



RA12-100 (12V100Ah)

RA12-100 is a general purpose battery with 10 years design life time in float charging use. As with all Ritar batteries, all RA models are rechargeable, highly efficient, leak proof and maintenance free.



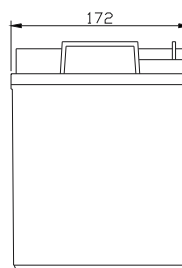
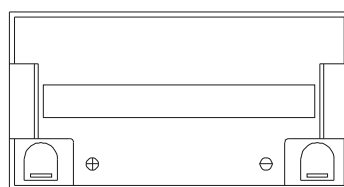
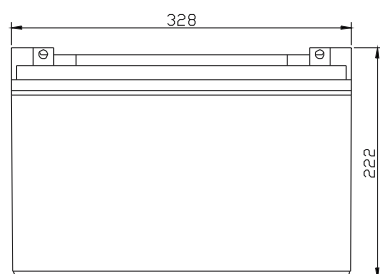
Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	100Ah@10hr-rate to 1.75V per cell @25°C
Weight	Approx. 30 Kg
Max. Discharge Current	500 A (5 sec)
Internal Resistance	Approx. 5 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	30 A
Equalization and Cycle Service	14.4 to 15.0 VDC/unit Average at 25°C
Self Discharge	RITAR batteries can be stored for more than 6 months at 25°C. Please charge batteries before using. For higher temperature, the time interval will be shorter.
Terminal	Terminal F5/F12
Container Material	A.B.S. (UL94-HB) Flammability resistance of UL94-V1 can be available upon request.

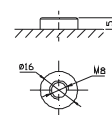


Dimensions

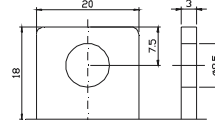
Unit: mm



Terminal F12



Terminal F5



Constant Current Discharge Characteristics Unit: A(25°C)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	374	268	195	115	65.0	39.9	26.1	21.6	17.0	12.3	10.4	5.5
1.67V	364	255	191	113	64.7	39.6	26.0	21.5	16.9	12.2	10.3	5.4
1.70V	343	246	188	112	64.1	39.3	25.8	21.4	16.8	12.1	10.2	5.3
1.75V	308	227	179	109	63.5	39.0	25.7	21.2	16.6	12.0	10.1	5.2
1.80V	278	207	165	105	62.0	38.3	25.0	20.7	16.3	11.8	10.0	5.1
1.85V	242	185	148	98	58.9	36.6	23.9	19.7	15.6	11.3	9.7	4.8

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

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	671	490	361	216	124	76.5	50.2	41.6	32.8	23.8	19.5	10.3
1.67V	657	468	354	214	123	76.2	50.1	41.5	32.6	23.7	19.3	10.2
1.70V	620	453	349	211	122	75.5	49.8	41.3	32.5	23.5	19.2	10.1
1.75V	558	418	333	206	121	74.8	49.5	41.0	32.2	23.3	19.0	10.0
1.80V	502	380	306	197	118	73.7	48.3	39.9	31.7	22.8	18.8	9.9
1.85V	434	337	273	185	112	70.3	45.9	38.0	30.1	22.0	18.2	9.5

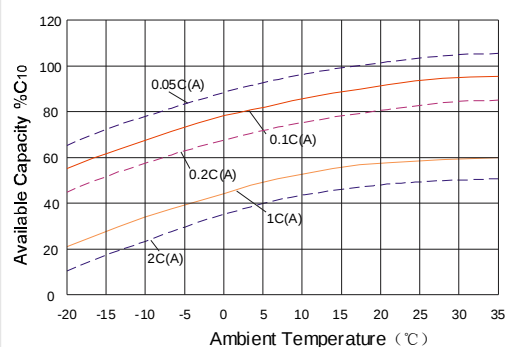
All mentioned values are average values.

