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# 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

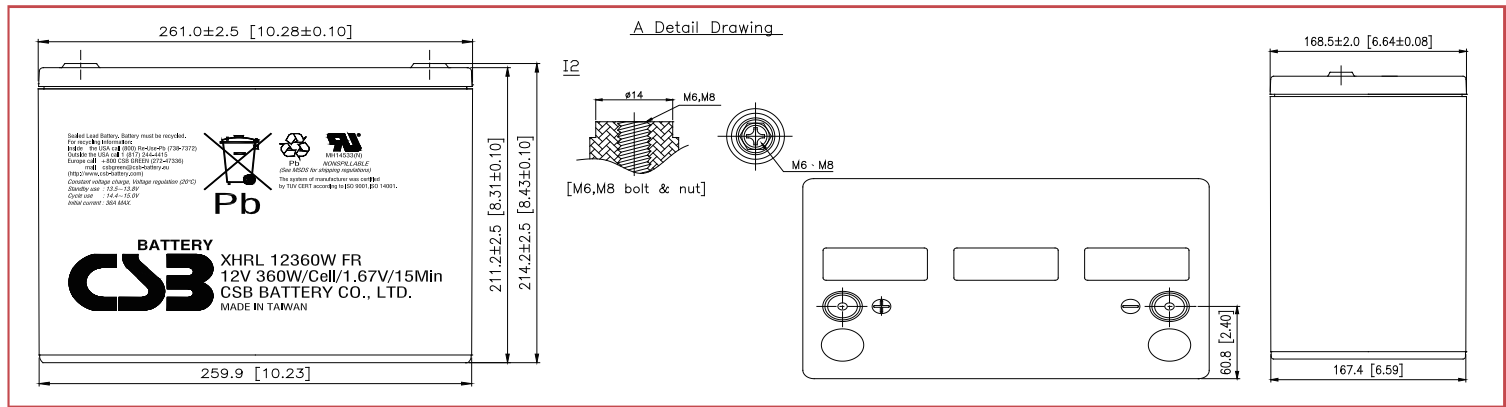
|  |  |
|--|--|
| Cells per unit                             | 6  |
| Voltage per unit                           | 12   |
| Capacity                                   | 360W @15 min-rate to 1.67V per cell @25°C (77°F)   |
| Weight                                     | Approx. 27.5 kg (60.63 lbs)  |
| Maximum Discharge Current                  | 800A(5sec)   |
| Internal Resistance                        | Approx. 4mΩ  |
| Operating Temperature Range                | 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)   |
| Nominal Operating Temperature Range        | 25°C ±3°C (77°F ±5°F)  |
| Float Charging Voltage                     | 13.5 to 13.8 VDC/unit Average at 25°C (77°F)   |
| Recommended Maximum Charging Current Limit | 36 A   |
| Equalization and Cycle Service             | 14.4 to 15.0 VDC/unit Average at 25°C (77°F)   |
| Self Discharge                             | 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. |
| Terminal                                   | I2-Thread lead alloy recessed terminal to accept M6/M8 bolt  |
| Container Material                         | Polypropylene(UL 94-V0) & Flammability resistance of (UL 94-HB) can be available upon request.   |



CSB-manufactured VRLA batteries are UL-recognized components under UL924 and UL1989.

CSB is also certified by ISO 9001 and ISO 14001.

| Dimensions :    | Overall Height (H)    | Container height (h)  | Length (L)             | Width (W)           |
|-----------------|-----------------------|-----------------------|------------------------|---------------------|
| Unit: mm (inch) | 214.2±2.5 (8.43±0.10) | 211.2±2.5 (8.31±0.10) | 261.0±2.5 (10.28±0.10) | 168.5±2 (6.64±0.08) |



