RA12-120A (12V120Ah)

RA series is a general purpose battery with 10 years design life in float service. It meets with IEC, JIS and BS standards .With up-dated AGM valve regulated technology and high purity raw materials, the RA series battery maintains high consistency for better performance and reliable standby service life. It is suitable for UPS/EPS, medical equipment, emergency light and security system applications.

RITAR®

Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	120Ah@10hr-rate to 1.80V per cell @25℃
Weight	Approx. 34.0 Kg (Tolerance±2%)
Max. Discharge Current	1200A (5 sec)
Internal Resistance	Approx. 4.5 mΩ
Operating Temperature Range	Discharge: -20℃~60℃ Charge: 0℃~50℃ Storage: -20℃~60℃
Normal Operating Temperature Range	25℃±5℃
Float charging Voltage	13.6 to 13.8 VDC/unit Average at 25℃
Recommended Maximum Charging Current	36A
Equalization and Cycle Service	14.6 to 14.8 VDC/unit Average at 25℃
Self Discharge	RITAR Valve Regulated Lead Acid (VRLA) batteries can be stored for more than 6 months at 25℃. Self-discharge ratio less than 3% per month at 25℃. Please charge batteries before using.
Terminal	Terminal F5/F12
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.

MH28539

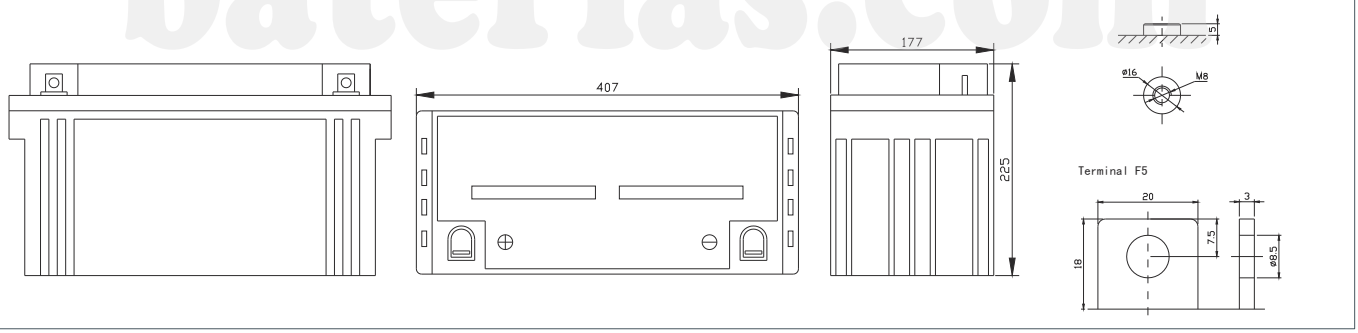
G4M20206-0910-E-16

IQNet CERTIFICATE
Postcode.:421001 is in conformity with ISO 14001:2004 Standard

IQNet CERTIFICATE
Postcode.:421001 is in conformity with OHSAS 18001:1999 Standard

Dimensions

Unit: mm Dimension: 407(L)×177(W) ×225(H)



baterias.com

Constant Current Discharge Characteristics: A (25℃)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
9.60V	362.9	267.6	211.2	118.2	74.90	46.24	31.43	25.34	21.04	13.86	12.49	6.611
10.0V	352.4	254.6	206.8	116.6	73.91	45.31	30.84	24.98	20.85	13.80	12.36	6.487
10.2V	342.0	245.7	203.6	114.9	73.20	44.83	30.57	24.73	20.71	13.68	12.24	6.364
10.5V	307.1	226.7	193.8	111.7	72.30	44.25	30.30	24.37	20.54	13.55	12.12	6.241
10.8V	277.2	206.7	178.7	108.0	71.30	43.88	29.95	23.53	20.44	13.50	12.01	6.177
11.1V	236.7	184.7	160.3	103.9	69.61	42.12	29.36	23.19	20.29	13.39	11.87	5.927

Constant Power Discharge Characteristics: W(25℃)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
9.6V	3754	2850	2323	1353	868.0	541.9	370.0	303.3	252.0	165.9	149.7	79.63
10.0V	3680	2763	2286	1338	860.1	535.3	364.5	299.0	249.7	165.3	148.6	78.25
10.2V	3638	2690	2260	1327	855.0	531.5	362.9	296.2	248.2	164.0	147.2	76.80
10.5V	3312	2505	2156	1300	849.5	524.8	359.9	292.2	246.2	162.6	145.8	75.35
10.8V	3016	2309	1992	1269	838.6	520.9	355.9	282.4	245.1	161.9	144.4	74.62
11.1V	2649	2088	1793	1234	826.0	501.4	349.9	278.3	244.2	160.8	142.8	71.95

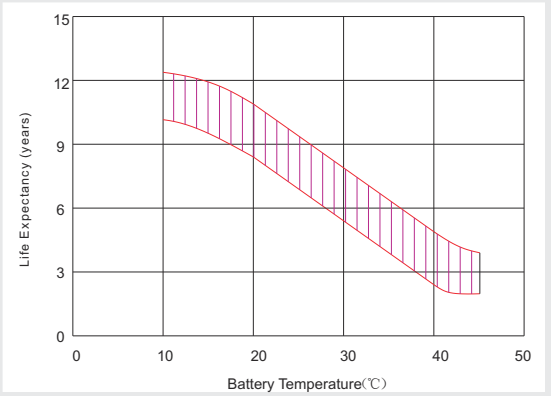
All mentioned values are average values (Tolerance ±2%).

