## BATTERY <br> 3

## ALL series

PRODUCT APPLIGATION $\nabla$
$\square$
Confidence \& Creativity
Service \& Sincerity
Belief \& Bravery
ت
Energy Of Infinity

## Product Manual



As a world leading manufacturer of Valve Regulated Lead-Acid (VRLA) batteries, CSB's products are utilized in over 52 countries in telecommunications, UPS, emergency lighting, security and more. Founded in 1986, CSB has evolved into an international company providing over 4 million batteries monthly.
CSB's demand for producing high quality batteries is the main reason for its' growth. The wide array of CSB customers have come to know and trust the quality and reliability of its' products and services. CSB is committed to developing next generation VRLA products and growing its' worldwide distribution network.

With over 2500 people, CSB is confident in providing you a better and more reliable solution.

## EVH series

- Characteristics: Increased cycle life up to $122 \%$ and power output up to $25 \%$ versus standard lead acid batteries.

| Application: For machines that need rechargeable power supplies for intensive use, |
| :--- |
| such as electric vehicle, portable machines, and camera, etc. |

- Capacity: 14Ah ~ 39Ah (20h)


## EVX series



- Characteristics: Increased cycle life up to $122 \%$ versus standard lead acid battery.
- Application: For machines that need rechargeable power supplies for intensive use such as electric vehicle, portable machines, and camera, etc.
- Capacity: 7.2Ah~75Ah (20h)

CP series


## CPlseries



- Characteristics: Long life, wide range application. (Up to 10 years expected long life under normal float charge)
- Application: UPS, emergency lighting, security alarm, telecommunication system etc.
- Capacity : 7.2Ah~100Ah (20h)

HR series


- Characteristics: high rate discharge.
- Application: UPS, emergency lighting, and security alarm, etc.
- Capacity : $21 \mathrm{~W} \sim 120 \mathrm{~W}$ (15min)


## HRLseries



- Characteristics: Long life, high rate discharge. (Up to 10 years expected long service life under normal float charge)
- Application: UPS, emergency lighting, and security alarm, etc.
- Capacity: 10W~500W (15min)

TPL series


- Characteristics: Front access, long life, space saving design.
- Application: UPS, wireless, telecom and transmission.
- Capacity : 80Ah~150Ah (8h)


## UPS series



- Characteristics: Wide range application provides hundreds to thousands of recharge cycles, life expectancy up to 5 years.
- Application:UPS, emergency lighting, and security alarm, etc.
- Capacity : $240 \mathrm{~W} \sim 580 \mathrm{~W}$ (5min)

XHRL series


XTV series



## Terminal Type


［FASTON TAB NO．187］


［FASTON TAB NO．250］

 ［M5 bolt \＆nut］


［M6 bolt \＆nut］

11 ［M5 bolt \＆nut］ 212．2

## EVH Series

| Battery Type | Nominal Voltage（V） | Nominal Capacity （20Hr）（Ah） | Weight （Approx． $\mathrm{kg})$ | Energy Density （Whil） | Specific Energy （Wh／kg） | Internal Resistance Approx． （m $\Omega$ ） | Max． Discharge Current $5 \sec (A)$ | Dimensions（mm） |  |  |  | Terminal Position | $\begin{aligned} & \text { Teminal } \\ & \text { Type } \end{aligned}$ | Max <br> Charging <br> Curent（A） | Max．Screw Torque value |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  | Qverall Height（H） | Container <br> Height（ h ） | Length（L） | Wiath（W） |  |  |  | Kgf－cm <br> ／lbf－in | N－m |
| EVH 12150 | 12 | 15 | 4.60 | 104 | 32.60 | 11.00 | 180 | $101.8 \pm 1.5$ | $97.5 \pm 1.0$ | $151 \pm 2.0$ | $98 \pm 1.0$ | －－ | F2 | 4.50 | －－ | －－ |
| EVH 12240 | 12 | 24 | 7.55 | 118.6 | 38.15 | 9.00 | 320 | $178.8 \pm 2.0$ | $176 \pm 2.0$ | $181 \pm 2.0$ | $76.2 \pm 1.0$ | d | 14 | 7.20 | 65／56 | 6.37 |
| EVH 12390 | 12 | 39 | 11.50 | 118.9 | 40.70 | 8.00 | 400 | $178.3 \pm 2.0$ | $154.8 \pm 2.0$ | $195.6 \pm 2.0$ | $130 \pm 1.5$ | c | B5 | 11.70 | 127／110 | 12.45 |

Charging（V）：• Standby Use ： $2.275 \mathrm{~V} \pm 0.025 / \mathrm{CELLAT} 25^{\circ} \mathrm{C}\left(77^{\circ} \mathrm{F}\right)$ Temp Coefficient $-3.3 \mathrm{mV} / \mathrm{CELL} \mathrm{C}$
－Cycle Use ： $2.45 \mathrm{~V} \pm 0.05 \mathrm{~V} / \mathrm{CELLAT} 25^{\circ} \mathrm{C}\left(77^{\circ} \mathrm{F}\right)$ Temp Coefficient $-5 \mathrm{mV} /$ CELLLC
EVH12150×2（2nd generation）is an improved product，please reference to the CSB website for the up dated specification．

