

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

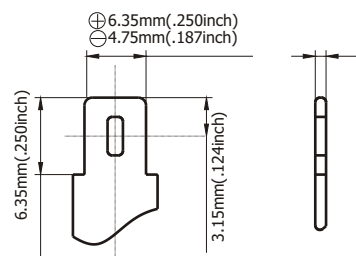
- Alarm System
- Cable Television
- Communication Equipment
- Control Equipment
- Security System
- Medical Equipment
- Toys
- UPS
- Emergency Power System

General Features

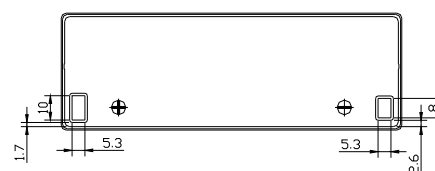
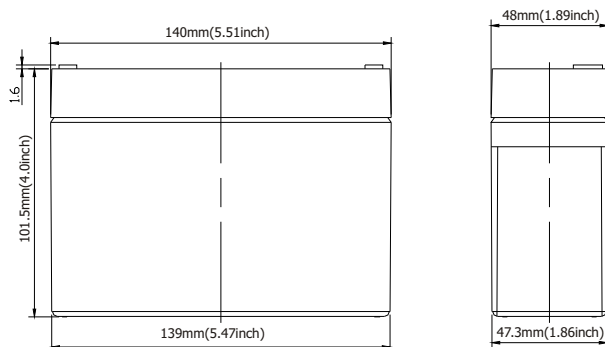
- Sealed and maintenance free operation.
- Non-Spillable construction design.
- ABS containers and covers(UL94HB, UL94V-0) optional.
- Safety valve installation for explosion proof.
- High quality and high reliability.
- Exceptional deep discharge recovery performance.
- Low self discharge characteristic.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

Construction

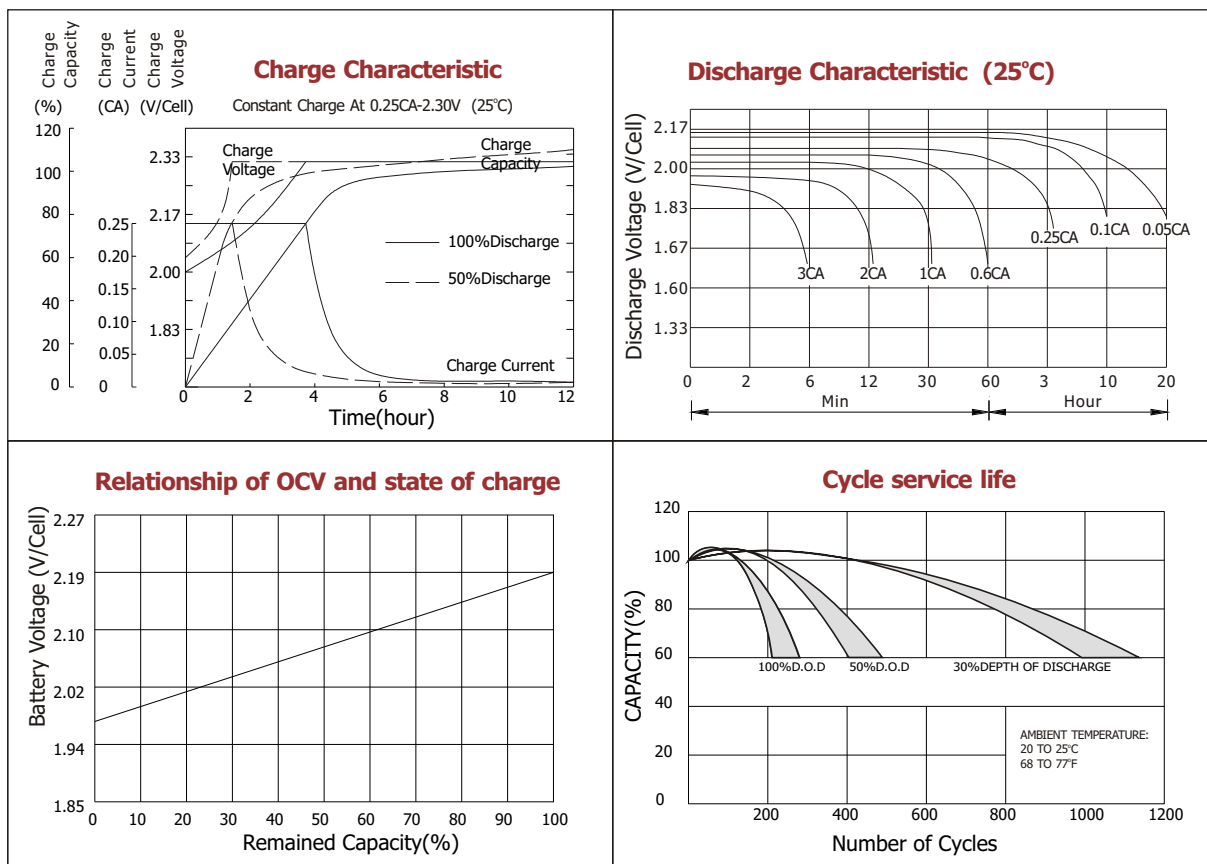
- ComponentRaw material
- PositiveLead dioxide
- NegativeLead
- ContainerABS
- CoverABS
- SealantEpoxy Resin
- Safety valveEPDR
- TerminalCopper
- SeparatorFibre glass
- ElectrolyteSulfuric acid



Terminal Dimensions



Battery Model	HR12-21W (21W to 1.67V, 15min)			
Designed Floating Life	5 Years			
Capacity(25°C)	20HR(0.26A,1.75V)	10HR(0.5A,1.75V)	5HR(0.85A,1.75V)	1HR(3.25A,1.75V)
	5.2AH	5AH	4.25AH	3.25AH
Dimensions	Length	Width	Height	Total Height
	140mm(5.51inch)	48mm(1.89inch)	101.5mm(4.0inch)	103.5mm(4.07inch)
Approx. Weight	2.00Kg (4.40 lbs)			
Internal Resistance	Full charged at 25°C: 0.021 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: 1.5A		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	24.8	15.4	11.6	7.10	3.55	1.56	0.95	0.52	0.28
1.67V	23.3	14.6	11.2	6.79	3.51	1.50	0.93	0.51	0.27
1.70V	21.3	14.1	10.9	6.18	3.40	1.40	0.91	0.51	0.27
1.75V	20.9	13.7	10.6	5.87	3.24	1.35	0.89	0.51	0.26
1.80V	18.7	13.1	9.62	5.44	3.03	1.30	0.84	0.50	0.25
1.85V	16.5	12.4	8.65	5.00	2.83	1.25	0.79	0.49	0.25

Constant power discharge ratings-watts at 25°C

F. V/Time	5MIN	10MIN	15MIN	30MIN	1HR	3HR	5HR	10HR	20HR
1.60V	43.5	27.9	21.3	12.8	6.41	2.77	1.61	1.07	0.56
1.67V	42.0	27.2	21.0	12.5	6.37	2.68	1.60	1.06	0.54
1.70V	39.6	26.9	20.8	11.7	6.25	2.56	1.58	1.05	0.53
1.75V	39.8	26.8	20.6	11.4	6.15	2.50	1.57	1.04	0.52
1.80V	36.4	26.4	19.1	10.9	5.79	2.43	1.52	1.03	0.51
1.85V	33.0	25.1	17.4	10.2	5.45	2.35	1.47	1.01	0.49

