

**HR Series**

HR(High-Rate) Series of valve regulated lead acid (VRLA) batteries have been developed with high efficiency active materials to stimulate inside the battery with higher power output when the battery is discharged to a extent level of discharging. Along with high-density structure design for relatively smaller Inner resistance which will significantly improve the performance for high rate discharging when high power output service is needed.

**Application**

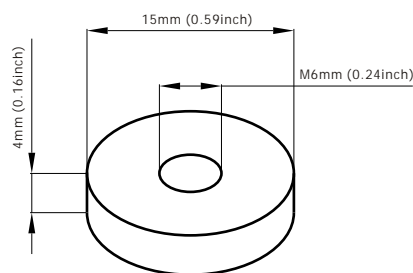
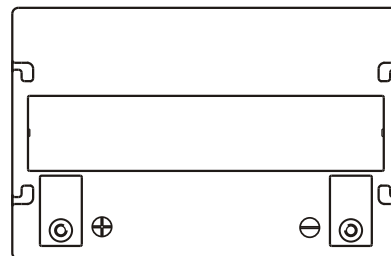
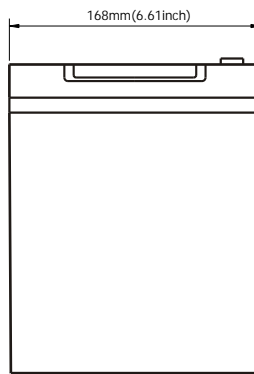
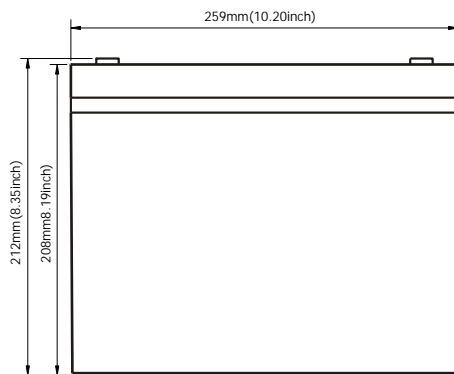
- Alarm System
- Cable Television
- Communication Equipment
- Control Equipment
- Security System
- Medical Equipment
- Toys
- UPS
- Emergency Power System

**General Features**

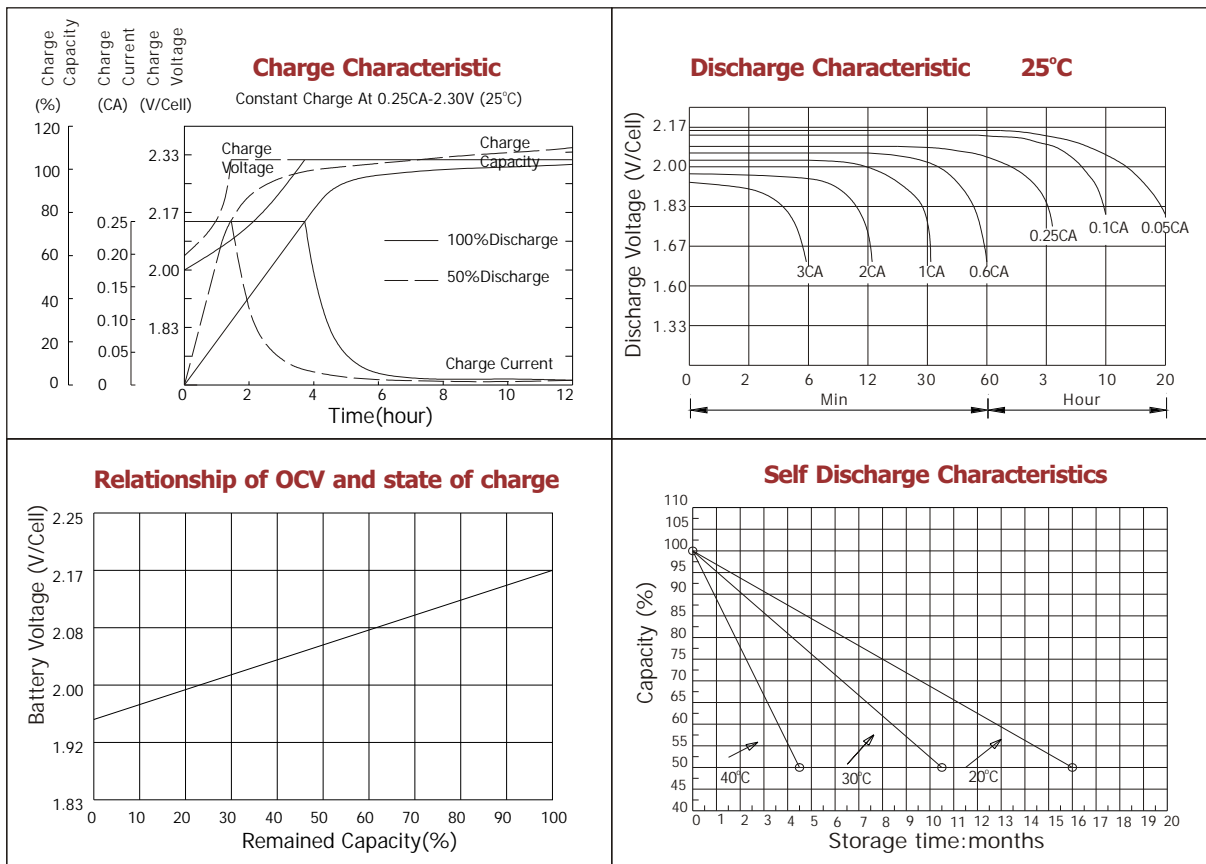
- Sealed and maintenance free operation.
- Non-Spillable construction design.
- ABS containers and covers(UL94HB, UL94V-0) optional.
- Safety valve installation for explosion proof.
- High quality and high reliability.
- Exceptional deep discharge recovery performance.
- Low self discharge characteristic.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

