



# Valve Regulated Lead-Acid Rechargeable Battery

## BP12-12

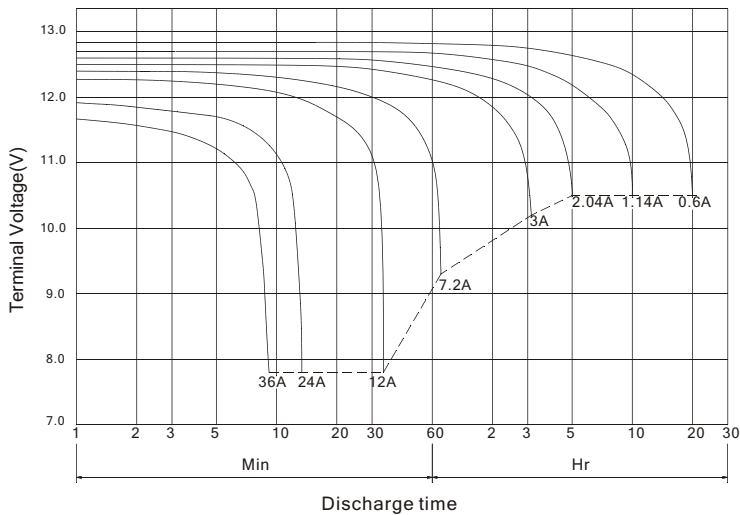


The battery is constructed by plates, separators, safety valves and container. Since the electrolyte is held by a glass-mat separator and plates, the battery can be used in any direction and position without leakage.

### PERFORMANCE SPECIFICATIONS

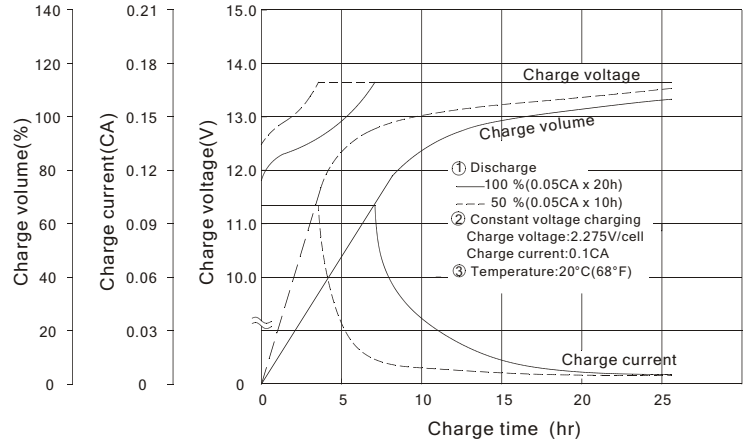
|   |   |
|---|---|
| Nominal Voltage(V).....   | 12 volts(6cells in series)  |
| Nominal Capacity(AH)  |   |
| 20 hour rate F.V.(1.75V/cell) (600mA to 10.50volts) .....                                       | 12A.H.  |
| 10 hour rate F.V.(1.75V/cell) (1140mA to10.50volts) .....                                       | 11.4A.H.  |
| 5 hour rate F.V.(1.75V/cell) (2040mA to 10.50volts) .....                                       | 10.2A.H.  |
| 1 hour rate F.V.(1.55V/cell) (7200mA to 9.30volts).....   | 7.2A.H.   |
| Approximate Weight.....   | 3940g(8.69lbs.)   |
| Terminal  |   |
| Standard.....   | Type T2   |
| Optional.....   | Type T1   |
| Internal Resistance (Fully Charged Battery).....  | <18m Ω  |
| Maximum Discharge Current For 5 sec.(A).....  | 180A  |
| Maximum Charge Current(A).....  | 3.6A  |
| Ambient Temperature   |   |
| Charge.....   | 0°C(32°F)~40°C(104°F)   |
| Discharge.....  | -20°C(-4°F)~50°C(122°F)   |
| Storage.....  | -20°C(-4°F)~40°C(104°F)   |
| Vibration test:   |   |
| Frequency: 16.7HZ   |   |
| Amplitude: 4mm  |   |
| Vibrate the battery horizontally or vertically for 60 minutes. The battery have no abnormality. |   |
| Case.....   | ABS   |
| Dimension(mm/inch)  |   |
| Length ±1.5mm.....  | 151/5.94  |
| Width ±1.5mm.....   | 98/3.86   |
| Container Height ±1.5mm.....  | 94/3.70   |
| Total Height ±2mm.....  | 98/3.86   |
| Application.....  | UPS, Laboratory Equipment, Toy-Cars, Power Packs, Fishing Lights. |

