

UP Series HR170-12

HIGH RATE AGM



Main Features

High Performance

HR (High Rate) series Valve Regulated Lead Acid (VRLA) battery is designed for heavy load discharge applications with 15 years design life in float service. By using strong grids, thick plate and specially designed active material.

It is with lower I.R, lower self discharge rate, high power, and longer service life. The HR series battery offers 30% more power output than the standard series. It is suitable for high power standby used, such as datacenter, UPS, EPS, etc.

Certified by



• ISO 9001



• ISO 14001



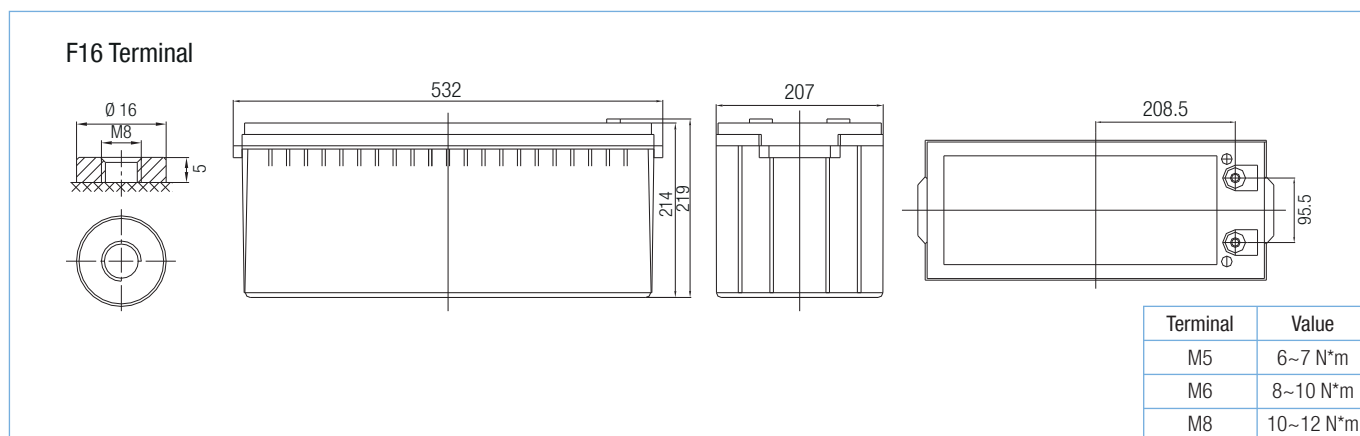
• OHSAS 18001

Technical Specifications

Cell per Unit	6
Voltage per Unit	12
Capacity	600W @ 15 min-rate to 1.67V per cell @ 25°C
Dimensions	Length: 532 ± 2mm (20.9 inches)
	Width: 207 ± 2mm (8.15 inches)
	Height: 214 ± 2mm (8.43 inches)
	Total Height: 219 ± 2mm (8.62 inches)
Weight	Approx. 56.0Kg (Tolerance ± 3.0%)
Internal Resistance	Approx. 3.8mΩ
Terminal	F12 (M8)
Maximum Discharge Current	1800A (5 sec)
Short Circuit Current	3200A
Design Life	15 years
Maximum Charging Current	54.0A
Reference Capacity	C10 = 170.0Ah
	C20 = 180.0Ah
Standby Use Voltage	13.6V ~ 13.8V @ 25°C Temperature Compensation: -3mV / °C / Cell
Equalization Voltage	14.6V ~ 14.8V @ 25°C Temperature Compensation: -4mV / °C / Cell
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
Self Discharge	Upower Valve Regulated Lead Acid (VRLA) batteries can be stored for up to 6 months at 25°C and then recharging is recommended. Monthly Self-discharge ratio is less than 3% at 25°C. Please charge batteries before using.
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.



Battery Dimensions



Battery Discharge Tables

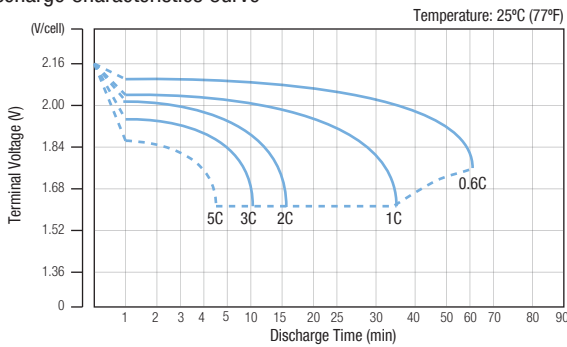
Constant Current Discharge Characteristics: A (25°C)								
F.V/Time	5 min	8 min	10 min	15 min	20 min	30 min	60 min	90 min
1.60V/cell	491.6	436.8	404.4	331.8	270.2	199.1	115.2	82.7
1.67V/cell	446.1	400.5	373.8	309.4	253.9	188.4	109.9	79.3
1.70V/cell	427.2	385.0	360.3	300.0	246.8	183.9	107.7	77.8
1.75V/cell	394.4	358.6	337.8	283.8	234.5	176.1	104.0	75.4
1.80V/cell	361.3	332.1	315.3	268.5	223.5	168.6	100.3	72.9
1.85V/cell	310.1	282.9	267.1	230.9	193.9	149.2	90.6	66.5

