

VOLTA

KER

Lead Acid batteries

High Rate SLA battery (HR Series)

HR Series

High Rate series batteries are designed to have a large amount of stored current discharged between charging sessions, with very heavy non-porous battery plates to withstand repeated major discharging and charging cycle(high rate). The High-Rate batteries uses a different chemistry for the plates active paste material, and a slightly stronger electrolyte than normal battery electrolyte, which allows for a much longer life in high rate applications.

Application

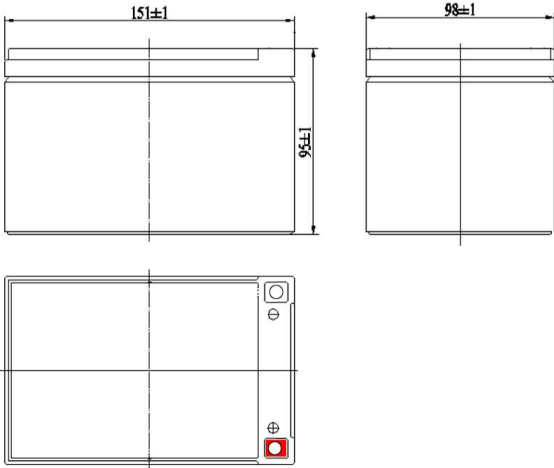
- Alarm System
 - Cable Television
 - Electric Bicycle
 - Emergency Power System
 - Security System
- Medical Equipment
 - Solar and Wind Power System
 - Communication Equipment
 - Control Equipment
 - Toys

General Features

- Sealed and maintenance free operation.
- Non-Spillable construction design.
- ABS containers and covers (UL94HB, UL94V-0) optional.
- Safety valve installation for explosion proof .
- High quality and high reliability.
- Exceptional deep discharge recovery performance.
- Low self discharge characteristic.
- Flexibility design for multiple install positions.

HR12120

(12V12.0Ah/20hr)



CONSTRUCTION

Component	Positive plate	Negative plate	Container	Cover	Safety valve	Terminal	Separator	Electrolyte
Raw material	Lead dioxide	Lead	ABS	ABS	Rubber	Copper	Fiberglass	Sulfuric acid

TECHNOLOGY PARAMETER

Battery model	DC12120			
Designed Cycle Life	> 350 Cycles @ -0.5CA to 9.6V			
Capacity (25℃)	20hR(0.6A, 10.5V)	10hR(1.14A, 10.5V)	5hR(2.06A, 10.5V)	1hR(8.09A, 9.60V)
	12.0Ah	1.14Ah	10.3Ah	8.09Ah
Dimensions	Length	Width	Height	Total Height
	151±1mm	98±1mm	95±1mm	101±1mm
Approx. weight (±5%)	3.3 Kg			
Internal resistance	Full charged at 25℃: Approx. 18mOhms			
Self discharge	3% of capacity declined per month at 25℃ (average)			
Capacity Affected by Temp.(20HR)	40℃	25℃	0℃	-15℃
	102%	100%	85%	65%
Charge Voltage (25℃)	Cycle use		Float use	
	14.4-14.7V(-30mV/℃), max. Current: 3.6A		13.6-13.8V(-20mV/℃)	

HR12120 (12V12.0Ah/20hr)

Constant current discharge ratings-amperes at 25°C

End Point Volts/Cell	5min	10min	15min	30min	1h	3h	5h	10h	20h
1.60V	45.4	32.0	24.4	13.5	7.93	3.34	2.10	1.22	0.621
1.65V	43.6	30.8	23.7	13.0	7.55	3.23	2.08	1.19	0.616
1.70V	41.1	29.6	23.2	12.5	7.19	3.12	2.04	1.16	0.608
1.75V	38.5	28.4	22.3	12.0	6.82	2.99	2.02	1.14	0.600
1.80V	36.0	27.2	21.5	11.5	6.68	2.85	1.98	1.11	0.589

Constant power discharge ratings-watts at 25°C

End Point Volts/Cell	5min	10min	15min	30min	1h	3h	5h	10h	20h
1.60V	84.0	59.2	45.5	25.3	14.9	6.30	4.00	2.32	1.19
1.65V	80.2	56.6	43.9	24.2	14.1	6.07	3.92	2.26	1.18
1.70V	75.1	54.2	42.6	23.2	13.4	5.84	3.84	2.20	1.16
1.75V	70.1	51.7	40.7	22.1	12.6	5.55	3.78	2.14	1.13
1.80V	64.9	49.0	39.0	21.0	12.2	5.25	3.67	2.07	1.10

