

# UPS ULTRA HIGH RATE

## XP12-150FR (12V, 150WPC, 32.9AH)



### Specification

|                                  |  |
|----------------------------------|--|
| Nominal Voltage                  | 12V  |
| Nominal Capacity(8 HR)           | 32.9 Ah at 1.75V/cell @ 25°C/77°F  |
| Watts(15 min rate)               | 150.0 Watts/cell at 1.67V/cell @ 25°C/77°F   |
| Dimensions                       | Length 195mm(7.68inches)   |
|                                  | Width 130mm(5.12inches)  |
|                                  | Container Height 164mm(6.46inches)   |
|                                  | Total Height (with Terminal) 167mm(6.57inches)   |
| Approx Weight                    | Approx 10.2 kg (22.5 lbs)  |
| Terminal                         | T6 with copper alloy insert for a M6 bolt  |
| Container Material               | Flame Retardant ABS to UL94-V0   |
| Rated Capacity                   | 35.0 AH/1.75A (20hr, 1.80V/cell, 25°C/77°F)  |
|                                  | 32.9 AH/4.11A (8hr, 1.75V/cell, 25°C/77°F)   |
|                                  | 30.8 AH/6.15A (5hr, 1.75V/cell, 25°C/77°F)   |
|                                  | 28.6 AH/9.54A (3hr, 1.75V/cell, 25°C/77°F)   |
|                                  | 26.8 AH/26.8A (1hr, 1.60V/cell, 25°C/77°F)   |
| Max. Discharge Current           | 630A (5s)  |
| Internal Resistance              | Approx 7.0mΩ   |
| Operating Temp.Range             | Discharge : -20~55°C (-4~131°F)  |
|                                  | Charge : 0~50°C (32~122°F)   |
|                                  | Storage : -20~55°C (-4~131°F)  |
| Nominal Operating Temperature    | 20 to 25°C (68 to 77°F)  |
| Standby Use (Float Voltage)      | No limit on Initial Charging Current.<br>13.5V~13.8V at 25°C (77°F) Temp. Coefficient -20mV/°C     |
| Cycle Use                        | Initial Charging Current less than 10.5A.<br>14.4V~15.0V at 25°C (77°F) Temp. Coefficient -30mV/°C |
| Capacity affected by Temperature | 40°C (104°F) 103%  |
|                                  | 25°C (77°F) 100%   |
|                                  | 0°C (32°F) 86%   |
| Self Discharge                   | ≤3% of capacity declined per month at 25°C   |

### Application

- ◆ Critical UPS (High rate) applications
- ◆ High power backup supply
- ◆ Emergency power supply
- ◆ Emergency lighting
- ◆ Electric starting

### Compliant Standards

- Eurobat Classification:*
- ◆ High Performance (10~12 years design life)
  - ◆ IEC60896-21/22:2004
  - ◆ BS 6290 Part 4

### Constant Current Discharge (Amperes) at 25 °C (77°F)

| F.V/Time   | 5min  | 10min | 15min | 20min | 30min | 45min | 1h   | 2h   | 3h   | 4h   | 5h   | 6h   | 8h   | 10h  | 20h  |
|------------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|
| 1.85V/cell | 102.3 | 73.7  | 59.1  | 49.4  | 37.9  | 28.3  | 22.6 | 12.7 | 9.04 | 7.06 | 5.85 | 5.01 | 3.93 | 3.26 | 1.72 |
| 1.80V/cell | 118.2 | 82.7  | 65.2  | 53.7  | 40.7  | 29.9  | 23.8 | 13.2 | 9.31 | 7.28 | 6.02 | 5.15 | 4.03 | 3.35 | 1.75 |
| 1.75V/cell | 132.8 | 89.9  | 70.3  | 57.2  | 42.7  | 31.2  | 24.7 | 13.5 | 9.54 | 7.46 | 6.15 | 5.25 | 4.11 | 3.41 | 1.79 |
| 1.70V/cell | 144.0 | 96.6  | 74.9  | 60.5  | 44.6  | 32.3  | 25.5 | 13.9 | 9.70 | 7.60 | 6.27 | 5.37 | 4.20 | 3.48 | 1.82 |
| 1.67V/cell | 156.0 | 103.3 | 79.1  | 63.6  | 46.4  | 33.3  | 26.2 | 14.2 | 10.0 | 7.78 | 6.41 | 5.48 | 4.31 | 3.54 | 1.85 |
| 1.60V/cell | 166.8 | 109.2 | 82.7  | 66.6  | 48.4  | 34.4  | 26.8 | 14.6 | 10.2 | 7.98 | 6.58 | 5.63 | 4.40 | 3.62 | 1.90 |

