



HR Series-High Rate

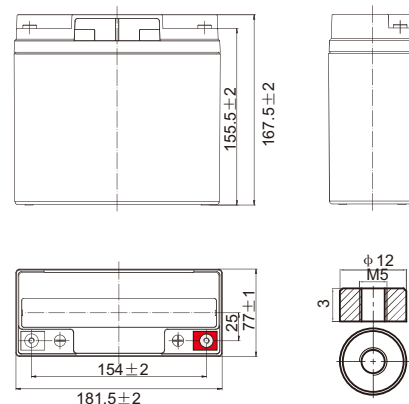
HR1285W(12V85W)

Specifications

Rated Voltage	12V		
Nominal Rate (W ₁₅ , 1.67V/cell)	85W		
Nominal Capacity(C ₁₀ , 1.80V/cell)	18.6Ah		
Dimension	Length	181.5±2mm (7.14 inches)	
	Width	77±1mm (3.03 inches)	
	Container Height	167.5±2mm (6.59 inches)	
	Total Height	167.5±2mm (6.59 inches)	
Approx. Weight	6.00 Kg (12.23 lbs)		
Terminal	M5		
Container Material	ABS: UL 94 HB or V-0		
Rated Capacity (25°C)	18.6 Ah	(10hr, 1.86A, 1.80V/cell)	
	18.2 Ah	(8hr, 2.28A, 1.80V/cell)	
	17.2 Ah	(5hr, 3.44A, 1.75V/cell)	
	15.8 Ah	(3hr, 5.26A, 1.75V/cell)	
	13.3 Ah	(1hr, 13.3A, 1.67V/cell)	
Max. Discharge Current	300A		
Internal Resistance (25°C)	Approx. 14mΩ		
Operating Temp. Range	Discharge	-20 ~ 55°C (-4 ~ 131°F)	
	Charge	-20~ 40°C (-4 ~ 104°F)	
	Storage	-15 ~ 50°C (5 ~ 122°F)	
Nominal Operating Temp. Range	25±3°C (77±5°F)		
Max. Charging Current(25°C)	5.0A		
Charge voltage(25°C)	Charge voltage	Temp. Coefficient	
	Float	2.25 ~2.30V/cell	-3mV/cell/°C
Effect of temp. to Capacity	Equalization	2.30~2.40V/cell	-4mV/cell/°C
	40°C (104°F)	106%	
	25°C (77°F)	100%	
	0°C (32°F)	86%	
Self Discharge	≤3%/month @ 25°C		



Layout



Constant Current Discharge (Amperes) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	8h	10h
1.85V/cell	52.6	37.4	32.4	26.3	18.5	13.7	10.9	7.90	6.33	4.74	3.75	3.12	2.13	1.74
1.80V/cell	61.4	44.1	37.7	30.3	21.0	15.4	12.1	8.65	6.88	5.12	4.04	3.36	2.28	1.86
1.75V/cell	66.9	47.3	39.9	31.8	21.9	16.0	12.6	8.94	7.09	5.26	4.14	3.44	2.32	1.89
1.70V/cell	72.5	50.5	42.2	33.5	22.9	16.6	13.0	9.24	7.32	5.41	4.24	3.52	2.36	1.92
1.67V/cell	75.8	52.5	43.5	34.4	23.4	17.0	13.3	9.41	7.44	5.50	4.30	3.56	2.39	1.94
1.60V/cell	83.6	56.9	46.6	36.5	24.7	17.8	13.9	9.83	7.75	5.70	4.45	3.67	2.44	1.98

Constant Power Discharge (Watts/cell) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	8h	10h
1.85V/cell	114.0	78.7	64.4	50.7	35.8	26.6	21.3	15.4	12.4	9.28	7.36	6.15	4.21	3.45
1.80V/cell	128.8	90.6	73.9	57.9	40.2	29.6	23.4	16.8	13.4	10.0	7.91	6.60	4.50	3.68
1.75V/cell	138.9	95.6	77.2	60.1	41.6	30.5	24.1	17.2	13.7	10.2	8.08	6.73	4.57	3.73
1.70V/cell	147.6	100.4	81.7	62.7	43.1	31.4	24.8	17.7	14.1	10.5	8.25	6.86	4.64	3.78
1.67V/cell	153.0	103.2	85.0	64.0	43.9	32.0	25.2	17.9	14.3	10.6	8.35	6.93	4.68	3.81
1.60V/cell	155.2	109.9	87.7	67.2	45.8	33.3	26.2	18.6	14.8	10.9	8.58	7.12	4.78	3.88