## EvX Series

| $\begin{aligned} & \text { Battery } \\ & \text { Type } \end{aligned}$ | Nominal Voltage（V） | Nominal <br> Oapacity <br> （20Hr）（Ah | $\begin{aligned} & \text { Weight } \\ & \text { (Approx. } \\ & \mathrm{Kg} \text { ) } \end{aligned}$ | $\begin{aligned} & \text { Energy } \\ & \text { Density } \\ & \text { (Whll) } \end{aligned}$ | Specific Energy （Wh／kg） | $\begin{aligned} & \text { Internal } \\ & \text { Resistance } \\ & \text { Approx. } \\ & \text { (m } \Omega \text { ) } \end{aligned}$ | Max． Discharge Current$5 \sec (A)$ | Dimensions（mm） |  |  |  | Termina Position | TeminalType | $\begin{aligned} & \text { Charging } \\ & \text { Curent (A) } \\ & \text { cur } \end{aligned}$ | Max．Screw Torque value |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  | $\begin{aligned} & \text { Overall } \\ & \text { Height } \end{aligned}$ | Container Height（h） | Length（L） | Width（W） |  |  |  | $\mathrm{Kgf-cm}$ ／lbf－in | N－m |
| Ev×1272 | 12 | 7.2 | 2.55 | 93.6 | 33.88 | 26.00 | 100／130 | 100t1．0 | $94 \pm 1.0$ | 151＋2．0 | $65 \pm 1.0$ | e | F1／F2 | 2.16 | －－ | －－ |
| EVX12120 | 12 | 12.0 | 3.83 | 103.5 | 37.60 | 18.50 | 150／180 | 100t1．0 | $94 \pm 1.0$ | 151 12.0 | $98+1.0$ | e | F1／F2 | 3.60 | －－ | －－ |
| EV×12170 | 12 | 17.0 | 5.67 | 89.4 | 35.98 | 16.50 | 230 | $167 \pm 2.0$ | 165．5さ2．0 | 1812.0 | $76.2 \pm 1.0$ | d | B183 | 5.10 | 65／56 | 6.37 |
| EV× 12200 | 12 | 20.0 | 6.70 | 108.8 | 35.82 | 14.00 | 230 | $167 \pm 2.0$ | $160 \pm 2.0$ | $181 \pm 2.0$ | $76.2 \pm 1.0$ | d | 11 | 6.00 | 65／56 | 6.37 |
| EV× 12260 | 12 | 26.0 | 8.65 | 88.0 | 36.07 | 11.50 | 350 | 125＋1．5 | $122 \pm 1.5$ | $175+2.0$ | $166 \pm 2.0$ | d | 81／В3／ВЗВл1 | 7.80 | 65／56 | 6.37 |
| EVX12300 | 12 | 30.0 | 10.40 | 99.1 | 34.62 | 9.00 | 400 | 175＋2．0 | $175+2.0$ | $166+2.0$ | $125 \pm 1.5$ | c | 11 | 9.00 | 65／56 | 6.37 |
| EV×12340 | 12 | 34.0 | 10.77 | 103.7 | 37.88 | 8.50 | 400 | 178．3＋2．0 | 154．8さ2．0 | $195.6 \pm 2.0$ | $130 \pm 1.5$ | c | B5 | 10.20 | $127 / 110$ | 12.45 |
| EV× 12400 | 12 | 40.0 | 12.73 | 87.6 | 37.71 | 10.00 | 400 | $170+2.0$ | 168．5＋2．0 | 197＋2．0 | $165 \pm 2.0$ | d | B2／1 | 12.00 | 65／56 | 6.37 |
| EV× 12520 | 12 | 52.0 | 18.30 | 90.3 | 34.10 | 5.50 | 500 | 219．3＋2．0 | 201．3土2．0 | $248+2.0$ | 138．4土1．5 | c | 84 | 15.60 | 127／110 | 12.45 |
| EV× 12650 | 12 | 65.0 | 22.20 | 78.0 | 35.14 | 8.00 | 500 | $174 \pm 2.0$ | 172．5さ2．0 | $349.4 \pm 2.5$ | $166+2.0$ | d | 84 | 19.50 | 127／110 | 12.45 |
| EV×12750 | 12 | 75.0 | 27.00 | 92.0 | 33.33 | 4.50 | 500 | $233.2 \pm 2.5$ | $211.2 \pm 2.5$ | $275+2.5$ | $168.5 \pm 2.0$ | c | B6 | 22.50 | 286／248 | 28.05 |

Charging（V）：• Standby Use ： $2.275 \mathrm{~V} \pm 0.025 / \mathrm{CELLAT} 25^{\circ} \mathrm{C}\left(77^{\circ} \mathrm{F}\right)$ Temp Coefficient $-3.3 \mathrm{mV} / \mathrm{CLELL}^{\circ} \mathrm{C}$
－Cycle Use ： $2.45 \mathrm{~V} \pm 0.05 \mathrm{~V} / \mathrm{CELL}$ AT $25^{\circ} \mathrm{C}\left(777^{\mathrm{F}}\right)$ Temp Coefficient－ $5 \mathrm{mV} / \mathrm{CELLL}$ C

