



# RA12-65H (12V65.0Ah) (240w/cell)

HR (High Rate) series is especially designed for heavy load discharge applications with 10 years design life in float service. By using strong grids and specially designed active material the HR series offers stable performance during high current discharge requirements. The HR series offers 30% more power output than the standard range. Suitable for UPS/EPS where high current loads are required.



## Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	240W@15min-rate to 1.67V per cell @25°C
Weight	Approx. 21.0 Kg(Tolerance ±2%)
Max. Discharge Current	650A (5 sec)
Internal Resistance	Approx. 5.5 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	19.5 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 tabF5/F11
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.



MH28539



G4M20206-0910-E-16



CERTIFICATE

Postcode: 421001

is in conformity with

ISO 14001:2004 Standard



CERTIFICATE

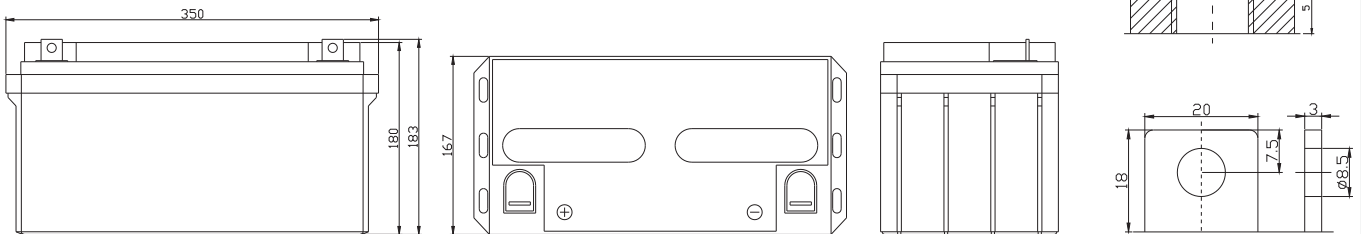
Postcode: 421001

is in conformity with

OHSAS 18001:1999 Standard

## Dimensions

Unit: mm Dimension: 350(L) × 167(W) × 180(H)



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

F.V / Time	5MIN	8MIN	10MIN	15MIN	20MIN	30MIN	60MIN	90MIN
9.60V	246.1	201.9	182.5	133.9	107.5	76.8	43.0	34.3
10.0V	239.0	191.3	181.6	130.8	101.2	73.9	42.2	33.1
10.2V	231.9	186.7	171.9	125.7	98.5	72.7	41.4	32.5
10.5V	208.2	179.7	157.1	119.3	93.8	70.0	40.5	31.9
10.8V	187.9	172.6	140.6	113.9	90.8	67.1	39.5	31.4
11.1V	160.5	158.9	129.4	108.6	87.5	64.9	38.3	30.1

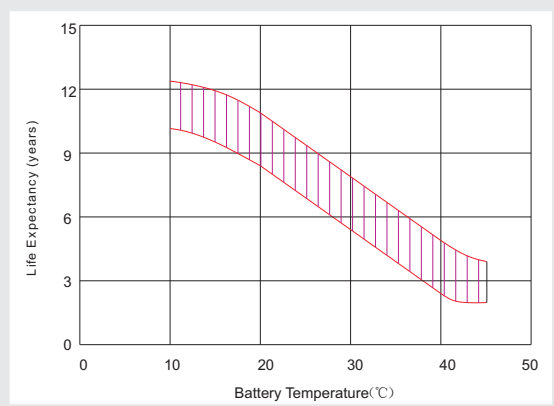
### Constant Power Discharge Characteristics : W(25°C)

F.V / Time	5MIN	8MIN	10MIN	15MIN	20MIN	30MIN	60MIN	90MIN
9.60V	2596	2142	2028	1560	1186	856.7	480.8	383.6
10.0V	2545	2057	2013	1533	1129	832.9	470.4	372.5
10.2V	2516	2002	1921	1487	1107	820.4	466.9	368.5
10.5V	2290	1957	1788	1441	1067	801.0	464.4	366.4
10.8V	2086	1879	1753	1381	1034	774.4	456.5	363.6
11.1V	1832	1780	1718	1320	1011	751.1	448.1	352.9

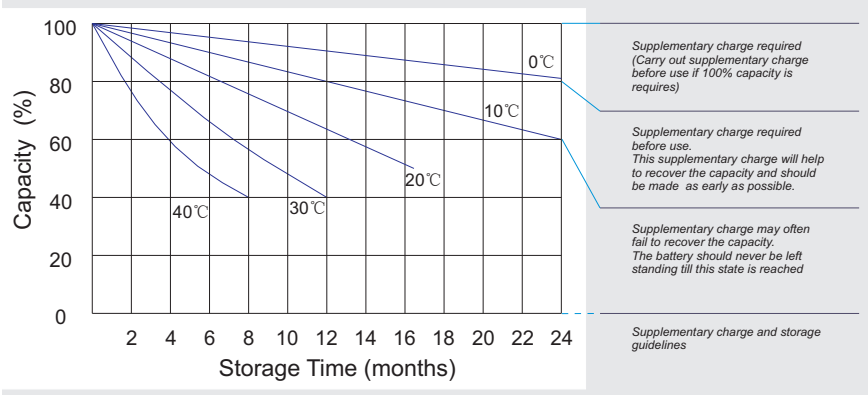
All mentioned values are average values (Tolerance ±2%).



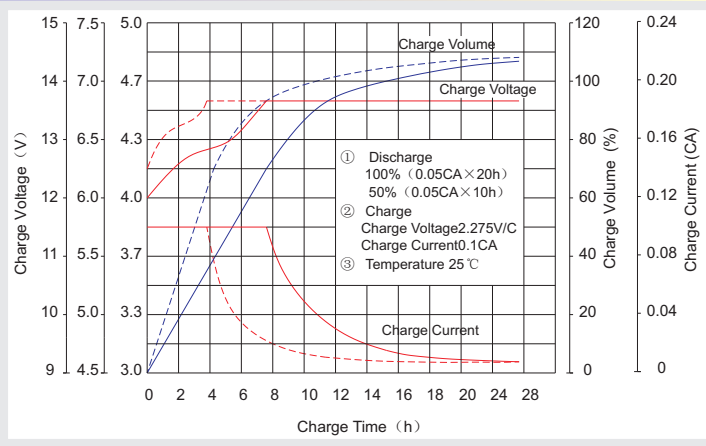
### Effect of temperature on long term float life



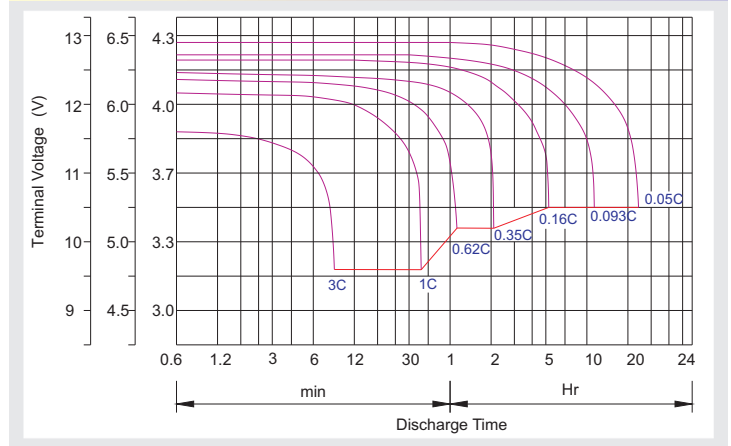
### Storage characteristic



### 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.