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

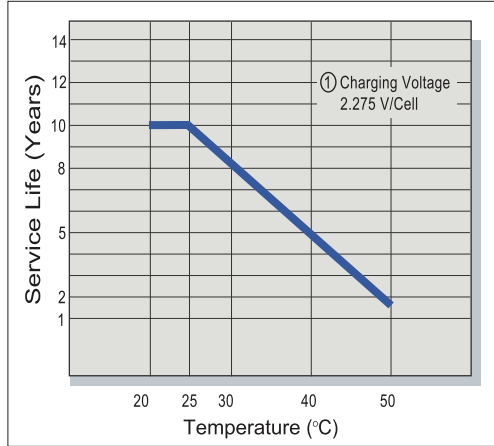
| F.V/Time | 2MIN | 4MIN | 6MIN | 8MIN | 10MIN | 15MIN | 20MIN | 30MIN | 60MIN | 90MIN |
|----------|------|------|------|------|-------|-------|-------|-------|-------|-------|
| 1.60V    | 468  | 383  | 319  | 273  | 239   | 182   | 145   | 104   | 57.3  | 40.4  |
| 1.67V    | 405  | 352  | 300  | 257  | 228   | 176   | 142   | 102   | 56.9  | 40.3  |
| 1.70V    | 373  | 324  | 290  | 252  | 221   | 173   | 139   | 101   | 56.5  | 40.1  |
| 1.75V    | 347  | 299  | 267  | 234  | 210   | 165   | 133   | 98.4  | 55.4  | 39.4  |
| 1.80V    | 319  | 284  | 244  | 214  | 194   | 152   | 125   | 92.8  | 54.0  | 38.5  |
| 1.85V    | 281  | 238  | 208  | 192  | 174   | 139   | 115   | 86.9  | 50.3  | 34.7  |

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

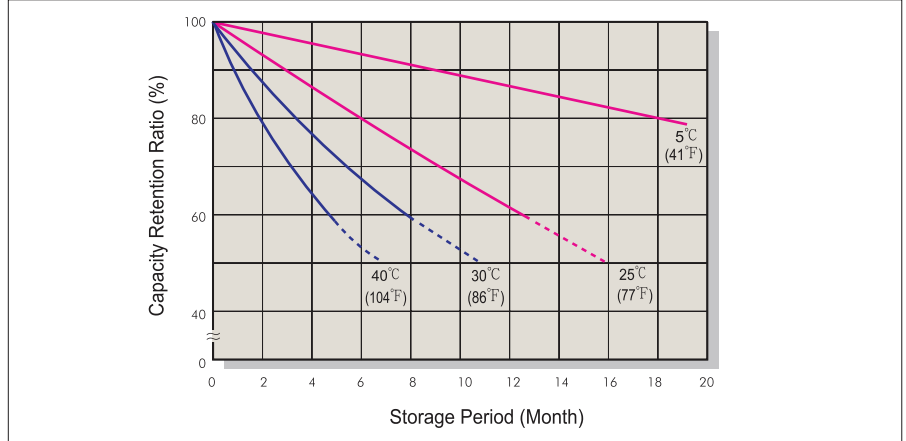
| F.V/Time | 2MIN  | 4MIN  | 6MIN  | 8MIN  | 10MIN | 15MIN | 20MIN | 30MIN | 60MIN | 90MIN |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1.60V    | 4,544 | 3,982 | 3,529 | 3,081 | 2,758 | 2,198 | 1,735 | 1,232 | 678   | 485   |
| 1.67V    | 4,125 | 3,665 | 3,339 | 2,956 | 2,646 | 2,160 | 1,711 | 1,209 | 676   | 480   |
| 1.70V    | 3,850 | 3,516 | 3,203 | 2,830 | 2,530 | 2,080 | 1,664 | 1,184 | 668   | 477   |
| 1.75V    | 3,593 | 3,327 | 3,073 | 2,677 | 2,400 | 1,986 | 1,597 | 1,160 | 658   | 468   |
| 1.80V    | 3,376 | 3,020 | 2,777 | 2,476 | 2,240 | 1,858 | 1,514 | 1,102 | 644   | 459   |
| 1.85V    | 2,750 | 2,571 | 2,436 | 2,232 | 2,016 | 1,686 | 1,365 | 1,029 | 598   | 434   |

Ratings presented herein are subject to revision without notice. Please refer to [www.csb-battery.com](http://www.csb-battery.com) to confirm the latest version.