| Battery Type | Nominal Voltage(V) | Nominal Capacity (20hr)(Ah) | Weight (Approx $\mathrm{kg})$ | Energy Density (Whil) | Specific Energy (Whikg) | Intemal Resistance Approx. ( $\mathrm{m} \Omega$ ) | Max. Discharge Current $5 \sec (A)$ | Dimensions (mm) |  |  |  | Terminal <br> Position | Terminal Type | Max. Charging Current (A) | Max. Screw Torque value |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  | Cverall Height (H) | Container Height (h) | Length (L) | Wiath (W) |  |  |  | Kgf-cm <br> libf-in | N-m |
| GP645 | 6 | 4.5 | 0.84 | 78.8 | 32.14 | 19.00 | 60/90 | $108 \pm 1.5$ | $102 \pm 1.5$ | $70 \pm 1.0$ | $48 \pm 1.0$ | a | F1/F2 | 1.35 | -- | -- |
| GP672 | 6 | 7.2 | 1.22 | 89.5 | 35.50 | 15.50 | 100/130 | $100 \pm 1.0$ | $94 \pm 1.0$ | $151 \pm 2.0$ | $34 \pm 1.0$ | c | F1/F2 | 2.16 | -- | -- |
| GP6120 | 6 | 12.0 | 1.85 | 101.5 | 38.92 | 8.50 | 150/180 | $100 \pm 1.0$ | $94 \pm 1.0$ | $151 \pm 2.0$ | $50 \pm 1.0$ | c | F1/F2 | 3.60 | -- | -- |
| GP 1222 | 12 | 2.2 | 0.90 | 72.7 | 29.33 | 63.00 | 40/60 | $66 \pm 1.0$ | $60 \pm 1.0$ | $178 \pm 0.5$ | $34 \pm 0.5$ | c | F1/F2 | 0.66 | -- | -- |
| GP 1245 | 12 | 4.5 | 1.66 | 81.6 | 32.53 | 40.50 | 60/90 | $108 \pm 1.5$ | $102 \pm 1.5$ | $92.8 \pm 1.0$ | $69.9 \pm 1.0$ | c | F1/F2 | 1.35 | -- | -- |
| GP 1272 | 12 | 7.2 | 2.40 | 93.6 | 36.00 | 23.00 | 100/130 | $100 \pm 1.0$ | $94 \pm 1.0$ | $151 \pm 2.0$ | $65 \pm 1.0$ | e | F1/F2 | 2.16 | -- | -- |
| GP 12120 | 12 | 12.0 | 3.67 | 103.5 | 39.24 | 16.00 | 150/180 | $100 \pm 1.0$ | $94 \pm 1.0$ | $151 \pm 2.0$ | $98 \pm 1.0$ | e | F1/F2 | 3.60 | -- | -- |
| GP 12170 | 12 | 17.0 | 5.50 | 89.4 | 37.09 | 16.00 | 230 | $167 \pm 2.0$ | $165.5 \pm 2.0$ | $181 \pm 2.0$ | $76.2 \pm 1.0$ | d | B1/B3 | 5.10 | 65/56 | 6.37 |
| GP 12200 | 12 | 20.0 | 6.40 | 108.8 | 37.50 | 13.00 | 230 | $167 \pm 2.0$ | $160 \pm 2.0$ | $181 \pm 2.0$ | $76.2 \pm 1.0$ | d | 11 | 6.00 | 65/56 | 6.37 |
| GP 12260 | 12 | 26.0 | 8.45 | 88.0 | 36.92 | 11.00 | 350 | $125 \pm 1.5$ | $122 \pm 1.5$ | $175 \pm 2.0$ | $166 \pm 2.0$ | d | B1/B3/83B/1 | 17.80 | 65/56 | 6.37 |
| GP 12340 | 12 | 34.0 | 10.48 | 103.7 | 38.93 | 8.00 | 380 | $178.3 \pm 2.0$ | $154.8+2.0$ | $195.6+2.0$ | $130 \pm 1.5$ | c | B5 | 10.20 | 127/110 | 12.45 |
| GP 12400 | 12 | 40.0 | 12.63 | 87.6 | 38.00 | 8.10 | 400 | $170 \pm 2.0$ | 168.5+2.0 | $197 \pm 2.0$ | $165 \pm 2.0$ | d | B2/1 | 12.00 | 65/56 | 6.37 |
| GP 12650 | 12 | 65.0 | 20.00 | 78.0 | 39.00 | 8.00 | 500 | $174 \pm 2.0$ | 172.5+2.0 | $349.4+2.5$ | $166 \pm 2.0$ | d | B4 | 19.50 | 127/110 | 12.45 |
| GP 121000 | 12 | 100.0 | 31.20 | 95.9 | 38.46 | 4.50 | 800 | $217.6 \pm 2.5$ | $214.6 \pm 2.5$ | $343 \pm 2.5$ | $170 \pm 2.0$ | f | 12 | 30.00 | 127/110 | 12.45 |

Charging(V): • Standby Use: $2.275 \mathrm{~V} \pm 0.025 / \mathrm{CELLAT} 25^{\circ} \mathrm{C}\left(77^{\circ} \mathrm{F}\right)$ Temp Coefficient $-3.3 \mathrm{mV} / \mathrm{CELL}{ }^{\circ} \mathrm{C}$

