

# XHRL12360W

## 12V 360W

XHRL 12360W is specially designed for high efficient discharge and long life application. Its characteristics are high energy density , small footprint and high discharge efficiency. It can be used for more than 260 cycles at 100% discharge in cycle service, up to 10 years in standby service.



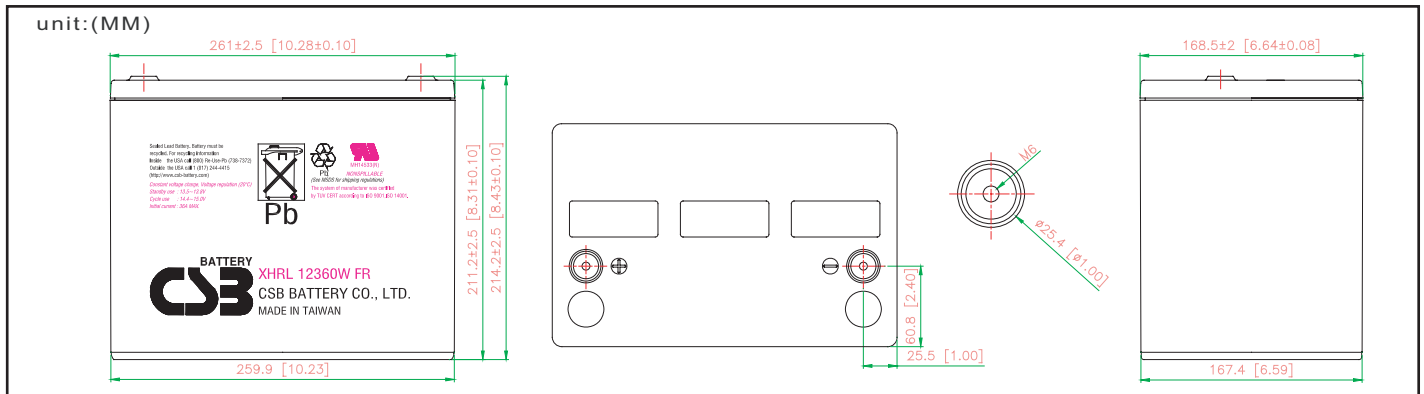
### Specification

|  |  |
|--|--|
| <b>Cells per unit</b>                      | 6  |
| <b>Voltage per unit</b>                    | 12   |
| <b>Capacity</b>                            | 360W @15 min-rate to 1.67V per cell @25°C (77°F)<br>73.6Ah @20hr-rate to 1.75V per cell@25°C (77°F)  |
| <b>Weight</b>                              | Approx. 27.5 kg (60.63 lbs)  |
| <b>Maximum Discharge Current</b>           | 800A(5sec)   |
| <b>Internal Resistance</b>                 | Approx. 4mΩ  |
| <b>Operating Temperature Range</b>         | Discharge: -20°C~50°C (-4°F~122°F)<br>Charge: -20°C~50°C (-4°F~122°F)<br>Storage: -15°C~40°C (5°F~104°F)   |
| <b>Nominal Operating Temperature Range</b> | 25°C ±3°C (77°F ±5°F)  |
| <b>Float Charging Voltage</b>              | 13.5 to 13.8 VDC/unit Average at 25°C (77°F)   |
| <b>Recommended Maximum Charging</b>        | 36 A   |
| <b>Current Limit</b>                       |  |
| <b>Equalization and Cycle Service</b>      | 14.4 to 15.0 VDC/unit Average at 25°C (77°F)   |
| <b>Self Discharge</b>                      | CSB Batteries can be stored for more than 6 months at 25°C(77°F). Please charge batteries before using. For higher temperatures the time interval will be shorter. |
| <b>Terminal</b>                            | I2-Thread lead alloy recessed terminal to accept M6 bolt   |
| <b>Container Material</b>                  | Polypropylene(UL 94-V0/File E50955)*Flammability resistance of (UL 94-HB/File E216959) can be available upon request.  |



CSB-manufactured batteries are UL-recognized components under UL924 as well as ISO 9001 and ISO 14001 certified.