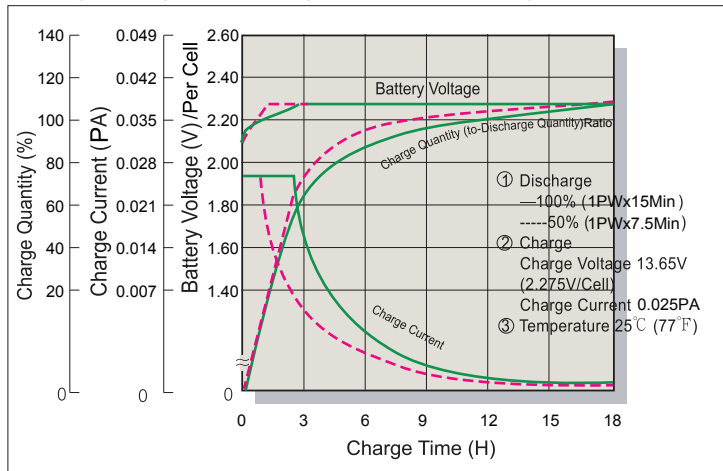
### Trickle (or Float) Service Life



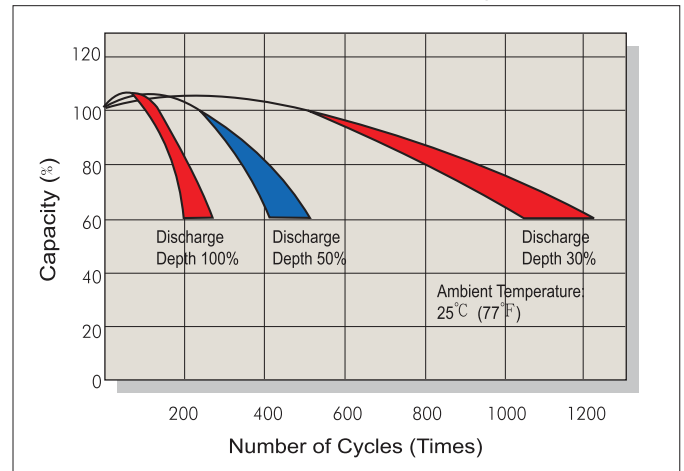
### Capacity Retention Characteristic



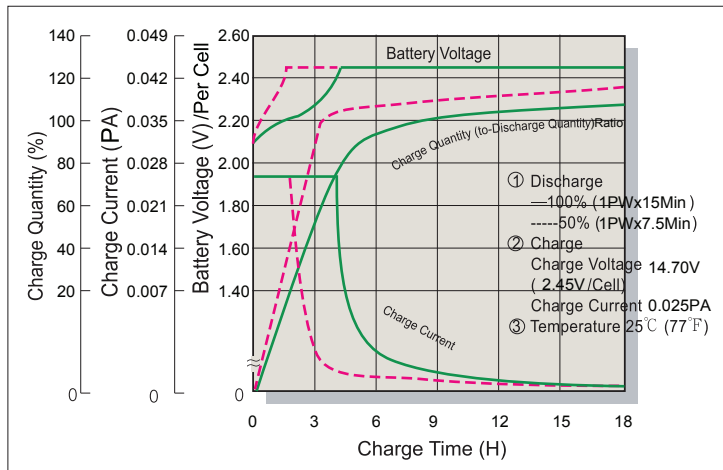
### Battery Voltage and Charge Time for Standby Use



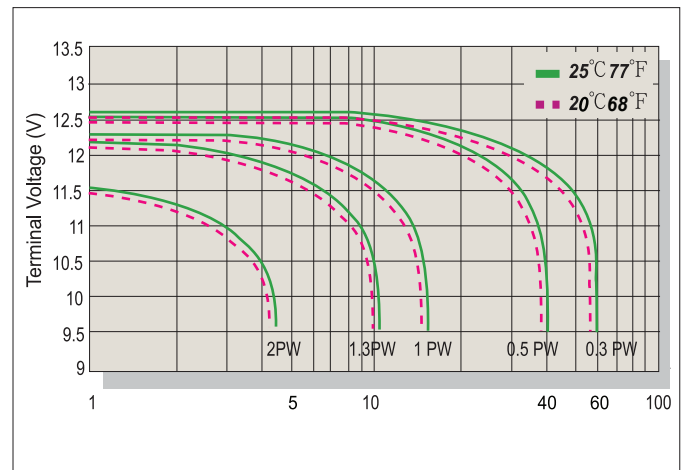
### Cycle Service Life



### 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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