



RA12-100 (12V100Ah)



RA12-100 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.

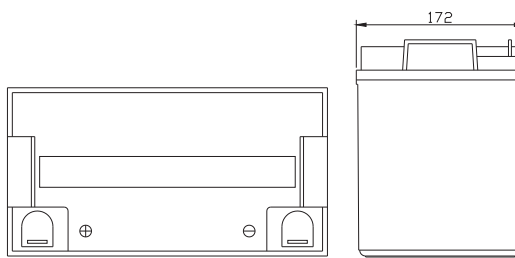
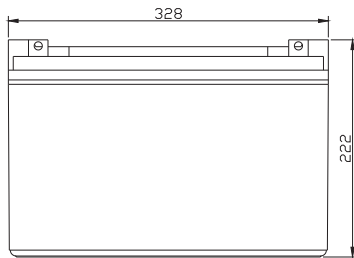
Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	100Ah@10hr-rate to 1.75V per cell @25°C
Weight	Approx.30.0 Kg
Max. Discharge Current	1000A (5 sec)
Internal Resistance	Approx. 5mΩ
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	30 A
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 F5/F12
Container Material	A.B.S. (UL94-HB), Flammability resistance of UL94-V1 can be available upon request.

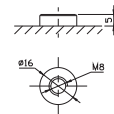
MH28539
G4M20206-0910-E-16
ISO9001:2000 Certificate

Dimensions

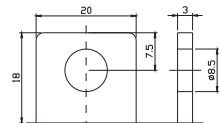
Unit: mm Dimension: 328(L)×172(W)×222(H)



Terminal F12



Terminal F5



Constant Current Discharge Characteristics: A (25°C)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
9.60V	314.5	231.6	177.8	115.0	65.00	36.31	26.10	21.60	17.68	12.42	10.50	5.55
10.0V	305.4	220.3	174.2	113.1	64.70	36.04	26.00	21.50	17.58	12.32	10.40	5.45
10.2V	296.4	212.5	171.5	112.1	64.10	35.76	25.80	21.40	17.47	12.22	10.30	5.35
10.5V	266.1	196.1	163.2	109.3	63.50	35.49	25.70	21.20	17.26	12.12	10.20	5.25
10.8V	240.2	178.8	150.5	104.5	62.00	34.85	25.00	20.70	16.95	11.92	10.10	5.15
11.1V	209.1	159.8	135.0	97.90	58.90	33.31	23.90	19.70	16.22	11.41	9.80	4.85

Constant Power Discharge Characteristics: W(25°C)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
9.6V	3298	2462	1914	1233	743.4	417.7	301.2	249.6	204.7	144.1	118.1	62.38
10.0V	3210	2352	1874	1218	739.8	416.1	300.6	249.0	203.4	143.5	116.9	61.78
10.2V	3114	2273	1848	1203	734.4	412.2	298.8	247.8	202.8	142.3	116.3	61.17
10.5V	2804	2101	1763	1176	727.2	408.4	297.0	246.0	200.9	141.1	115.1	60.56
10.8V	2522	1907	1619	1122	709.2	402.4	289.8	239.4	197.8	138.1	113.9	59.96
11.1V	2177	1694	1446	1052	672.0	383.8	275.4	228.0	187.8	133.2	110.2	57.54

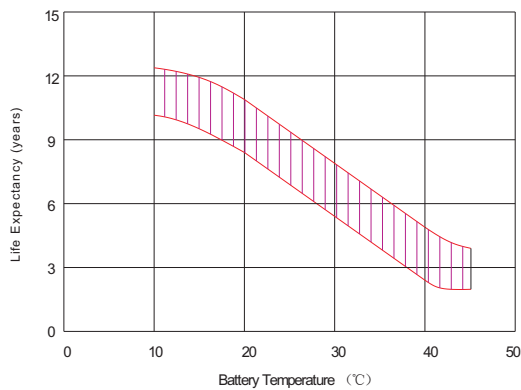
All mentioned values are average values.

RA12-100

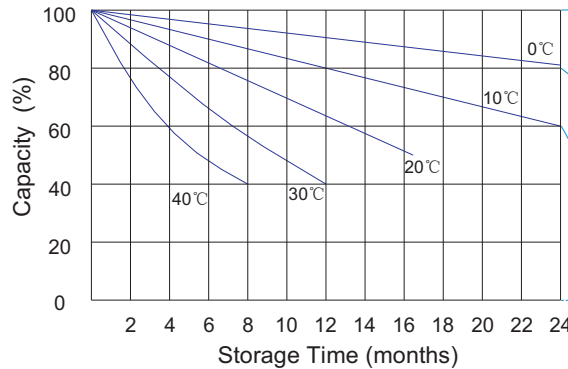
12V100Ah



Effect of temperature on long term float life



Storage characteristic



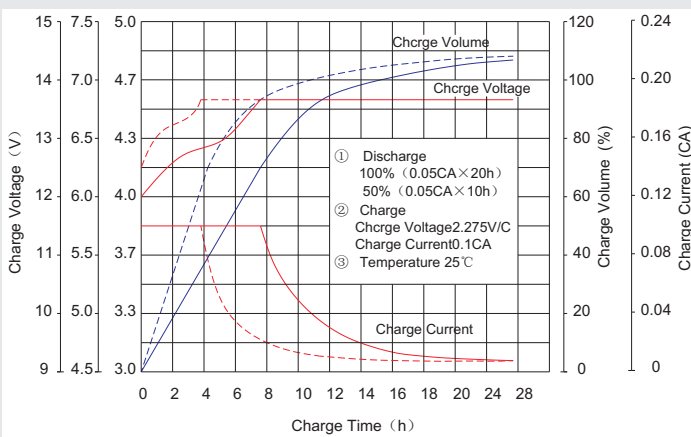
Supplementary charge required (Carry out supplementary charge before use if 100% capacity is required)

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

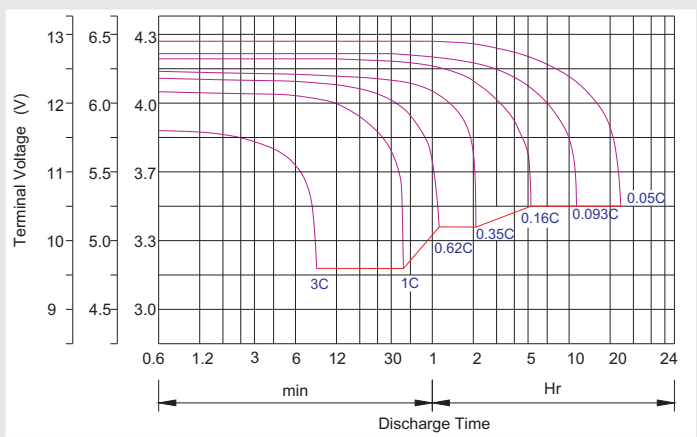
Supplementary charge and storage guidelines

Charge characteristic Curve for standby use



- ① Discharge
100% (0.05CA×20h)
50% (0.05CA×10h)
- ② Charge
Charge Voltage 2.275V/C
Charge Current 0.1CA
- ③ Temperature 25°C

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

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

Maintenance & Cautions

Float Service:
※ 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.