RA12-100

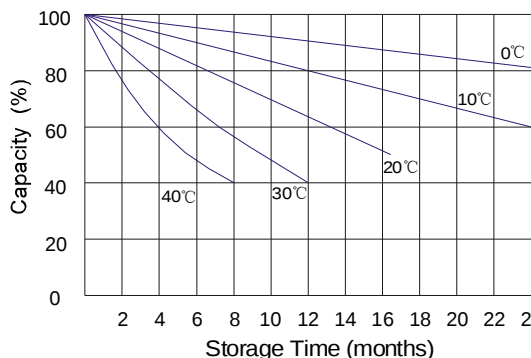
12V100Ah



Temperature effects curve



Storage characteristic



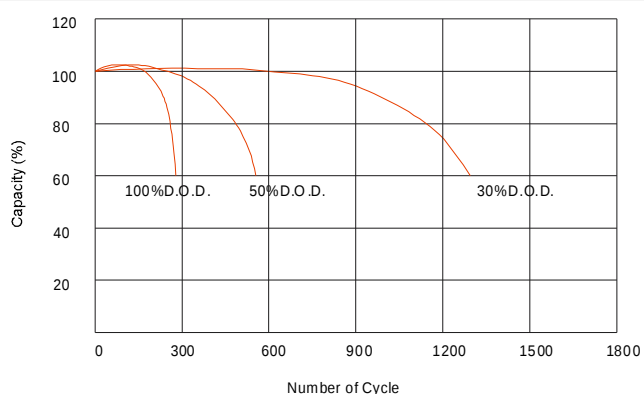
Supplementary charge required (Carry out supplementary charge before use if 100% capacity is required)

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

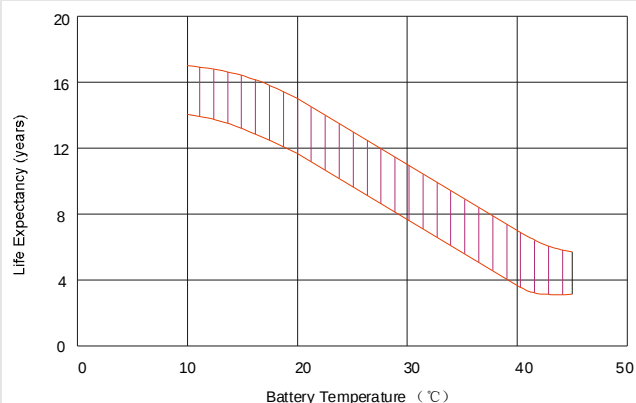
Supplementary charge may often fail to recover the capacity. The battery should never be left standing till this state is reached

Supplementary charge and storage guidelines

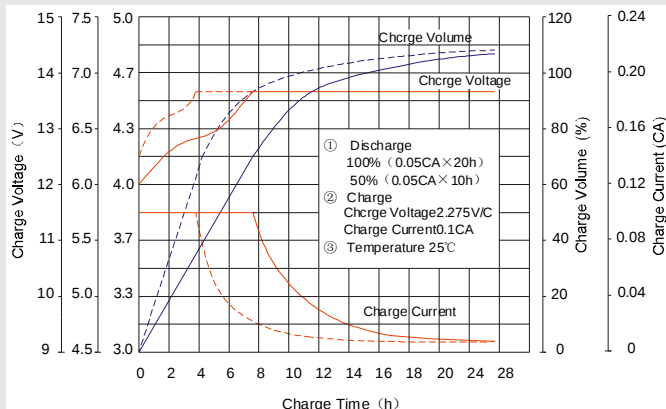
Life characteristics of cyclic use



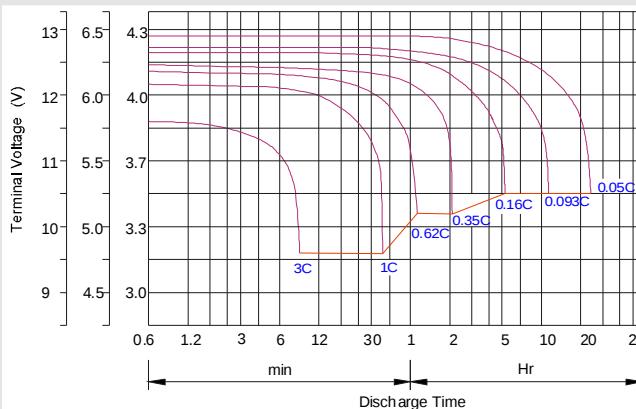
Effect of temperature on long term float life



Charge characteristic Curve for standby use



Discharge characteristic Curve



Charging Procedures(12V series)

Application	Charge Voltage (V)			Max. Charge Current
	Temperature	Set point	Allowable range	
Cycle Use	25°C	14.7	14.4~15.0	0.3C
Standby	25°C	13.7	13.6~13.8	0.3C

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

Charging Method:

Constant Voltage	-0.2Cx2h +14.4~15.0V,24h,Max. Current 0.3CA
Constant Current	-0.2Cx2h +0.1CAx12h
Fast	-0.2CX2h +0.3CAx4h

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

Charging Procedures(6V series)

Application	Charge Voltage (V)			Max. Charge Current
	Temperature	Set point	Allowable range	
Cycle Use	25°C	7.35	7.25~7.45	0.3C
Standby	25°C	6.85	6.8~6.9	0.3C

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