### Constant Power Discharge (Watts/Cell) at 25 °C (77°F)

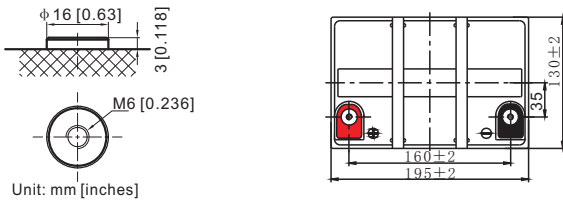
| F.V/Time   | 5min  | 10min | 15min | 20min | 30min | 45min | 1h   | 2h   | 3h   | 4h   | 5h   | 6h   | 8h   | 10h  | 20h  |
|------------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|
| 1.85V/cell | 199.0 | 144.2 | 116.2 | 97.6  | 75.4  | 56.4  | 45.2 | 25.6 | 18.3 | 14.3 | 11.9 | 10.2 | 8.05 | 6.71 | 3.55 |
| 1.80V/cell | 227.6 | 160.2 | 127.1 | 105.1 | 80.1  | 59.3  | 47.4 | 26.3 | 18.7 | 14.7 | 12.2 | 10.4 | 8.22 | 6.85 | 3.59 |
| 1.75V/cell | 253.0 | 172.4 | 135.7 | 111.1 | 83.4  | 61.2  | 48.9 | 26.9 | 19.0 | 14.9 | 12.4 | 10.6 | 8.33 | 6.94 | 3.66 |
| 1.70V/cell | 271.2 | 183.3 | 142.9 | 116.2 | 86.3  | 62.9  | 49.9 | 27.4 | 19.3 | 15.1 | 12.5 | 10.8 | 8.45 | 7.03 | 3.70 |
| 1.67V/cell | 291.5 | 194.5 | 150.0 | 121.4 | 89.3  | 64.5  | 51.2 | 28.0 | 19.7 | 15.4 | 12.7 | 10.9 | 8.62 | 7.12 | 3.75 |
| 1.60V/cell | 308.1 | 203.4 | 155.2 | 125.9 | 92.2  | 65.9  | 51.7 | 28.3 | 20.0 | 15.7 | 13.0 | 11.1 | 8.73 | 7.21 | 3.81 |



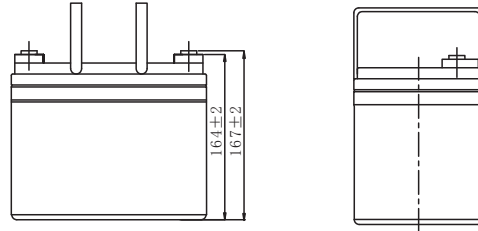
# Dimensions

## T6 Terminal

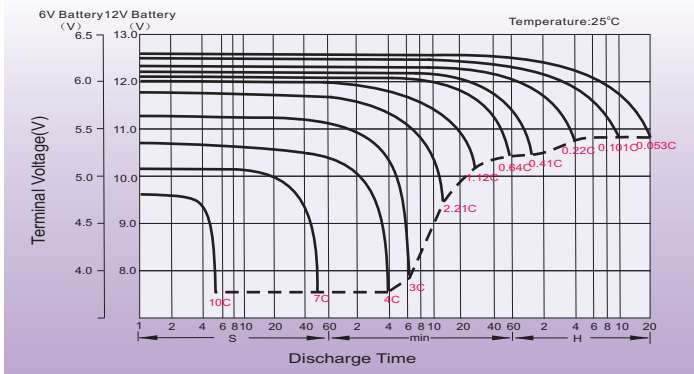
Unit: mm [inches]



