



**HR series**

**HR 1251W 12V 51W**



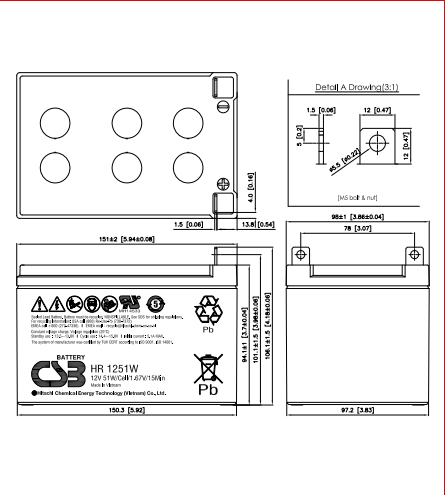
**Valve Regulated Lead Acid Battery**

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

**Design for Standby Power Applications**

|                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>【Design Life】</b><br/>Up to 5 Years in Standby Service at 25°C<br/>Eurobat (20°C) : 3-5 years, Standard Commercial</p> <p><b>【Operating Temperature Range】</b><br/>Nominal Operating Temperature : 25°C (77°F)<br/>Discharge : -15°C ~ 50°C (5°F~122°F)<br/>Charge: -15°C ~ 40°C (5°F~104°F)<br/>Storage: -15°C ~ 40°C (5°F~104°F)</p> | <p><b>【Float Charging Voltage】</b><br/>13.5 ~ 13.8 VDC/Unit at 25°C (77°F)</p> <p><b>【Equalization Charging Voltage】</b><br/>14.4 ~ 15.0 VDC/Unit at 25°C (77°F)</p> <p><b>【Self Discharge】</b><br/>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).</p> |
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| Specification             |                                                                 | Design according with IEC 61056-1/2:2012 |                |
|---------------------------|-----------------------------------------------------------------|------------------------------------------|----------------|
| Nominal Voltage           | 12V (6 cells per unit)                                          |                                          |                |
| Nominal Capacity          | 51W @15min-rate to 1.67V per cell @25°C (77°F)                  |                                          |                |
| Weight                    | Approx. 3.85 Kg (8.49 lbs)                                      |                                          |                |
| Maximum Discharge Current | 200A (5sec)                                                     |                                          |                |
| Internal Resistance       | Approx. 13.6 mΩ                                                 |                                          |                |
| Short Circuit Current     | 462A                                                            |                                          |                |
| Maximum Charge Current    | 5.1A                                                            |                                          |                |
| Terminal types            | B0 terminal to accept M5 bolt                                   |                                          |                |
| Terminal hardware Torque  | --                                                              |                                          |                |
| Container Material        | ABS (UL 94-HB) & Flame Retardant (94-V0) available upon request |                                          |                |
| Dimensions                | Length (L)                                                      | 151.0±2.0 mm                             | 5.94±0.08 inch |
|                           | Width (W)                                                       | 98.0±1.0 mm                              | 3.86±0.04 inch |
|                           | Container Height (h)                                            | 94.1±1.0 mm                              | 3.70±0.04 inch |
|                           | Overall Height (H)                                              | 100.3±1.5 mm                             | 3.95±0.06 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    | 85.8 | 64.0 | 56.4 | 50.8 | 43.0 | 36.8  | 27.1  | 21.4  | 15.4  | 10.9  | 8.33  | 6.65  |
| 1.67V    | 82.4 | 61.6 | 54.4 | 49.2 | 41.8 | 35.8  | 26.7  | 20.9  | 15.3  | 10.8  | 8.29  | 6.61  |
| 1.70V    | 80.5 | 60.5 | 53.3 | 48.0 | 41.2 | 35.2  | 26.4  | 20.7  | 15.2  | 10.7  | 8.28  | 6.58  |
| 1.75V    | 77.2 | 57.9 | 51.3 | 46.4 | 39.9 | 34.3  | 25.7  | 20.3  | 15.1  | 10.6  | 8.24  | 6.52  |
| 1.80V    | 72.9 | 54.8 | 48.9 | 44.6 | 38.3 | 32.9  | 24.8  | 19.9  | 14.9  | 10.5  | 8.20  | 6.44  |
| 1.85V    | 68.6 | 51.6 | 46.5 | 42.7 | 36.5 | 31.6  | 23.9  | 19.6  | 14.7  | 10.4  | 8.16  | 6.36  |

**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    | 1030 | 768  | 675  | 607  | 511  | 441   | 325   | 257   | 185   | 130   | 100   | 79.8  |
| 1.67V    | 990  | 742  | 651  | 585  | 500  | 430   | 320   | 251   | 184   | 129   | 99.6  | 79.4  |
| 1.70V    | 969  | 726  | 637  | 573  | 494  | 422   | 317   | 249   | 183   | 128   | 99.3  | 79.0  |
| 1.75V    | 927  | 695  | 612  | 552  | 479  | 408   | 310   | 244   | 181   | 127   | 98.9  | 78.3  |
| 1.80V    | 875  | 657  | 585  | 532  | 460  | 393   | 300   | 239   | 179   | 126   | 98.4  | 77.3  |
| 1.85V    | 824  | 619  | 558  | 513  | 441  | 379   | 290   | 235   | 177   | 125   | 97.9  | 76.4  |

Please refer to the official site for the latest rating confirmation. URL: [www.csb-battery.com](http://www.csb-battery.com) Issued: 170912

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and certified by ISO 9001, 14001.

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