



RA12-33H (12V33.0Ah) (121.2w/cell)

RA12-33H is high rate series with 10 years floating design life, especially designed for high rate load discharge applications. By using strong grid and specific paste plate to insure high performance during big current discharge requirement when electricity is off., High Rate series offering extra-durable stable performance under high rate discharge.



Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	121.2W@15min-rate to 1.67V per cell @25°C
Weight	Approx. 10.2 Kg
Max. Discharge Current	330A (5 sec)
Internal Resistance	Approx. 9 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	9.9 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 F7/F11
Container Material	A.B.S. (UL94-HB), Flammability resistance of UL94-V1 can be available upon request.



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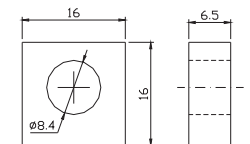
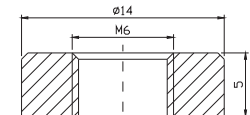
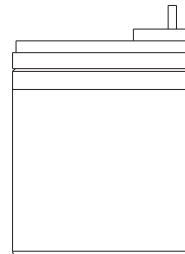
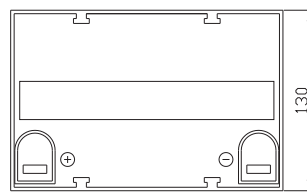
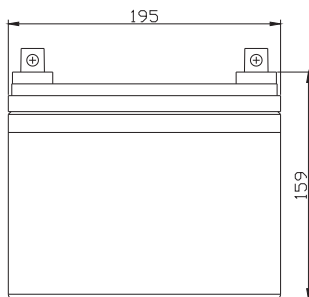
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ISO9001:2000 Certificate

Dimensions

Unit: mm Dimension: 195(L)×130(W)×159(H)



Constant Current Discharge Characteristics : A(25°C)

F.V/Time	2MIN	4MIN	6MIN	8MIN	10MIN	15MIN	20MIN	30MIN	60MIN	90MIN
9.60V	223.6	166.9	130.1	111.2	95.69	70.60	56.90	41.05	22.11	17.64
10.0V	208.4	156.1	121.4	105.3	90.51	67.56	53.58	39.53	21.29	17.03
10.2V	201.9	151.5	117.7	102.8	88.27	66.28	52.15	38.86	20.92	16.73
10.5V	191.4	143.6	113.8	98.97	83.95	63.98	51.36	38.26	20.86	16.51
10.8V	180.9	135.7	109.9	95.07	79.60	61.63	50.54	37.62	20.77	16.33
11.1V	170.4	127.8	106.1	91.19	75.31	59.33	49.78	37.01	20.65	16.12

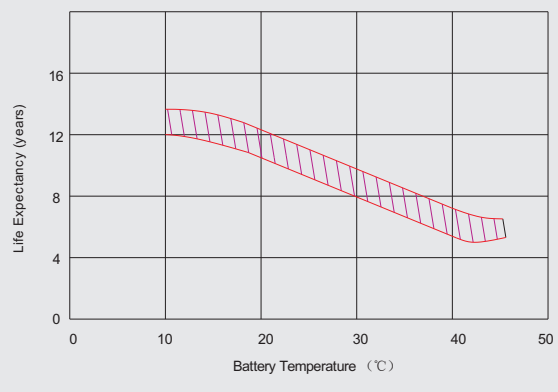
Constant Power Discharge Characteristics : W(25°C)

F.V/Time	2MIN	4MIN	6MIN	8MIN	10MIN	15MIN	20MIN	30MIN	60MIN	90MIN
9.60V	2406	1796	1400	1197	1028	759.7	621.6	448.8	241.8	193.4
10.0V	2243	1680	1306	1133	973.8	727.2	585.5	432.1	232.6	185.9
10.2V	2173	1630	1266	1107	949.7	713.1	569.8	424.8	228.6	182.5
10.5V	2060	1545	1225	1065	903.1	688.3	561.2	418.0	227.7	180.6
10.8V	1946	1460	1183	1023	856.4	663.3	552.5	411.1	226.4	178.8
11.1V	1833	1375	1141	981.6	809.9	638.3	544.1	404.0	225.5	177.0

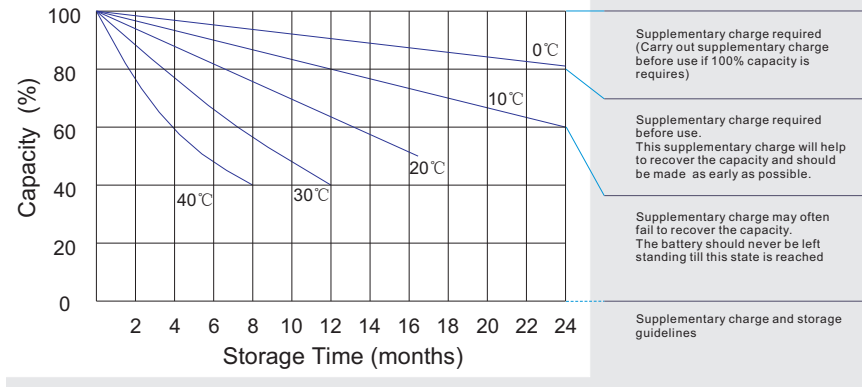
All mentioned values are average values.



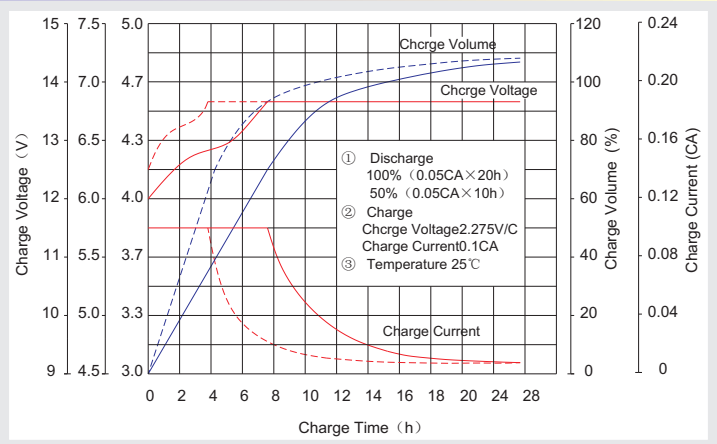
Effect of temperature on long term float life



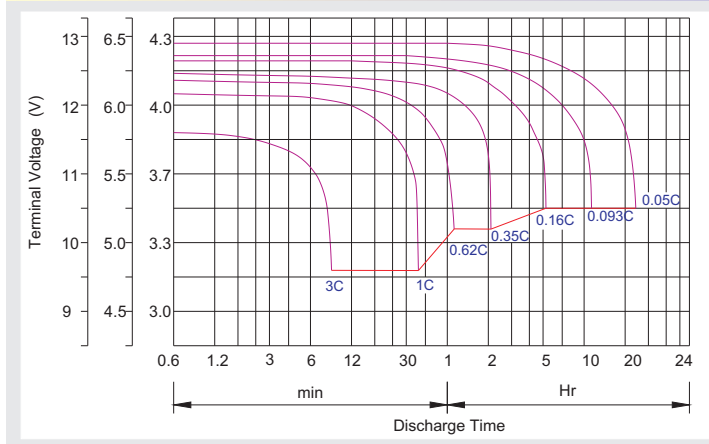
Storage characteristic



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

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.