### Dimensions



### Constant Current Discharge Characteristics Unit:Amperes(25°C,77°F)

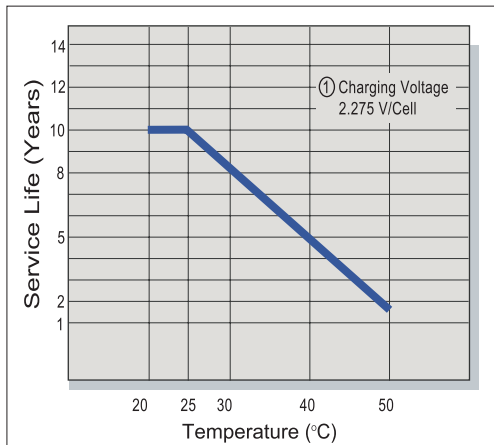
| F.V/Time | 5MIN | 10MIN | 15MIN | 20MIN | 30MIN | 40MIN | 50MIN | 60MIN | 90MIN |
|----------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1.60V    | 378  | 256   | 195   | 155   | 110   | 87    | 72    | 61    | 43    |
| 1.67V    | 348  | 245   | 188   | 152   | 109   | 86    | 70    | 60    | 42    |
| 1.70V    | 333  | 237   | 185   | 149   | 107   | 85    | 70    | 60    | 42    |
| 1.75V    | 308  | 225   | 177   | 143   | 105   | 83    | 69    | 59    | 41    |
| 1.80V    | 283  | 208   | 162   | 134   | 100   | 80    | 66    | 57    | 41    |
| 1.85V    | 245  | 188   | 147   | 120   | 92    | 74    | 62    | 52    | 32    |

### Constant Power Discharge Characteristics Unit:Watt(25°C,77°F)

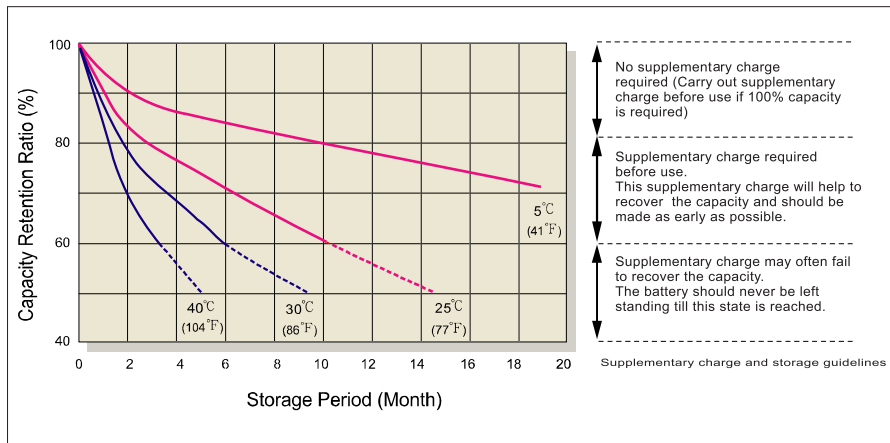
| F.V/Time | 5MIN | 10MIN | 15MIN | 20MIN | 30MIN | 40MIN | 50MIN | 60MIN | 90MIN |
|----------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1.60V    | 4098 | 2888  | 2216  | 1773  | 1284  | 1018  | 845   | 716   | 510   |
| 1.67V    | 3834 | 2771  | 2161  | 1744  | 1269  | 1008  | 837   | 716   | 505   |
| 1.70V    | 3695 | 2714  | 2131  | 1712  | 1258  | 1001  | 829   | 706   | 502   |
| 1.75V    | 3440 | 2574  | 2035  | 1662  | 1232  | 983   | 812   | 694   | 493   |
| 1.80V    | 3203 | 2402  | 1904  | 1558  | 1171  | 943   | 785   | 680   | 483   |
| 1.85V    | 2842 | 2191  | 1728  | 1418  | 1093  | 872   | 737   | 632   | 457   |

- All mentioned values are average values.
- Tolerance: X<6min(+15%~-15%),6min ≤ X<10min(+12%~-12%),10min ≤ X<60min(+8%~-8%),X ≥ 60min(+5%~-5%)