Constant Power Discharge Characteristics: WPC (25°C)								
F.V/Time	5 min	8 min	10 min	15 min	20 min	30 min	60 min	90 min
1.60V/cell	903.3	813.3	760.7	632.4	519.2	386.9	216.4	156.5
1.67V/cell	840.8	763.1	717.9	600.0	495.6	371.0	208.3	151.3
1.70V/cell	813.1	740.2	697.8	586.0	484.9	363.6	204.9	149.2
1.75V/cell	763.0	699.5	662.8	560.7	465.4	351.6	199.3	145.2
1.80V/cell	710.2	656.6	625.9	535.8	447.9	339.2	193.3	141.2
1.85V/cell	618.7	567.1	537.4	465.7	392.4	302.6	175.8	129.9

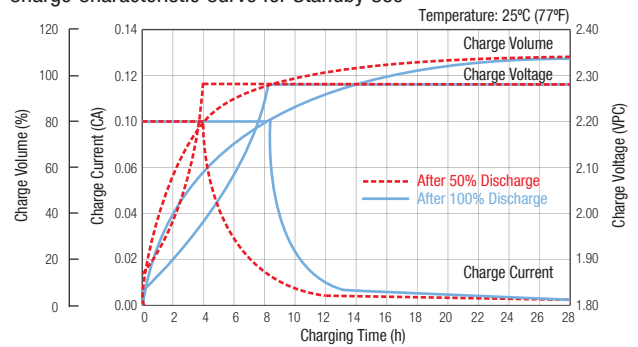
Note: The above characteristics data are average values obtained within three charge/discharge cycle not the minimum values.



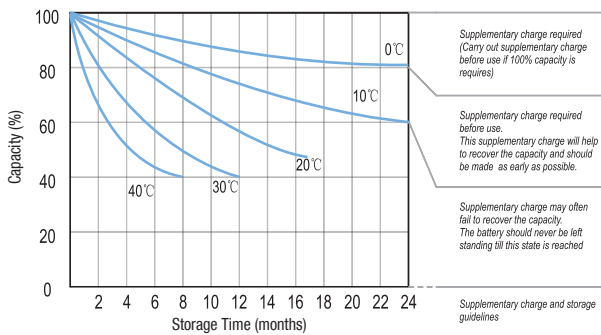
Discharge Characteristics Curve



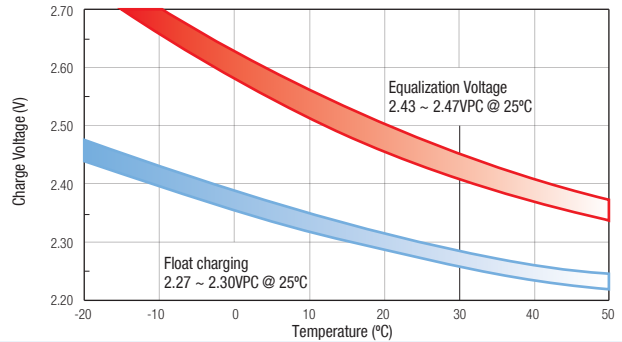
Charge Characteristic Curve for Standby Use



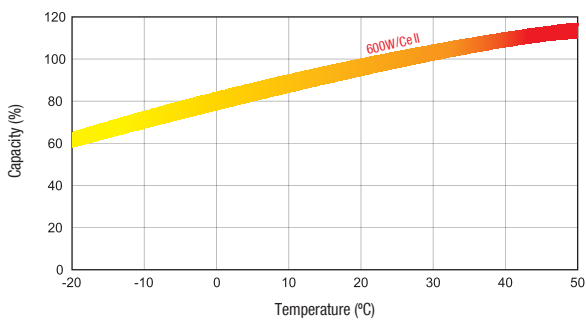
Storage Characteristics



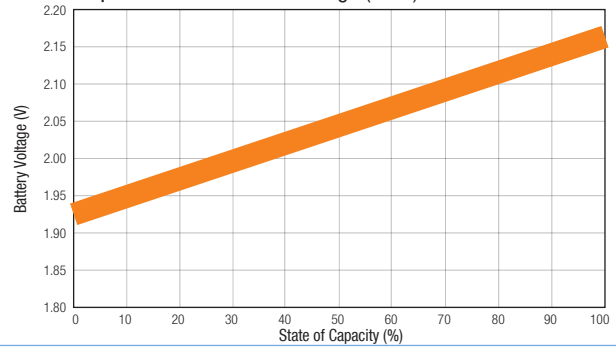
Relationship Between Charging Voltage and Temperature



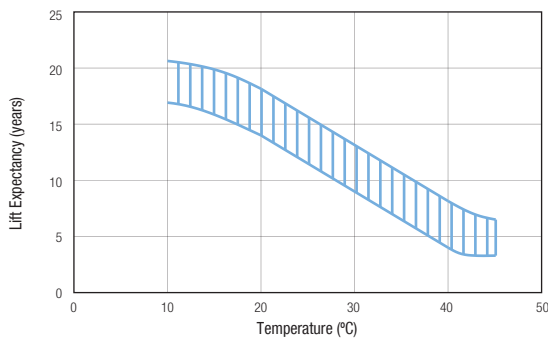
Temperature Effects on Capacity



Relationship of OCV And State of Charge (20°C)



Effect of Temperature on Long Term Life



Life Characteristics of Standby Use