## BP12-12 Battery discharge characteristics (25°C/77°F)



## Battery Charging Characteristics

(Typical example of the charge characteristics for the standbyuse)

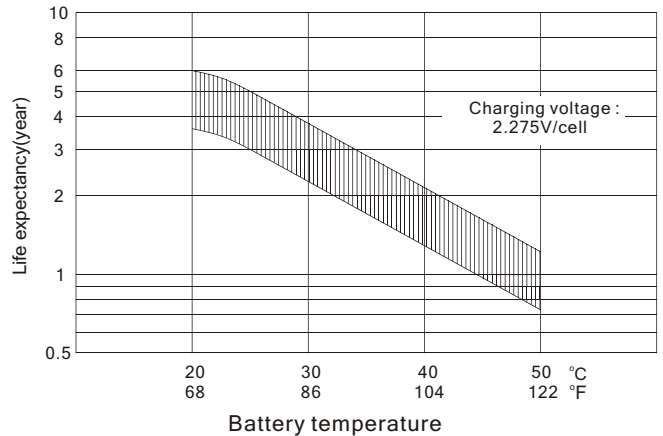


## Charging Procedure

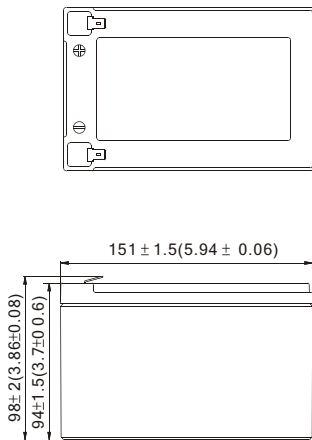
| Application              | Charging method   | Charging Voltage at 20°C (V/cell) | Temperature compensation coefficient of charging voltage (mV/°C/cell) | Max. charging current (CA) | Charging time 0.1CA, 20°C (h) |               | Temp (°C)          |
|--------------------------|---|-----------------------------------|---|----------------------------|-------------------------------|---------------|--------------------|
|                          |   |                                   |   |                            | 100% discharge                | 50% discharge |                    |
| For standby power Source | Constant voltage & Constant current charging (with current restriction) | 2.25~2.30                         | -3  | 0.3                        | 24                            | 20            | 0~40<br>(32~104°F) |
| For cycle service        |   | 2.40~2.50                         | -4  | 0.3                        | 16                            | 10            |                    |

\*Temperature compensation of charging voltage is not needed, when using the batteries within 5°C to 35°C range.

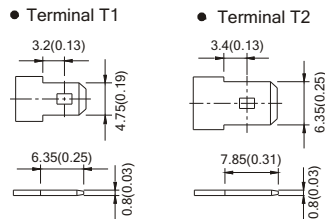
## Effect of Temperature on Long Term Float Life



## OUTER DIMENSIONS



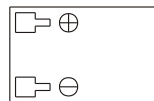
## TERMINAL TYPE mm (inch)



## Constant power discharge characteristics at 25°C/77°F

| Final Voltage | Discharge time |       |       |       |       |       |       |       |      |
|---------------|----------------|-------|-------|-------|-------|-------|-------|-------|------|
|               | 5Min           | 10Min | 15Min | 30Min | 1Hr   | 3Hr   | 5Hr   | 10Hr  | 20Hr |
| 10.80V        | 433.9          | 319.4 | 256.0 | 152.3 | 87.34 | 34.98 | 24.12 | 13.48 | 7.05 |
| 10.50V        | 502.2          | 346.0 | 267.7 | 158.1 | 89.96 | 35.68 | 24.48 | 13.68 | 7.20 |
| 10.20V        | 533.6          | 358.5 | 276.0 | 161.7 | 91.57 | 36.00 | 24.61 | 13.75 | 7.23 |
| 9.90V         | 557.5          | 367.1 | 282.4 | 164.0 | 92.67 | 36.25 | 24.70 | 13.79 | 7.25 |
| 9.60V         | 576.0          | 374.4 | 288.0 | 165.6 | 93.60 | 36.47 | 24.77 | 13.79 | 7.25 |

## TERMINAL POSITION



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