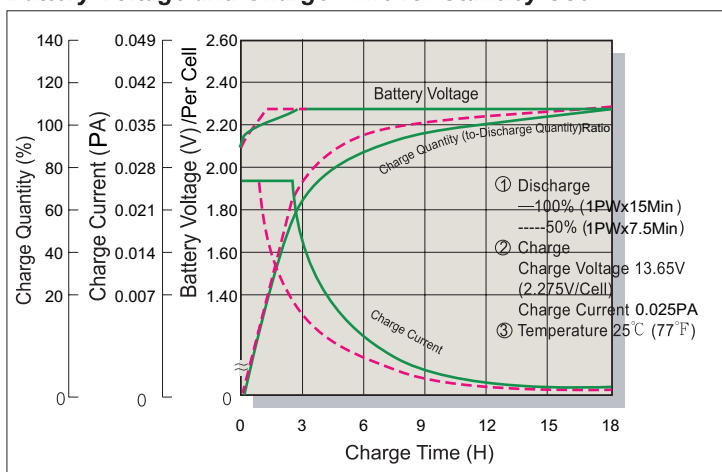
### Trickle (or Float) Service Life



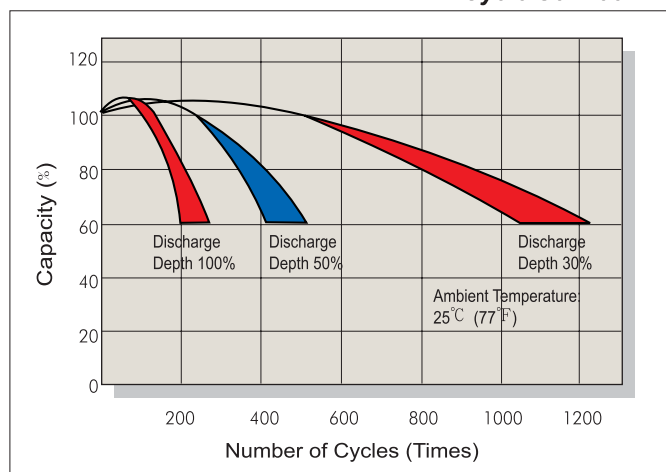
### Capacity Retention Characteristic



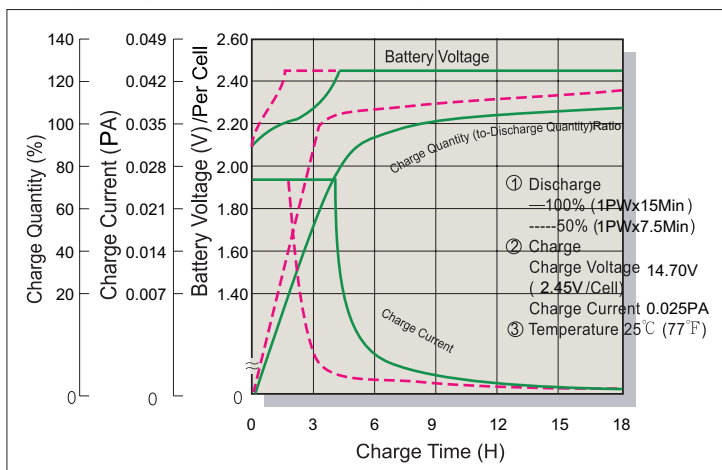
### Battery Voltage and Charge Time for Standby Use



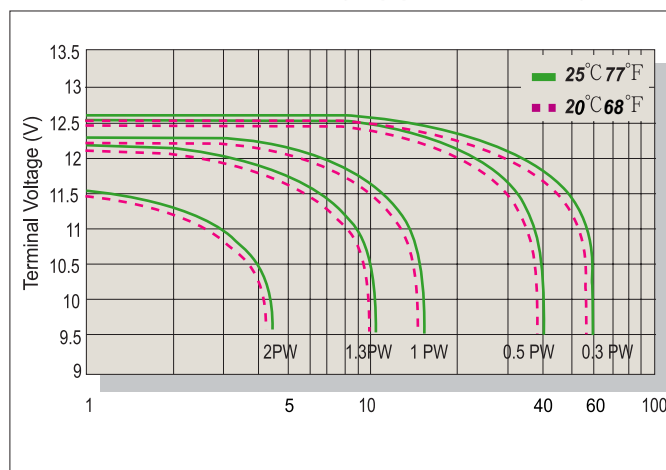
### Cycle Service Life



### Battery Voltage and Charge Time for Cycle Use



### Terminal Voltage (V) and Discharge Time



### Charging Procedures

| Application | Charge Voltage(V/Cell) |           |                 | Max.Charge Current |
|-------------|------------------------|-----------|-----------------|--------------------|
|             | Temperature            | Set Point | Allowable Range |                    |
| Cycle Use   | 25°C(77°F)             | 2.45      | 2.40~2.50       | 0.1PA              |
| Standby     | 25°C(77°F)             | 2.275     | 2.25~2.30       |                    |

### Discharge Current VS. Discharge Voltage

| Final Discharge Voltage V/Cell | 1.75     | 1.70           | 1.60           | 1.30     |
|--------------------------------|----------|----------------|----------------|----------|
| Discharge Power(W)             | 0.1P>(W) | 0.1P≤(W)<0.25P | 0.25P≤(W)<1.0P | (W)≥1.0P |

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