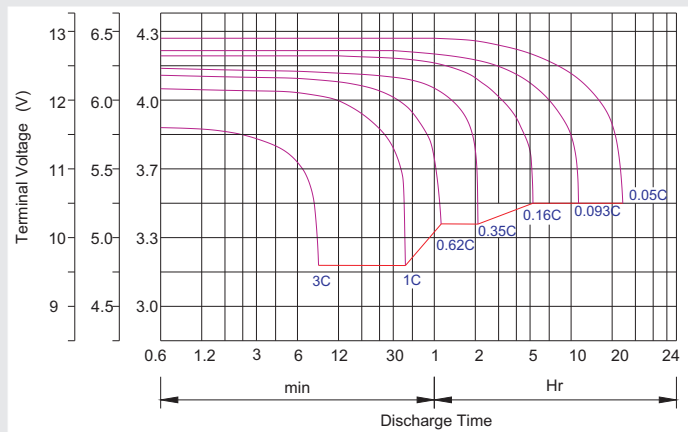
Supplementary charge may often fail to recover the capacity. The battery should never be left standing till this state is reached

Supplementary charge and storage guidelines

### 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 0.3CA, constant voltage 2.4-2.45V/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+2.4-2.45V/cellx24h, Max. Current 0.3CA
Constant Current	-0.2Cx2h+0.1CAx12h
Fast	-0.2Cx2h+0.3CAx4.0h