

# BATTERY UPS

## BU SERIES-General Purpose BU12-18 (12V18AH)

### Specification

|                                  |  |                                 |
|----------------------------------|--|---------------------------------|
| Nominal Voltage                  | 12V  |                                 |
| Nominal Capacity(20HR)           | 18.0AH   |                                 |
| Dimensions                       | Length   | 181.5±2mm (7.14 inches)         |
|                                  | Width  | 77±1mm (3.03 inches)            |
|                                  | Container Height   | 167.5±2mm (6.59 inches)         |
|                                  | Total Height (with Terminal)   | 167.5±2mm (6.59 inches)         |
| Approx Weight                    | Approx 5.4kg (11.9lbs)   |                                 |
| Terminal                         | T12  |                                 |
| Container Material               | ABS  |                                 |
| Rated Capacity                   | 18.0 AH/0.90A  | (20hr, 1.80V/cell, 25 °C/77 °F) |
|                                  | 16.7 AH/1.67A  | (10hr, 1.80V/cell, 25 °C/77 °F) |
|                                  | 15.3 AH/3.05A  | (5hr, 1.75V/cell, 25 °C/77 °F)  |
|                                  | 13.4 AH/4.46A  | (3hr, 1.75V/cell, 25 °C/77 °F)  |
|                                  | 11.2 AH/11.2A  | (1hr, 1.60V/cell, 25 °C/77 °F)  |
| Max. Discharge Current           | 270A (5s)  |                                 |
| Internal Resistance              | Approx 16mΩ  |                                 |
| Operating Temp. Range            | Discharge : -15~50°C (5 ~122°F)  |                                 |
|                                  | Charge : 0 ~40°C (32 ~104°F)   |                                 |
|                                  | Storage : -15~40°C (5 ~104°F)  |                                 |
| Nominal Operating Temp. Range    | 25 ±3°C (77 ±5°F)  |                                 |
| Cycle Use                        | Initial Charging Current less than 5.4A. Voltage   |                                 |
|                                  | 14.4V~15.0V at 25°C (77°F) Temp. Coefficient -30mV/°C  |                                 |
| Standby Use                      | No limit on Initial Charging Current Voltage   |                                 |
|                                  | 13.5V~13.8V at 25°C (77°F) Temp. Coefficient -20mV/°C  |                                 |
| Capacity affected by Temperature | 40°C (104°F)   | 103%                            |
|                                  | 25°C (77°F)  | 100%                            |
|                                  | 0°C (32°F)   | 86%                             |
| Self Discharge                   | Leoch LP series batteries may be stored for up to 6 months at 25°C (77°F) and then a refreshing charge is required. For higher temperatures the time interval will be shorter. |                                 |



### Applications

- ◆ All purpose
- ◆ Uninterruptable Power Supply (UPS)
- ◆ Electric Power System (EPS)
- ◆ Emergency backup power supply
- ◆ Emergency light
- ◆ Railway signal
- ◆ Aircraft signal
- ◆ Alarm and security system
- ◆ Electronic apparatus and equipment
- ◆ Communication power supply
- ◆ DC power supply
- ◆ Auto control system



### 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 | 34.3 | 22.8  | 18.8  | 16.5  | 13.5  | 10.6  | 8.75 | 5.37 | 4.04 | 3.33 | 2.82 | 2.45 | 1.94 | 1.62 | 0.891 |
| 1.80V/cell | 41.0 | 27.3  | 22.1  | 18.9  | 15.1  | 11.6  | 9.47 | 5.76 | 4.32 | 3.54 | 2.97 | 2.55 | 2.02 | 1.67 | 0.900 |
| 1.75V/cell | 49.2 | 31.3  | 24.6  | 20.9  | 16.2  | 12.4  | 10.0 | 6.00 | 4.46 | 3.62 | 3.05 | 2.63 | 2.07 | 1.72 | 0.909 |
| 1.70V/cell | 57.1 | 35.0  | 27.1  | 22.6  | 17.3  | 13.0  | 10.4 | 6.21 | 4.58 | 3.71 | 3.12 | 2.68 | 2.10 | 1.74 | 0.925 |
| 1.65V/cell | 63.0 | 37.9  | 29.0  | 24.2  | 18.2  | 13.6  | 10.8 | 6.41 | 4.70 | 3.80 | 3.19 | 2.73 | 2.14 | 1.76 | 0.938 |
| 1.60V/cell | 69.5 | 41.0  | 31.2  | 25.6  | 19.2  | 14.1  | 11.2 | 6.57 | 4.82 | 3.90 | 3.25 | 2.80 | 2.18 | 1.79 | 0.943 |