RA12-120A

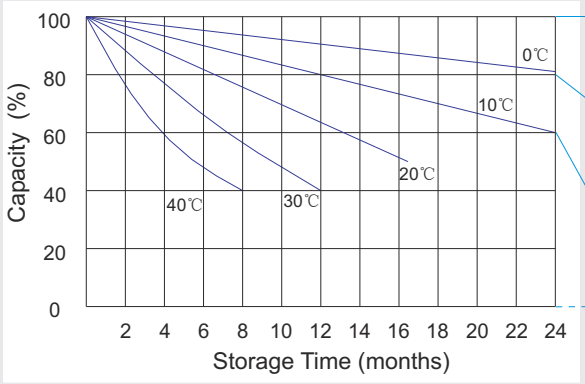
12V120Ah

RITAR®

Effect of temperature on long term float life



Storage characteristic



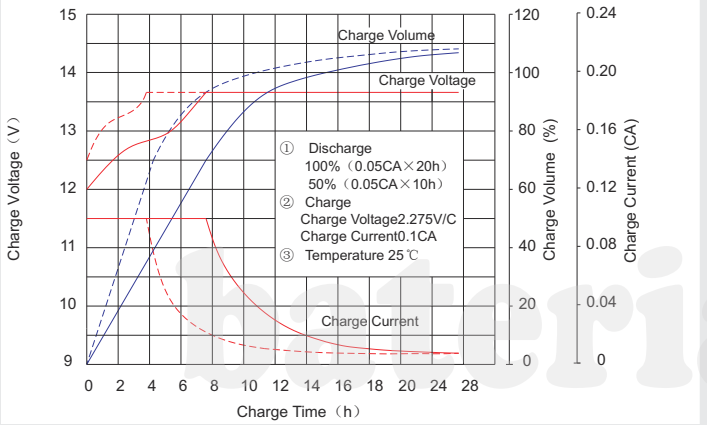
Supplementary charge required (Carry out supplementary charge before use if 100% capacity is requires)

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

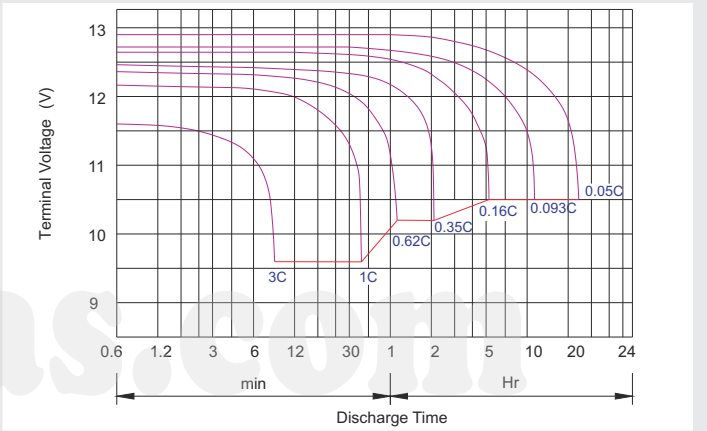
Supplementary charge may often fail to recover the capacity. The battery should never be left standing till this state is reached

Supplementary charge and storage guidelines

Charge characteristic Curve for standby use



Discharge characteristic Curve



Capacity Factors With Different Temperature

Battery Type		-20℃	-10℃	0℃	5℃	10℃	20℃	25℃	30℃	40℃	45℃
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℃.

Charging Method:

Constant Voltage	-0.2Cx2h+14.4-14.7Vx24h,Max. Current 0.3C
Constant Current	-0.2Cx2h+0.1Cx12h
Fast	-0.2Cx2h+0.3Cx4h

Bolt	M5	M6	M8
Terminal	F3 F4 F13 F18 T25 T26	F8 F11 F12-1 F15	F5 F9 F10 F12 F14 F16
Torque	6~7N-m	8~10N-m	10~12N-m

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 14.4-14.7V charge 24h.

※ Effect of temperature on float charge voltage: -3mV/℃/Cell.

※ Length of service life will be directly affected by the number of discharge cycles, depth of discharge, ambient temperature and charging voltage.

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