



RA12-145 (12V145Ah)



RA12-145 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	145Ah@10hr-rate to 1.80V per cell @25°C
Weight	Approx. 44 Kg
Max. Discharge Current	1450A (5 sec)
Internal Resistance	Approx. 4.5 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	43.5A
Equalization and Cycle Service	14.6 to 14.8 VDC/unit Average at 25°C
Self Discharge	RITAR Valve Regulated Lead Acid (VRLA) 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



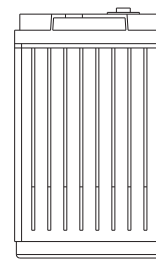
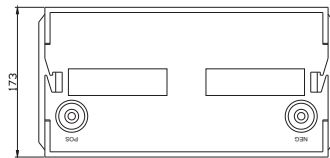
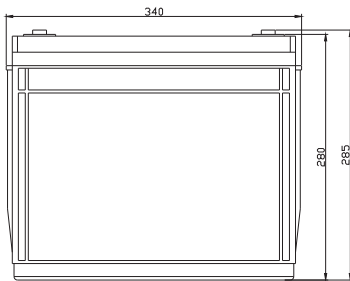
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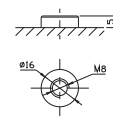
ISO9001:2000 Certificate

Dimensions

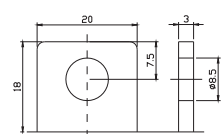
Unit: mm Dimension: 340(L)×173(W)×280(H)



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	427.8	319.1	263.1	163.4	94.25	56.40	38.98	31.95	26.15	18.01	15.23	8.376
10.0V	415.4	303.6	257.7	160.7	93.82	55.97	38.83	31.80	25.99	17.87	15.08	8.224
10.2V	403.1	292.9	253.6	159.2	92.95	55.55	38.53	31.65	25.84	17.72	14.94	8.072
10.5V	361.9	270.3	241.5	155.3	92.08	55.12	38.38	31.35	25.53	17.57	14.79	7.919
10.8V	326.7	246.4	222.6	148.4	89.90	54.14	37.34	30.62	25.07	17.28	14.64	7.767
11.1V	278.9	220.3	199.6	139.1	85.41	51.73	35.69	29.14	24.00	16.55	14.20	7.310

Constant Power Discharge Characteristics: W(25°C)

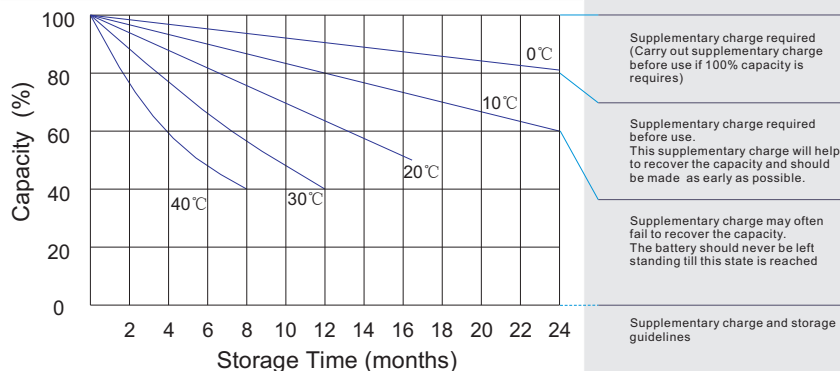
F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
9.6V	4424	3398	2894	1862	1089	664.7	463.9	380.8	312.0	215.1	182.0	100.4
10.0V	4337	3294	2847	1840	1087	661.2	464.0	380.3	311.2	214.0	180.8	98.7
10.2V	4288	3207	2815	1827	1078	657.2	462.0	379.5	310.1	212.6	179.2	96.9
10.5V	3903	2986	2685	1784	1068	652.4	460.2	375.9	306.4	210.9	177.5	95.0
10.8V	3555	2753	2482	1710	1049	644.1	447.7	367.4	300.9	207.4	175.7	93.2
11.1V	3123	2489	2234	1606	1004	620.2	428.3	349.6	287.9	198.6	170.5	87.7

All mentioned values are average values.

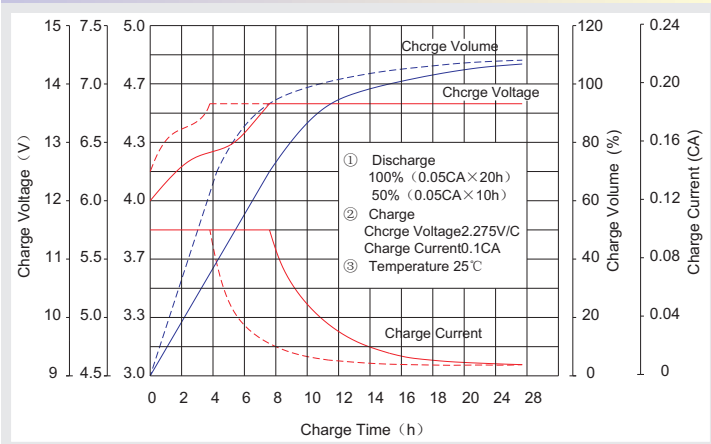
Effect of temperature on long term float life



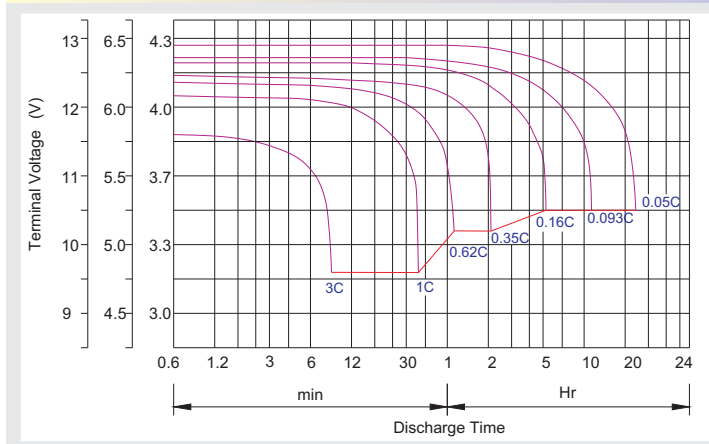
Storage characteristic



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.