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Applications

- UPS
- Hospitals & Testing Laboratories
- Emergency Power Supply
- Industrial Process Control Facilities
- Banks & Financial Markets
- Data & Network Operation Centers

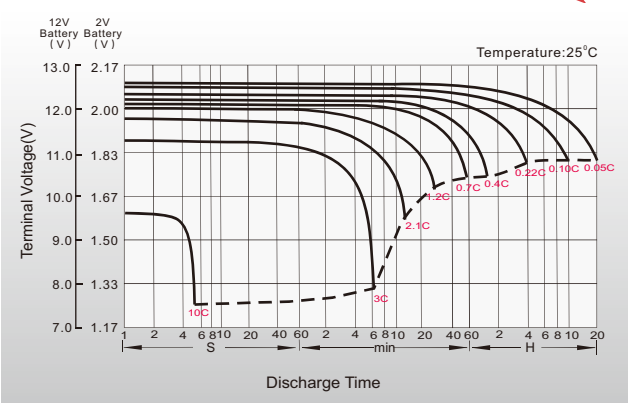
General Features

- High quality AGM separator: extend cycle life and prevent micro short circuit
- PbCaSn alloy for plate grids: less gassing, less self-discharging
- Unique vent valve design: reduce water losing and prevent air/spark going inside

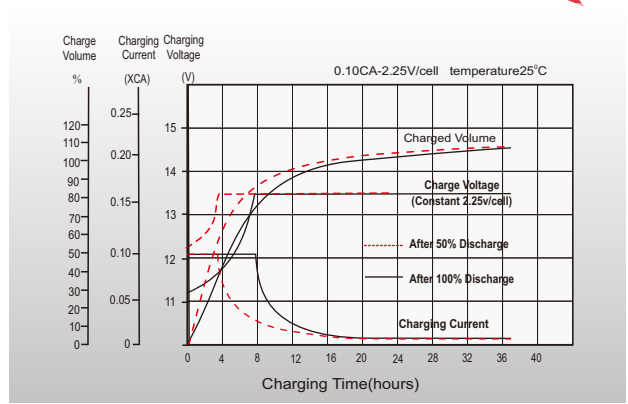
Standards

- Compliance with IEC 60896 standards
- Classified as "General Purpose" according to Eurobat

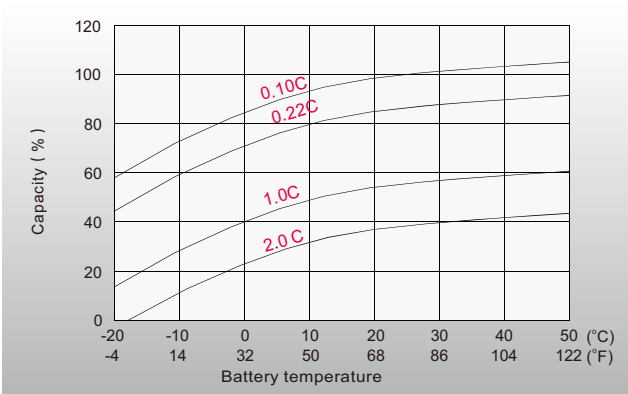
Discharge Characteristics



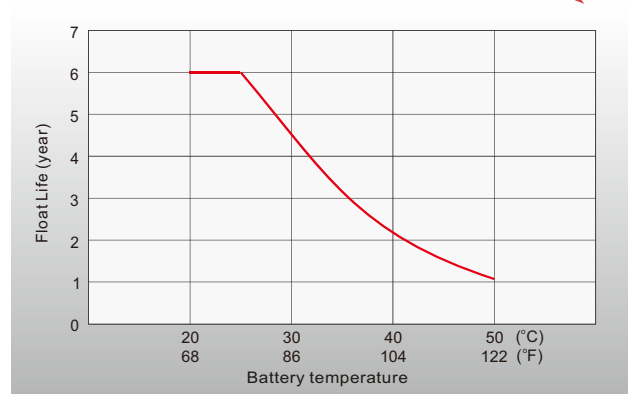
Float Charging Characteristics



Temperature Effects in Relation to Battery Capacity



Effect of Temperature on Long Term Float Life



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