



RA12-225HL (12V225Ah) (690w/cell)

HRL is high rate series with 12 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.



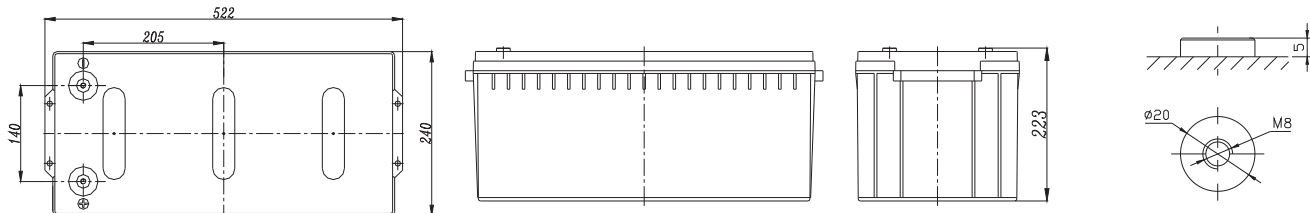
Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	690W@15min-rate to 1.67V per cell @25°C
Weight	Approx. 65.5 Kg(Tolerance ± 1.5%)
Max. Discharge Current	2200A (5 sec)
Internal Resistance	Approx. 3.5 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	67 A
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	Faston tabF10
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.



Dimensions

Unit: mm Dimension: 522(L) × 240(W) × 223(H)



Constant Current Discharge Characteristics : A(25°C)

F.V / Time	5MIN	8MIN	10MIN	15MIN	20MIN	30MIN	60MIN	90MIN
9.60V	767	629	568	417	365	260	146	116
10.0V	744	596	566	408	343	251	143	112
10.2V	722	582	536	392	334	247	141	110
10.5V	649	560	489	372	318	237	137	108
10.8V	585	538	438	355	308	228	134	106
11.1V	500	495	403	338	297	220	130	102

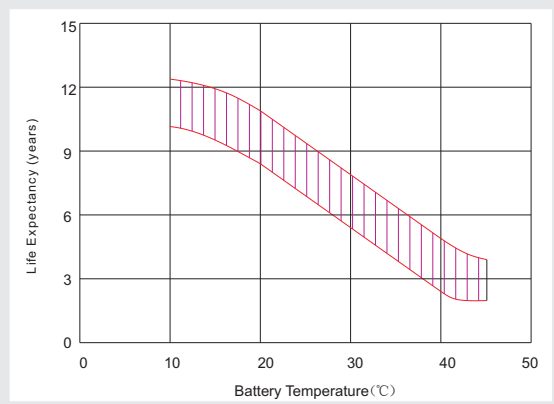
Constant Power Discharge Characteristics : W(25°C)

F.V / Time	5MIN	8MIN	10MIN	15MIN	20MIN	30MIN	60MIN	90MIN
9.60V	8088	6674	6319	4860	4025	2906	1631	1301
10.0V	7928	6408	6271	4775	3829	2825	1596	1264
10.2V	7838	6237	5986	4634	3754	2783	1584	1250
10.5V	7135	6098	5569	4490	3619	2717	1575	1243
10.8V	6499	5854	5461	4301	3509	2627	1549	1234
11.1V	5708	5544	5354	4112	3430	2548	1520	1197

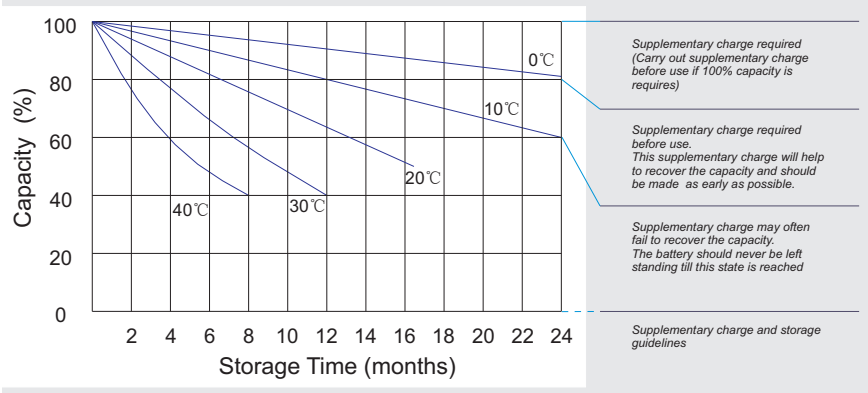
All mentioned values are average values (Tolerance ±2%).



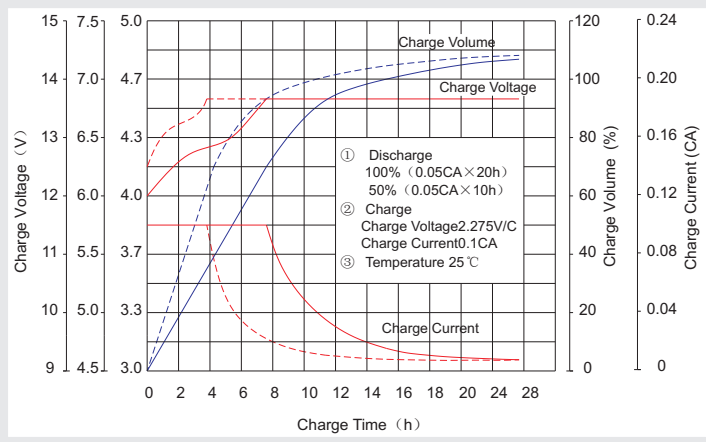
Effect of temperature on long term float life



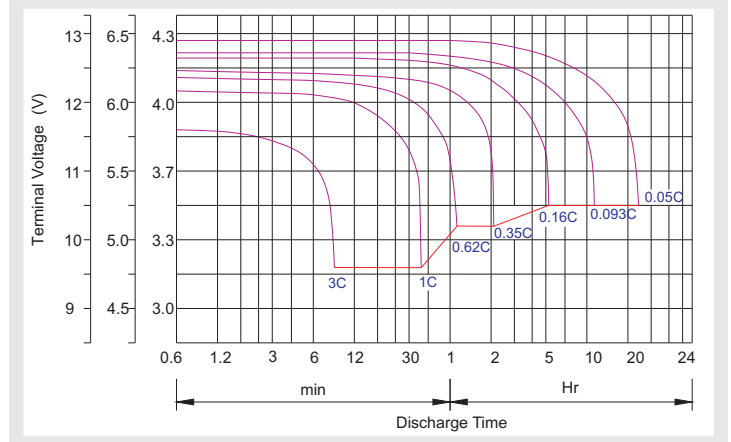
Storage characteristic



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 0.3C
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 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.