

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

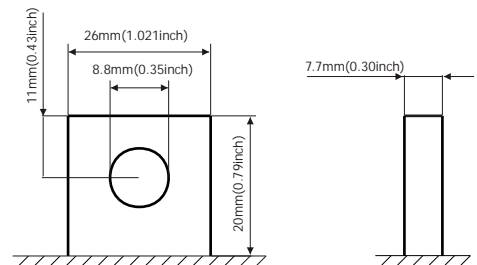
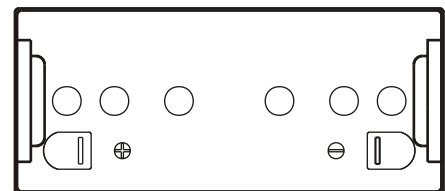
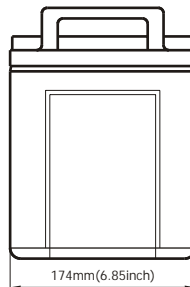
- Alarm System
- Cable Television
- Communication Equipment
- Control Equipment
- Security System
- Medical Equipment
- Toys
- UPS
- Emergency Power System

General Features

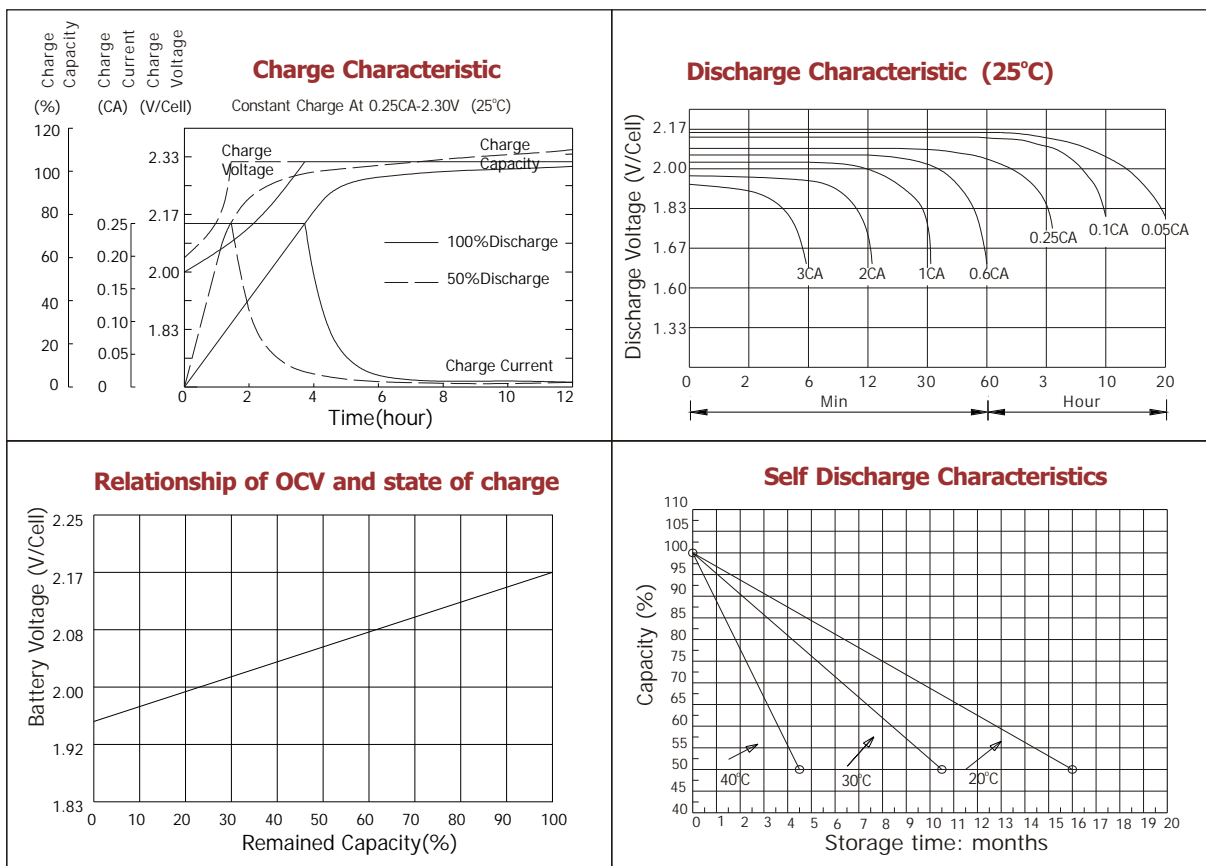
- Sealed and maintenance free operation.
- Non-Spillable construction design.
- ABS containers and covers(UL94HB, UL94V-0) optional.
- Safety valve installation for explosion proof.
- High quality and high reliability.
- Exceptional deep discharge recovery performance.
- Low self discharge characteristic.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

Construction

- ComponentRaw material
- PositiveLead dioxide
- NegativeLead
- ContainerABS
- CoverABS
- SealantEpoxy Resin
- Safety valveEPDR
- TerminalCopper
- SeparatorFibre glass
- ElectrolyteSulfuric acid

**Terminal Dimensions**

Battery Model	HR12-445w [445W to 1.67V, 15min]			
Designed Floating Life	8 Years			
Capacity(25°C)	20HR(6.8A,1.75V)	10HR(13A,1.75V)	5HR(23A,1.75V)	1HR(82A,1.75V)
	136AH	130AH	115AH	82AH
Dimensions	Length	Width	Height	Total Height
	406mm(16.00inch)	174mm(6.85inch)	208mm(8.19inch)	233mm(9.17inch)
Approx. Weight	38.0Kg (83.79 lbs)			
Internal Resistance	Full charged at 25°C: 0.0045 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: 30A		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	526	327	247	151	96.7	42.4	25.9	14.1	7.63
1.67V	494	310	237	144	95.4	40.8	25.4	14.0	7.36
1.70V	452	299	232	131	92.5	38.1	24.8	13.9	7.25
1.75V	443	290	224	124	88.1	36.8	24.3	13.9	7.06
1.80V	397	277	204	115	82.5	35.4	22.8	13.6	6.87
1.85V	350	264	183	106	76.9	34.1	21.4	13.4	6.68

Constant power discharge ratings-watts at 25°C

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	3HR	5HR	10HR	20HR
1.60V	923	591	451	271	174	75.3	43.8	29.0	15.2
1.67V	890	576	445	266	173	72.9	43.6	28.8	14.7
1.70V	838	570	441	249	170	69.6	43.1	28.7	14.5
1.75V	844	568	438	241	167	68.0	42.7	28.3	14.1
1.80V	772	560	406	230	158	66.0	41.4	27.9	13.8
1.85V	700	531	368	215	148	64.0	40.0	27.6	13.2

