



**HRL series**

**HRL 12200W 12V 215W**



**Valve Regulated Lead Acid Battery**

Maintenance-Free Sealed Lead Acid Battery.  
Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99%.

**Design for Standby Power Applications**

**【Design Life】**

Up to 10 Years in Standby Service at 25°C  
Eurobat (20°C) : 10-12 years, Long Life

**【Operating Temperature Range】**

Nominal Operating Temperature : 25°C (77°F)  
Discharge : -15°C ~ 50°C (5°F~122°F)  
Charge: -15°C ~ 40°C (5°F~104°F)  
Storage: -15°C ~ 40°C (5°F~104°F)

**【Float Charging Voltage】**

13.5 ~ 13.8 VDC/Unit at 25°C (77°F)

**【Equalization Charging Voltage】**

14.4 ~ 15.0 VDC/Unit at 25°C (77°F)

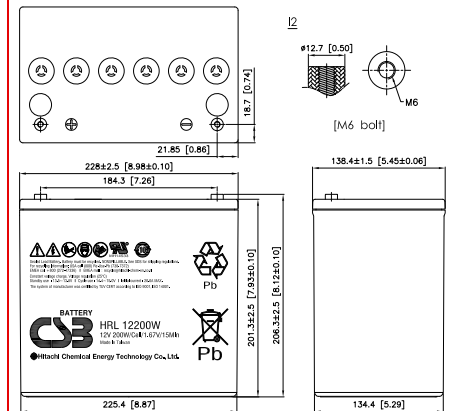
**【Self Discharge】**

Less than 10% after 90 days, can be stored up to 6 months at 25°C (77°F);  
Fully recharging is required before usage, and charged sooner if stored at higher temperature than 25°C (77°F).

**Specification**

Design according with IEC 60896-21/22:2004

Nominal Voltage	12V (6 cells per unit)		
Nominal Capacity	215W @15min-rate to 1.67V per cell @25°C (77°F)		
Weight	Approx. 17.30 Kg (38.13 lbs)		
Maximum Discharge Current	400A (5sec)		
Internal Resistance	Approx. 5.50 mΩ		
Short Circuit Current	1509A		
Maximum Charge Current	20.0A		
Terminal types	I2 thread lead alloy terminal to accept M6 bolt		
Terminal hardware Torque	138.6 Kgf-cm / 120.3 lbf-in / 13.58 N-m		
Container Material	PP (UL 94-HB) & Flame Retardant (94-V0) available upon request		
Dimensions	Length (L)	228.0±2.5 mm	8.98±0.10 inch
	Width (W)	138.4±1.5 mm	5.45±0.06 inch
	Container Height (h)	201.3±2.5 mm	7.93±0.10 inch
	Overall Height (H)	206.3±2.5 mm	8.12±0.10 inch



**Constant Current Discharge Characteristics Unit: A (25°C, 77°F)**

F.V/Time	2MIN	4MIN	5MIN	6MIN	8MIN	10MIN	15MIN	20MIN	30MIN	45MIN	60MIN	90MIN
1.60V	304	256	243	221	190	164	123	98.9	71.9	52.6	41.8	29.9
1.67V	279	232	218	205	177	157	118	97.0	71.2	52.0	41.2	29.5
1.70V	260	218	209	196	170	151	116	95.7	70.3	51.8	41.1	29.4
1.75V	233	197	192	176	156	141	111	92.0	68.2	50.7	40.3	29.1
1.80V	198	172	165	156	140	126	102	85.2	64.6	48.7	38.9	28.2
1.85V	162	146	145	136	120	110	91.3	76.1	59.0	45.3	36.2	26.6

**Constant Power Discharge Characteristics Unit: W (25°C, 77°F)**

F.V/Time	2MIN	4MIN	5MIN	6MIN	8MIN	10MIN	15MIN	20MIN	30MIN	45MIN	60MIN	90MIN
1.60V	3094	2572	2448	2279	1962	1745	1333	1098	816	602	476	343
1.67V	2861	2395	2306	2127	1874	1666	1308	1083	809	600	475	342
1.70V	2732	2308	2207	2045	1815	1625	1282	1066	796	596	474	339
1.75V	2458	2120	2022	1904	1717	1523	1232	1027	772	585	464	335
1.80V	2231	1889	1840	1765	1562	1409	1158	959	738	564	452	326
1.85V	1764	1691	1659	1544	1376	1255	1035	873	687	529	423	310

Please refer to the official site for the latest rating confirmation. URL: [www.csb-battery.com](http://www.csb-battery.com)

Issued: 170306

**Sales Offices**

**日立化成能源科技股份有限公司**  
Hitachi Chemical Energy Technology Co., Ltd.

**BUSINESS HEADQUARTERS**

Tel: +886-2-2880-5600  
Fax: +866-2-2888-3300

**USA OFFICE**

Tel: +1-817-244-7777 / 1-(800)3-CSB-USA (272872)  
Fax: +1-817-244-4445

**SHENZHEN OFFICE (CHINA)**

Tel: +86-755-8831-6488, 8831-6775  
Fax: +86-755-8831-6075

**EUROPE (EMEA) OFFICE**

Tel: +31(0)180-418-140  
Fax: +31(0)180-418-327

**SHANGHAI OFFICE (CHINA)**

Tel: +86-21-5046-1622, 5046-0833  
Fax: +86-21-5046-1046

**TAIPEI OFFICE**

Tel: +886-2-2880-5600  
Fax: +866-2-2888-3300

**BEIJING OFFICE (CHINA)**

Tel: +86-10-5820-5336, 5820-5338  
Fax: +86-10-5820-3053

Recognized under UL 1989,  
and certified by ISO 9001, 14001.