- Cycle Use : $2.45 \mathrm{~V} \pm 0.05 \mathrm{~V} / \mathrm{CELLAT} 25^{\circ} \mathrm{C}\left(77^{\circ} \mathrm{F}\right)$ Temp Coefficient $-5 \mathrm{mV} / \mathrm{CELL} \mathrm{C}$

| Type | $\begin{gathered} \text { Nominal } \\ \text { Voltage(V) } \end{gathered}$ | Nominal Capacity (Wicell) | $\left\lvert\, \begin{gathered} \text { Weight } \\ \text { (Approx. } \\ \text { kg } \end{gathered}\right.$ | Energy Density ( $w h^{\prime} \mathrm{L}$ ) | Specifio Energy (wh/kg) | Intemal Resistance Approx$(\mathrm{m} \Omega)$ |  | Dimensions (mm) |  |  |  | Terminal Position | Terminal Type | $\begin{gathered} \text { Max } \\ \text { Cuarging } \\ \text { Current (A) } \end{gathered}$ | Charging(V) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  | Height Over Terminal (H) | Container Height (h) | Length (L) | wioth (w) |  |  |  | Standiby Use | cycle Use |
| ( ${ }_{\text {GP } 1245}^{\text {(12VI6W) }}$ | 12 | 16.0 | 1.40 | 37.4 | 17.14 | 33.00 | 60/90 | 107.7士1.5 | 101.8さ1.5 | $90.0 \pm 1.0$ | $70.0 \pm 1.0$ | c | F1/F2 | 1.35 | 2.275V $\pm 0.025 / \mathrm{CELL}$ <br> AT $25^{\circ} \mathrm{C}\left(77^{\circ} \mathrm{F}\right)$ <br> Temp Coefficient <br> $-3.3 \mathrm{mV} / \mathrm{CELL}$ ' C | $2.45 \mathrm{~V} \pm 0.05 \mathrm{~V} / \mathrm{CE} \mathrm{L}$ AT $25^{\circ} \mathrm{C}$ ( $77^{\circ} \mathrm{F}$ ) Temp Coefficient -5mVICELLC |
|  | 12 | 28.7 | 2.10 | 45.5 | 20.00 | 21.00 | 100/130 | $100.0 \pm 1.0$ | $94.0 \pm 1.0$ | $151.0 \pm 2.0$ | $65.0 \pm 1.0$ | e | F1/F2 | 2.16 |  |  |


| Battery Type | Nominal Voltage(V) | Nominal Capacity (20hr)(Ah) | Weight (Approx kg) | Energy Density (Whrl) | Specific Energy (Wh/kg) | Internal Resistance Approx. ( $\mathrm{m} \Omega$ ) | Max. Discharge Current $5 \sec (A)$ | Dimensions (mm) |  |  |  | Terminal Position | Terminal Type | Max. Charging current (A) | Max. Screw Torque value |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  | Overall Height (H) | Container Height (h) | Length (L) | Wioth (W) |  |  |  | Kgf-cm libt-in | N-m |
| GPL672 | 6 | 7.2 | 1.37 | 89.5 | 31.53 | 13.50 | 100/130 | $100 \pm 1.0$ | $94 \pm 1.0$ | $151 \pm 2.0$ | $34 \pm 1.0$ | c | F1/F2 | 2.16 | --- | -- |
| GPL1272 | 12 | 7.2 | 2.60 | 93.6 | 33.23 | 21.00 | 100/130 | $100 \pm 1.0$ | 94 V 1.0 | $151 \pm 2.0$ | $65 \pm 1.0$ | e | F1/F2 | 2.16 | --- | -- |
| GPL12120 | 12 | 12.0 | 4.10 | 103.5 | 35.12 | 14.00 | 150/180 | $100 \pm 1.0$ | $94 \pm 1.0$ | $151 \pm 2.0$ | $98 \pm 1.0$ | e | F1/F2 | 3.60 | --- | -- |
| GPL12260 | 12 | 26.0 | 8.30 | 88.0 | 37.59 | 11.00 | 350 | $125 \pm 1.5$ | $122 \pm 1.5$ | $175+2.0$ | $166 \pm 2.0$ | d | B1/B3/B3B/1 1 | 17.80 | 65/56 | 6.37 |
| GPL12400 | 12 | 40.0 | 14.50 | 87.6 | 33.10 | 7.00 | 400 | $170 \pm 2.0$ | $168.5 \pm 2.0$ | $197 \pm 2.0$ | $165 \pm 2.0$ | d | B2/11 | 12.00 | 65/56 | 6.37 |
| GPL12520 | 12 | 52.0 | 18.00 | 94.0 | 34.67 | 5.50 | 500 | $219.3 \pm 2.0$ | $210.3 \pm 2.0$ | $228 \pm 2.0$ | $138.4 \pm 2.0$ | c | B4 | 15.60 | 127/110 | 12.45 |
| GPL12750 | 12 | 75.0 | 25.60 | 96.9 | 35.16 | 4.50 | 800 | $214.2 \pm 2.5$ | $211.2 \pm 2.5$ | $261 \pm 2.5$ | $168.5 \pm 2.0$ | c | 12 | 22.50 | 127/110 | 12.45 |
| GPL12880 | 12 | 88.0 | 29.70 | 95.8 | 35.56 | 4.50 | 800 | $214.3 \pm 2.5$ | $211.3 \pm 2.5$ | $308.7 \pm 2.5$ | $169 \pm 2.0$ | c | 12 | 26.40 | 127/110 | 12.45 |
| GPL121000 | 12 | 100.0 | 33.50 | 95.9 | 35.82 | 3.50 | 800 | $217.6 \pm 2.5$ | $214.6 \pm 2.5$ | $343+2.5$ | $170 \pm 2.0$ | c | 12 | 30.00 | 127/110 | 12.45 |

