General features for MPHR series battery

* MPHR stands for "High Rate Discharge." The series is a modern hi-tech energy application product;
* Lead-calcium alloy grids and the use of high purity lead account for superior shelf-life characteristics;
* Precision plate pasting for higher consistency with 100% load testing to ensure uniform capacity;
* When it is used in safe surroundings, the battery is maintenance free, and you never need to add electrolyte,It can be recycled repeatedly;
* High energy, high intensity, high quality output electrical energy product series.

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MPHR12-750W (12V200Ah)

Specifications

Nominal Voltage			12V
Number of cell			6 cells
Rated capacity (25℃)	Rated capacity/cell (15 minutes rate to 1.67V/cell)		750W
	Rated capacity (10 hour rate)		200Ah
Dimensions (±2mm)	Total Height	T19	221mm (8.69 inches)
		T12	237mm (9.29 inches)
	Height		216mm (8.50 inches)
	Length		522mm (20.6 inches)
	Width		240mm (9.45inches)
Weight Approx (±3%)			64.0Kg (141.1 lbs)

Battery picture and construction

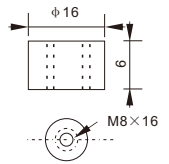
Battery Construction

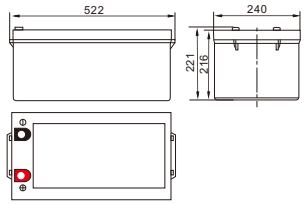
Component	Positive plate	Negative plate	Container	Cover
Raw material	Lead dioxide	Lead	ABS	ABS
Component	Electrolyte	Separator	Safety valve	Terminal
Raw material	Dilute sulfuric acid	Fiberglass	Rubber	Copper

Outer dimension and terminal

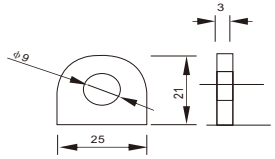
Terminal:T19

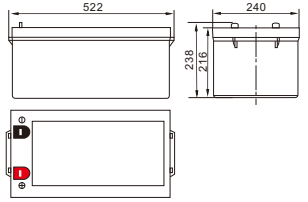
Outer dimensions(±2mm) Unit:mm





Terminal:T12





Characteristics

Capacity 25℃(77℉)	30 minutes rate(241.8A,1.70V/cell) 15 minutes rate(409.4A,1.67V/cell) 5 minutes rate(700A,1.60V/cell)	2713W 4500W 7941W
Internal Resistance	Full charged battery at 25℃(77℉)	Appox 2.5mΩ
Capacity affected by Temperature (20hour rate)	40℃ (104℉) 25℃ (77℉) 0℃ (32℉) -15℃ (5℉)	102% 100% 85% 65%
Remaining capaicty Self-Discharge At 25℃(77℉)	Capacity after 3 month storage Capacity after 6 month storage Capacity after 12 month storage	91% 82% 64%
Terminal type		T19 (Opition T12)
Max. Discharge current 25℃/(77℉)		1600A (5Seconds)
Nominal operating temperature		25℃ ±5℃(77℉ ±9℉)
Operating Temperature Range	Discharge Charge Storage	-15℃～50℃ (5℉～122℉) -10℃～50℃ (14℉～122℉) -20℃～50℃ (-4℉～122℉)
Charge methods (constant Voltage) At 25℃(77℉)	Cycle use	Initial Charging Current less than 50 A Voltage 14.50-15.00V Temperature compensation:-30mV/℃
	Standby use	Voltage 13.50-13.80V Temperature compensation:-18mV/℃

Constant current discharge (25℃ , 77 ℉)

Unit:A

Time F.V/cell	5min	15min	30min	45min	60min	90min	5hours	10hours
1.60V	739.2	426.4	260.9	190.7	148.9	110.5	32.9	21.4
1.67V	700.0	409.4	250.3	180.9	142.3	104.8	32.6	21.0
1.70V	651.0	394.5	241.8	176.9	137.7	100.3	32.3	20.5
1.75V	602.0	369.1	224.8	162.5	125.6	94.2	31.9	20.0
1.80V	574.0	326.7	203.2	146.8	115.6	88.2	31.5	19.4
1.85V	504.0	299.1	189.6	137.7	108.4	83.8	30.8	18.9

Note:
the end voltage means Voltage per cell.
(Above characteristics data are average values obtained within three charge/ discharge cycles,not the minimum values.)

Constant power discharge (25℃ , 77 ℉)

Unit:watts

Time F.V/cell	5min	10min	15min	20min	30min	45min	60min	90min
1.60V	7941	5940	4603	3793	2829	2083	1633	1214
1.67V	7602	5747	4500	3729	2764	2006	1594	1173
1.70V	7262	5529	4397	3639	2713	1980	1556	1133
1.75V	6930	5400	4281	3574	2661	1916	1491	1079
1.80V	6591	4834	3793	3317	2366	1710	1350	1036
1.85V	5869	4320	3446	3060	2199	1607	1269	985

Note:
the end voltage means Voltage per cell.
(Above characteristics data are average values obtained within three charge/ discharge cycles,not the minimum values.)

General features for MPHR12-750W (High rate discharge)

- Positive and negative plates in lead -calcium tin alloy
- Superior energy density
- Operates at a low internal pressure.
- Gas Recombination
- Very high power output
- Application specific designs
- Six months self-life at 25℃(77℉),then a freshening charge is required.
- Design life 10 years @ floating service at 25℃(77℉).