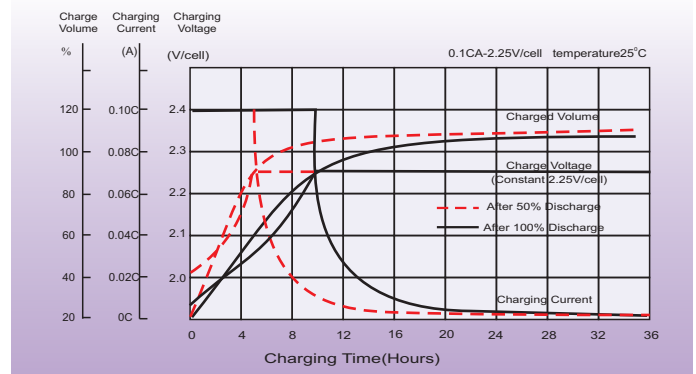
Unit: mm [inches]



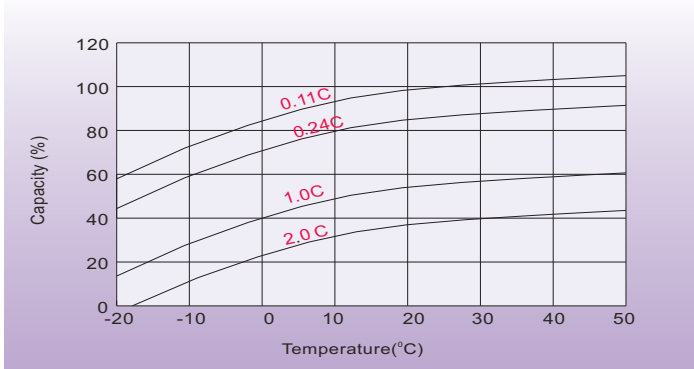
## Discharge Characteristics



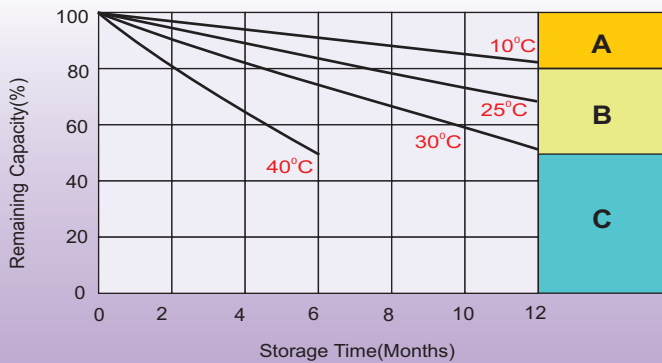
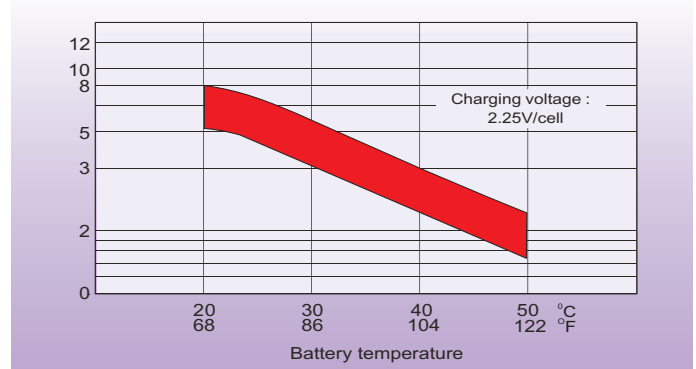
## Float Charging Characteristics



## Temperature Effects in Relation to Battery Capacity



## Effect of Temperature on Long Term Float Life



## Self Discharge Characteristics

- A** No supplementary charge required  
(Carry out supplementary charge before use if 100% capacity is required.)
- B** Supplementary charge required before use. Optional charging way as below:
  1. Charged for above 3 days at limited current 0.25CA and constant volatge 2.25V/cell.
  2. Charged for above 20hours at limited current 0.25CA and constant volatge 2.45V/cell.
  3. Charged for 8-10hours at limited current 0.05CA .
- C** Supplementary charge may often fail to recover the capacity.  
The battery should never be left standing till this is reached.

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