Charging(V) : •Standby Use : $2.275 \mathrm{~V} \pm 0.025 / \mathrm{CELLAT} 25^{\circ} \mathrm{C}\left(77^{\circ} \mathrm{F}\right)$ Temp Coefficient - $3.3 \mathrm{mV} / \mathrm{CELL} \mathrm{C}$
-Cycle Use : $2.45 \mathrm{~V} \pm 0.05 \mathrm{~V} / \mathrm{CELLL}^{2} 25^{\circ} \mathrm{C}\left(77^{\circ} \mathrm{F}\right)$ Temp Coefficient- $5 \mathrm{mV} / \mathrm{CELL}{ }^{\circ} \mathrm{C}$

## HR Series

| Battery Type | $\begin{aligned} & \text { Nominal } \\ & \text { Voltage(V) } \end{aligned}$ | Nominal Capacity (15min) (W/cell) | Weight (Approx. $\mathrm{Kg})$ | Energy Density (Whrit) | Specific Energy (Whikg) | Intemal Resistance Approx. (m $\Omega$ ) | Max. Discharge Current $5 \sec (A)$ | Dimensions (mm) |  |  |  | Terminal Position | $\begin{aligned} & \text { Terminal } \\ & \text { Type } \end{aligned}$ | Max Charging Current ( $A$ ) | Max. Screw Torque value |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  | Overall <br> Height(H) | Container Height (h) | Length (L) | Wioth (W) |  |  |  | Kgf-cm <br> / Ibf-in | N-m |
| HR1221W | 12 | 21 | 1.80 | 49.1 | 17.50 | 25.00 | 60/90 | $106 \pm 0.5$ | $101.8 \pm 0.5$ | $90 \pm 0.5$ | $70 \pm 0.5$ | c | F1/F2 | 2.10 | -- | -- |
| HR1224W | 12 | 24 | 1.95 | 49.7 | 18.46 | 21.00 | 100/130 | $98.3 \pm 1.0$ | $94 \pm 1.0$ | $151 \pm 2.0$ | $51 \pm 1.0$ | e | F1/F2 | 2.40 | -- | -- |
| HR1227W | 12 | 27 | 1.97 | 63.1 | 20.56 | 19.00 | 100/130 | $106 \pm 1.5$ | $101.8 \pm 1.5$ | $90 \pm 1.0$ | $70 \pm 1.0$ | c | F1/F2 | 2.70 | -- | -- |
| HR1234W | 12 | 34 | 2.50 | 55.3 | 20.40 | 19.00 | 100/130 | $100 \pm 1.0$ | $94 \pm 1.0$ | $151 \pm 2.0$ | $65 \pm 1.0$ | e | F1/F2 | 3.40 | -- | - |
| HR1251W | 12 | 51 | 3.72 | 55.0 | 20.56 | 13.00 | 150/180 | $100 \pm 1.0$ | $94 \pm 1.0$ | $151 \pm 2.0$ | $98 \pm 1.0$ | e | F1/F2 | 5.10 | -- | -- |
| HR1290W | 12 | 90 | 6.75 | 61.2 | 20.00 | 9.00 | 300 | $167 \pm 2.0$ | $160 \pm 2.0$ | $181 \pm 2.0$ | $76.2 \pm 1.0$ | d | 11 | 9.00 | 65/56 | 6.37 |
| HR12120W | 12 | 120 | 10.20 | 52.1 | 17.65 | 9.00 | 400 | $175 \pm 2.0$ | $166.5 \pm 2.0$ | $166 \pm 2.0$ | $125 \pm 1.5$ | c | 11 | 12.00 | 65/56 | 6.37 |

Charging(V) : • Standby Use : $2.275 \mathrm{~V} \pm 0.025 / \mathrm{CELL}$ AT $25^{\circ} \mathrm{C}$ ( $77^{\circ} \mathrm{F}$ ) Temp Coefficient $-3.3 \mathrm{mV} / \mathrm{CELL} \mathrm{L}^{\circ} \mathrm{C}$

- Cycle Use : $2.45 \mathrm{~V} \pm 0.05 \mathrm{~V} / \mathrm{CELL}$ AT $25^{\circ} \mathrm{C}$ ( $77^{\circ} \mathrm{F}$ ) Temp Coefficient - $5 \mathrm{mV} / \mathrm{CELL}$ 'C