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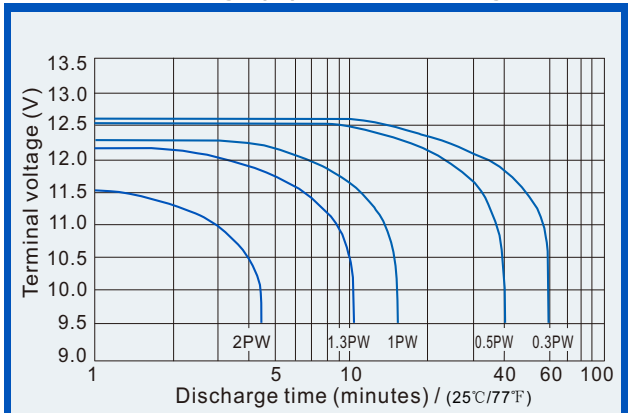
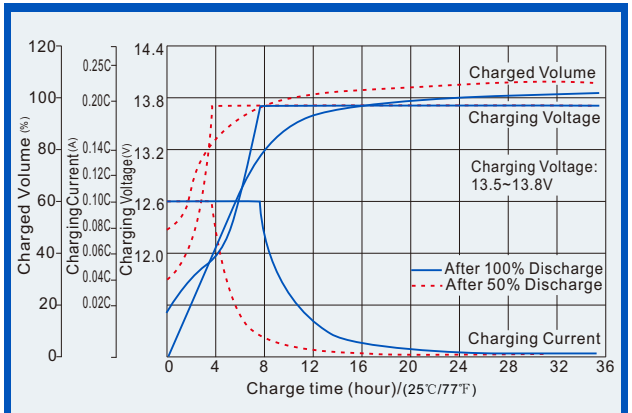
MPHR12-750W (12V200Ah)

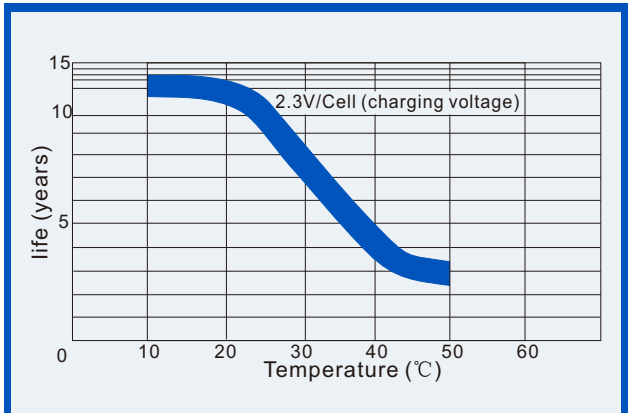
Terminal voltage(V) and discharge time



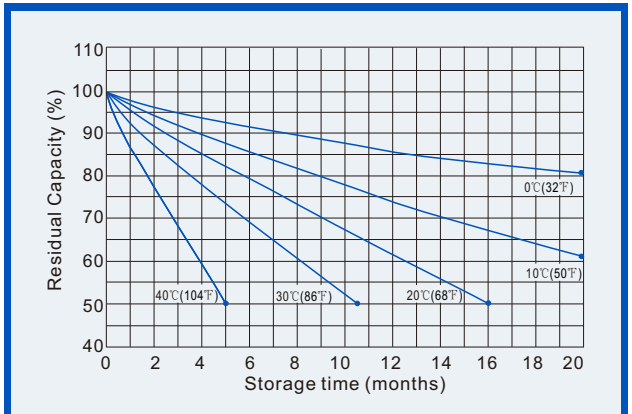
Battery voltage and charge time for standby use



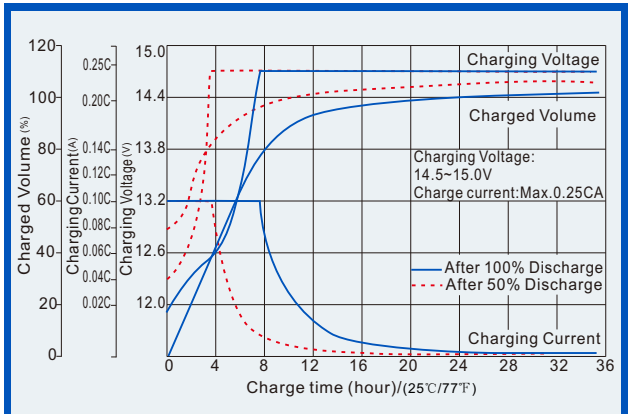
Life Characteristics of float service



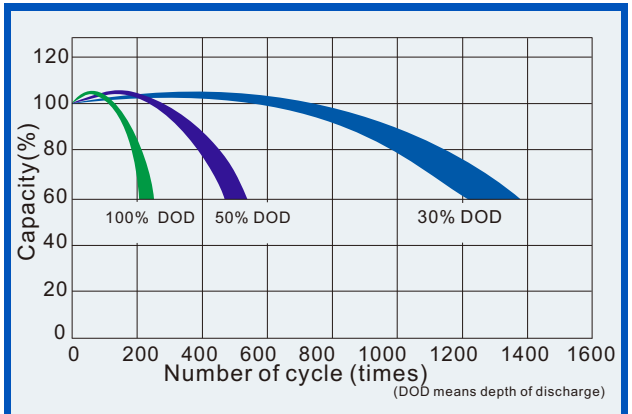
Self-discharge characteristics



Battery voltage and charge time for cycle use



Life characteristics of Cyclic Use



Charging procedures

Application	Charging voltage(V)			Max Charging current
	Temperature	Set Point	Allowable range	
Cycle Use	25℃(77℉)	14.70	14.50~15.00	50.0A
Standby Use		13.70	13.50~13.80	

Discharging current & discharging voltage

Final Discharging Voltage (V)	10.50	10.20	9.60	7.80
Discharging Power (W)	0.1P＞(W)	0.1P≥(W)＜0.25P	0.25P≤(W)＜1.0P	W≥1.0P