**Construction**

- Component .....Raw material
- Positive .....Lead dioxide
- Negative .....Lead
- Container .....ABS
- Cover .....ABS
- Sealant .....Epoxy Resin
- Safety valve .....EPDR
- Terminal .....Copper
- Separator .....Fibre glass
- Electrolyte .....Sulfuric acid

**Terminal Dimensions**

Battery Model	HR12-270 (270W to 1.67V, 15min)			
Designed Floating Life	8 Years			
Capacity(25°C)	20HR(4.5A,1.75V)	10HR(8.75A,1.75V)	5HR(15.2A,1.75V)	1HR(57A,1.75V)
	90AH	87.5AH	76AH	57AH
Dimensions	Length	Width	Height	Total Height
	259mm(11.77inch)	168mm(6.62inch)	208mm(8.20inch)	212mm(8.35inch)
Approx. Weight	25Kg (55.13 lbs)			
Internal Resistance	Full charged at 25°C: 0.006 Ohm			
Self Discharge	3% of capacity declined per month at (25°C)			
Capacity Affected by Temp.(20HR)	40°C	25°C	0°C	-15°C
	102%	100%	85%	65%
Charge Voltage(25°C)	Cycle use		Float use	
	14.4-15V(-30mV/ °C), max. Current: 21A		13.6-13.8V(-20mV/ °C)	



#### Constant current discharge ratings-amperes at 25°C

F. V/Time	5MIN	10MIN	15MIN	30MIN	1HR	3HR	5HR	10HR	20HR
1.60V	319	199	150	91.3	60.4	26.5	16.2	8.83	4.77
1.67V	299	188	144	87.4	59.6	25.5	15.9	8.74	4.60
1.70V	274	182	141	79.4	57.8	23.8	15.5	8.71	4.53
1.75V	269	176	136	75.4	55.1	23.0	15.2	8.67	4.41
1.80V	241	168	124	69.9	51.6	22.1	14.3	8.50	4.29
1.85V	212	160	111	64.3	48.1	21.3	13.4	8.38	4.22

#### Constant power discharge ratings-watts at 25°C

F. V/Time	5MIN	10MIN	15MIN	30MIN	1HR	3HR	5HR	10HR	20HR
1.60V	560	358	273	164	109	47.0	27.4	18.1	9.52
1.67V	540	349	270	161	108.3	45.6	27.3	18.0	9.18
1.70V	509	346	268	151	106.3	43.5	26.9	17.9	9.07
1.75V	512	345	265	146	104.5	42.5	26.7	17.6	8.84
1.80V	468	340	246	140	98.5	41.3	25.9	16.6	8.61
1.85V	425	322	223	131	92.6	40.0	25.0	16.4	8.33