## HRL Series

| Battery Type | Nominal Voltage(V) | Nominal Capacity (15min) (W/cell) | Weight (Approx kg) | Energy Density (Wh/l) | Specific Energy (Wh/kg) | Intemal Resistance Approx. ( $\mathrm{m} \Omega$ ) | Max. Discharge Current $5 \sec (A)$ | Dimensions (mm) |  |  |  | Teminal <br> Position | Terminal Type | Max <br> Charging <br> Current (A) | Max. Screw Torque value |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  | Overall Height (H) | Container Height (h) | Length (L) | Width (W) |  |  |  | $\mathrm{Kgf}-\mathrm{cm}$ <br> / lbf -in | N-m |
| HRLE34W | 6 | 34 | 1.32 | 52.8 | 19.32 | 10.00 | 130 | $98.3 \pm 1.0$ | $94 \pm 1.0$ | $151 \pm 2.0$ | $34 \pm 1.0$ | c | F2 | 3.40 | --- | -- |
| HRL1210W | 12 | 10 | 1.10 | 38.7 | 13.64 | 35.00 | 40 | $70 \pm 1.0$ | $64 \pm 1.0$ | $178 \pm 2.0$ | $34 \pm 1.0$ | c | F2 | 1.00 | --- | -- |
| HRL1223W | 12 | 23 | 2.10 | 53.8 | 16.43 | 19.00 | 130 | $106 \pm 1.5$ | $101.8 \pm 1.5$ | $90 \pm 1.0$ | $70 \pm 1.0$ | c | F2 | 2.30 | --- | -- |
| HRL1234W | 12 | 34 | 2.70 | 55.3 | 18.89 | 17.00 | 130 | $98.3 \pm 1.0$ | $94 \pm 1.0$ | $151 \pm 2.0$ | $65 \pm 1.0$ | e | F2 | 3.40 | --- | -- |
| HRL1280W | 12 | 80 | 6.50 | 54.4 | 18.46 | 9.00 | 300 | $167 \pm 2.0$ | $160 \pm 2.0$ | $181 \pm 2.0$ | $76.2 \pm 1.0$ | d | 11 | 8.00 | 65/56 | 6.37 |
| HRL12110W | 12 | 110 | 9.90 | 48.0 | 16.67 | 9.00 | 165 | $175 \pm 2.0$ | 165.5 | $166 \pm 2.0$ | $125 \pm 1.5$ | c | 11 | 11.00 | 65/56 | 6.37 |
| HRL12150W | 12 | 150 | 11.75 | 59.6 | 19.15 | 7.00 | 225 | $172 \pm 2.0$ | $148.5 \pm 2.0$ | $195.6 \pm 2.0$ | $130 \pm 1.5$ | c | 12 | 15.00 | 127/110 | 12.45 |
| HRL1200W | 12 | 200 | 17.60 | 47.0 | 17.05 | 5.90 | 300 | $207.3 \pm 2.5$ | $202.3 \pm 2.5$ | $228 \pm 2.5$ | $138.4 \pm 1.5$ | c | 12 | 20.00 | 127/110 | 12.45 |
| HRL1280W | 12 | 280 | 25.80 | 45.2 | 16.28 | 4.00 | 800 | $214.2 \pm 2.5$ | $211.2 \pm 2.5$ | $261 \pm 2.5$ | $168.5 \pm 2.0$ | c | 12 | 28.00 | 127/110 | 12.45 |
| HRL12330W | 12 | 330 | 29.60 | 44.9 | 16.72 | 4.00 | 800 | $214.3 \pm 2.5$ | $211.3 \pm 2.5$ | $308.7 \pm 2.5$ | $169 \pm 2.0$ | c | 12 | 33.00 | 127/110 | 12.45 |
| HRL12390W | 12 | 390 | 33.00 | 46.9 | 17.73 | 4.00 | 800 | $217.6 \pm 2.5$ | $214.6 \pm 2.5$ | $342 \pm 2.5$ | $170 \pm 2.0$ | c | 12 | 39.00 | 127/110 | 12.45 |
| HRL12500W | 12 | 500 | 45.70 | 46.8 | 16.41 | 3.70 | 800 | $277.7 \pm 2.5$ | $274.7 \pm 2.5$ | $343 \pm 2.5$ | $170 \pm 2.0$ | c | 12 | 50.00 | 127/110 | 12.45 |

Charging(V) : • Standby Use : $2.275 \mathrm{~V} \pm 0.025 / \mathrm{CELLAT} 25^{\circ} \mathrm{C}\left(77^{\circ} \mathrm{F}\right)$ Temp Coefficient $-3.3 \mathrm{mV} / \mathrm{CELL}$ ©

- Cycle Use : $2.45 \mathrm{~V} \pm 0.05 \mathrm{~V} / \mathrm{CELL}$ AT $25^{\circ} \mathrm{C}\left(77^{\circ} \mathrm{F}\right)$ Temp Coefficient - $5 \mathrm{mV} / \mathrm{CELL}$ C


| Battery Type | Nominal Voltage (V) | Nominal Capacity (8Hr) (Ah) | Weight (Approx Kg) | Energy Density (Whil) | Specific Energy (Wh/kg) | Internal Resistance. Approx ( $\mathrm{m} \Omega$ ) | Max. Discharge Current $5 \sec (A)$ | Dimensions (mm) |  |  | Terminal Position | Terminal Type | Max.Charging Current (A) | Max. Screw Torque value |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  | Overall Height (H) | Length <br> (L) | Width <br> (W) |  |  |  | $\mathrm{Kgf-cm}$ <br> I $\mathrm{lbf}-\mathrm{in}$ | N-m |
| TPL12800 | 12 | 80 | 36.00 | 67.1 | 26.67 | 4.50 | 800 | $256.7 \pm 2.5$ | $512 \pm 2.5$ | $112.8 \pm 1.5$ | e | 12 | 24.00 | 91/79 | 8.92 |
| TPL12900 | 12 | 90 | 36.00 | 75.5 | 30.00 | 4.50 | 800 | $256.7 \pm 2.5$ | $512 \pm 2.5$ | $112.8 \pm 1.5$ | e | 12 | 27.00 | 91/79 | 8.92 |
| TPL121000 | 12 | 100 | 36.00 | 83.9 | 33.33 | 4.50 | 800 | $256.7 \pm 2.5$ | $512 \pm 2.5$ | $112.8 \pm 1.5$ | e | 12 | 30.00 | 91/79 | 8.92 |
| TPL121000T | 12 | 100 | 32.30 | 108.5 | 37.15 | 5 | 800 | $280 \pm 2.5$ | $390 \pm 2.5$ | $105 \pm 1.5$ | e | 12 | 30.00 | 91/79 | 8.92 |
| TPL121250A | 12 | 125 | 44.00 | 66.3 | 34.09 | 6.50 | 800 | $323 \pm 2.5$ | $558.4 \pm 2.5$ | $125.6 \pm 1.5$ | e | 12 | 37.50 | 91/79 | 8.92 |
| TPL121350A | 12 | 135 | 52.80 | 71.6 | 30.68 | 6.50 | 800 | $323 \pm 2.5$ | $558.4 \pm 2.5$ | $125.6 \pm 1.5$ | e | 12 | 40.50 | 91/79 | 8.92 |
| TPL121500A | 12 | 150 | 52.80 | 79.5 | 34.09 | 6.50 | 800 | $323 \pm 2.5$ | $558.4 \pm 2.5$ | $125.6 \pm 1.5$ | e | 12 | 45.00 | 91/79 | 8.92 |

Charging(V) : • Standby Use : $2.275 \mathrm{~V} \pm 0.025 / \mathrm{CELL}$ AT $25^{\circ} \mathrm{C}\left(77^{\circ} \mathrm{F}\right)$ Temp Coefficient $-3.3 \mathrm{mV} / \mathrm{CELL}{ }^{\circ} \mathrm{C}$

- Cycle Use : $2.45 \mathrm{~V} \pm 0.05 \mathrm{~V} / \mathrm{CELLAT} 25^{\circ} \mathrm{C}\left(77^{\circ} \mathrm{F}\right)$ Temp Coefficient -5mV/CELL'C

UPS Series

| Battery Type | Nominal Voltage(V) | Nominal Capacity (5min) (W/cell) | Weight (Approx $\mathrm{kg})$ | Energy Density (wh/L) | Specific Energy (wh/kg) | Internal Resistance Approx. ( $\mathrm{m} \Omega$ ) | Max. Discharge Current $5 \sec (A)$ | Dimensions (mm) |  |  |  | Terminal Position | Terminal Type | Max Charging Current (A) | Charging(V) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  | Height Over Terminal (H) | Container Height (h) | Length (L) | Wiath (W) |  |  |  | Standby Use | Cycle Use |
| UPS122406 | 12 | 240 | 1.45 | 27.6 | 13.79 | 32.00 | 100/130 | $98.3 \pm 1.0$ | $94 \vee 1.0$ | $151 \pm 2.0$ | $51 \pm 1$ | e | F1/F2 | 2.00 |  |  |
| UPS123606 | 12 | 360 | 1.97 | 41.4 | 15.22 | 22.00 | 100/130 | $98.3 \pm 1.0$ | $94 \pm 1.0$ | $151 \pm 2.0$ | $51 \pm 1$ | e | F1/F2 | 3.00 | $2.275 \mathrm{~V} \pm 0.025 / \mathrm{CELL}$ <br> AT $25^{\circ} \mathrm{C}\left(77^{\circ} \mathrm{F}\right)$ <br> Temp Coefficient <br> $-3.3 \mathrm{mV} /$ CELL $^{\circ} \mathrm{C}$ | $2.45 \mathrm{~V} \pm 0.05 \mathrm{~V} / \mathrm{CELL}$ <br> AT $25^{\circ} \mathrm{C}\left(77^{\circ} \mathrm{F}\right)$ <br> Temp Coefficient <br> $-5 \mathrm{mV} / \mathrm{CELL}{ }^{\circ} \mathrm{C}$ |
| UPS123607 | 12 | 360 | 1.97 | 32.5 | 15.22 | 22.00 | 100/130 | $98.3 \pm 1.0$ | $94 \pm 1.0$ | $151 \pm 2.0$ | $65 \pm 1.0$ | e | F1/F2 | 3.00 |  |  |
| UPS 12460 | 12 | 460 | 2.50 | 41.5 | 15.33 | 18.00 | 130 | $98.3 \pm 1.0$ | $94 \pm 1.0$ | $151 \pm 2.0$ | $65 \pm 1.0$ | e | F2 | 3.60 |  |  |
| UPS12580 | 12 | 580 | 2.83 | 52.4 | 17.07 | 12.50 | 130 | $98.3 \pm 1.0$ | $94 \pm 1.0$ | $151 \pm 2.0$ | $65 \pm 1.0$ | e | F2 | 3.76 |  |  |

## XTV Series

| Battery Type | Nominal Voltage(V) | Nominal Capacity (10Hr) (Ah) | Weight (Approx, $\mathrm{kg})$ | Energy Density (Whil) | Specific Energy (Wh/kg) | internal Resistance Approx. (m@) | Max. Discharge Current $5 \sec (A)$ | Dimensions (mm) |  |  |  | Terminal Position | $\begin{aligned} & \text { Terminal } \\ & \text { Type } \end{aligned}$ | Max. Charging Current (A) | Max. Screw Torque value |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  | Overall Height (H) | Container Height (h) | Length (L) | Wiath (W) |  |  |  | Kgf-cm <br> / lbf-in | N-m |
| XTV1272 | 12 | 7.2 | 2.75 | 93.6 | 31.42 | 21.00 | 130 | $100 \pm 1.0$ | $94 \pm 1.0$ | $151 \pm 2.0$ | $65 \pm 1.0$ | e | F2 | 2.16 | --- | --- |
| XTV12750 | 12 | 75 | 29.50 | 81.6 | 30.51 | 6.50 | 800 | $214.3 \pm 2.5$ | $211.3 \pm 2.5$ | $308.7 \pm 2.5$ | $169 \pm 2.0$ | c | 12 | 22.50 | 127/110 | 12.45 |
| XTV12850 | 12 | 85 | 31.20 | 81.5 | 32.69 | 6.50 | 800 | $217.6 \pm 2.5$ | $214.6 \pm 2.5$ | $343 \pm 2.5$ | $170 \pm 2.0$ | c | 12 | 25.50 | 127/110 | 12.45 |
| XTV12950 | 12 | 95 | 32.40 | 71.2 | 35.19 | 6.50 | 800 | $277.7 \pm 2.5$ | $274.7 \pm 2.5$ | $343 \pm 2.5$ | $170 \pm 2.0$ | c | 12 | 28.50 | 127/110 | 12.45 |

Charging(V) : • Standby Use : $2.275 \mathrm{~V} \pm 0.025 / \mathrm{CELL}$ AT $25^{\circ} \mathrm{C}\left(77^{\circ} \mathrm{F}\right)$ Temp Coefficient $-3.3 \mathrm{mV} / \mathrm{CELL} \mathrm{C}$

- Cycle Use : $2.45 \mathrm{~V} \pm 0.05 \mathrm{~V} / \mathrm{CELL} A T 25^{\circ} \mathrm{C}\left(77^{\circ} \mathrm{F}\right)$ Temp Coefficient $-5 \mathrm{mV} / \mathrm{CELL} \mathrm{C}$


## XHRL Series

| Battery Type | Nominal Voltage(V) | Nominal Capacity (15min) (W/cell) | Weight (Approx $\mathrm{kg})$ | Energy Density (Wh/l) | Specific Energy (Wh/kg) | InternalResistanceApprox.$(\mathrm{m} \Omega)$ | Max. Discharge Current $5 \sec (A)$ | Dimensions (mm) |  |  |  | Terminal Position | Terminal Type | Max. Charging Current (A) | Max. Screw Torque value |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  | Overall Height (H) | Container Height (h) | Length (L) | Wiath (W) |  |  |  | $\mathrm{Kgf}-\mathrm{cm}$ <br> / Ibf-in | N-m |
| $\begin{aligned} & \text { XHRL } \\ & 12360 \mathrm{~W} \end{aligned}$ | 12 | 360 | 27.50 | 58.1 | 19.64 | 4.00 | 800 | $214.2 \pm 2.5$ | $211.2 \pm 2.5$ | $261 \pm 2.5$ | $168.5 \pm 2.0$ | c | 12 | 36.00 | 91/79 | 8.92 |
| $\begin{aligned} & \text { XHRL } \\ & \text { 12410W } \end{aligned}$ | 12 | 410 | 31.00 | 55.8 | 19.84 | 4.00 | 800 | $214.2 \pm 2.5$ | $211.3 \pm 2.5$ | $308.7 \pm 2.5$ | $169 \pm 2.0$ | c | 12 | 41.00 | 91/79 | 8.92 |
| $\begin{aligned} & \text { XHRL } \\ & 12475 \mathrm{~W} \end{aligned}$ | 12 | 475 | 35.30 | 56.9 | 20.18 | 3.70 | 800 | $217.9 \pm 2.5$ | $214.6 \pm 2.5$ | $343 \pm 2.5$ | $170 \pm 2.0$ | c | 12 | 47.50 | 91/79 | 8.92 |
| $\begin{aligned} & \text { XHRL } \\ & 12620 \mathrm{~W} \end{aligned}$ | 12 | 620 | 47.20 | 58.2 | 19.70 | 3.70 | 800 | $275.9 \pm 2.5$ | $273.9 \pm 2.5$ | $343 \pm 2.5$ | $170 \pm 2.0$ | c | 12 | 62.00 | 91/79 | 8.92 |

Charging(V) : • Standby Use : $2.275 \mathrm{~V} \pm 0.025 / \mathrm{CELL}$ AT $25^{\circ} \mathrm{C}\left(77^{\circ} \mathrm{F}\right)$ Temp Coefficient $-3.3 \mathrm{mV} / \mathrm{CELL} \mathrm{L}^{\circ} \mathrm{C}$

$$
\text { - Cycle Use : } 2.45 \mathrm{~V} \pm 0.05 \mathrm{~V} / \mathrm{CELLAT} 25^{\circ} \mathrm{C}\left(77^{\circ} \mathrm{F}\right) \text { Temp Coefficient }-5 \mathrm{mV} / \mathrm{CELL} \mathrm{C}
$$

All information is subject to change without (prior) notification. Please consult CSB website (www.csb-battery.com) for latest information.

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