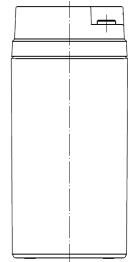
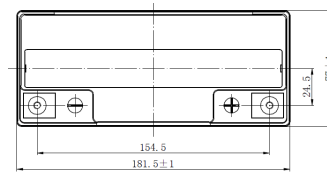
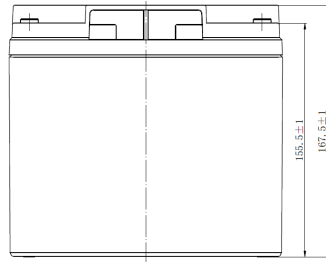
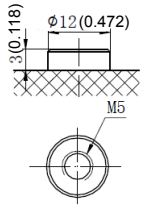
### Constant Power Discharge (Watts/cell) at 25 °C (77°F)

| F.V/Time   | 5min  | 10min | 15min | 20min | 30min | 45min | 1h   | 2h   | 3h   | 4h   | 5h   | 6h   | 8h   | 10h  | 20h  |
|------------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|
| 1.85V/cell | 63.9  | 42.6  | 35.3  | 31.1  | 25.7  | 20.3  | 16.9 | 10.4 | 7.88 | 6.50 | 5.53 | 4.81 | 3.84 | 3.21 | 1.77 |
| 1.80V/cell | 74.2  | 50.1  | 40.9  | 35.4  | 28.5  | 22.1  | 18.2 | 11.1 | 8.37 | 6.88 | 5.79 | 5.00 | 3.97 | 3.31 | 1.78 |
| 1.75V/cell | 88.2  | 56.8  | 45.0  | 38.7  | 30.3  | 23.5  | 19.1 | 11.5 | 8.62 | 7.02 | 5.93 | 5.12 | 4.07 | 3.39 | 1.80 |
| 1.70V/cell | 100.9 | 62.6  | 49.1  | 41.7  | 32.2  | 24.5  | 19.9 | 11.9 | 8.82 | 7.17 | 6.05 | 5.23 | 4.12 | 3.44 | 1.83 |
| 1.65V/cell | 109.7 | 66.8  | 52.0  | 44.2  | 33.6  | 25.4  | 20.4 | 12.2 | 9.03 | 7.33 | 6.16 | 5.31 | 4.18 | 3.47 | 1.85 |
| 1.60V/cell | 118.8 | 71.3  | 54.9  | 45.9  | 34.9  | 26.2  | 21.1 | 12.5 | 9.20 | 7.49 | 6.28 | 5.42 | 4.26 | 3.53 | 1.86 |

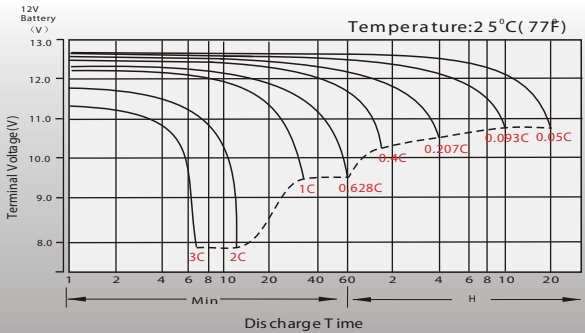
# Dimensions

## T1 2Terminal

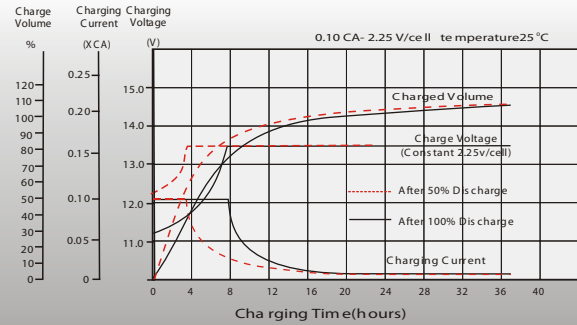
Unit: mm [inches]



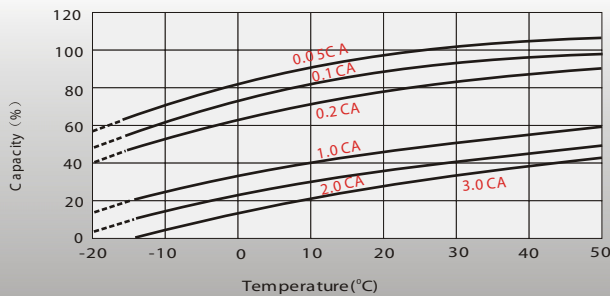
## Discharge Characteristics



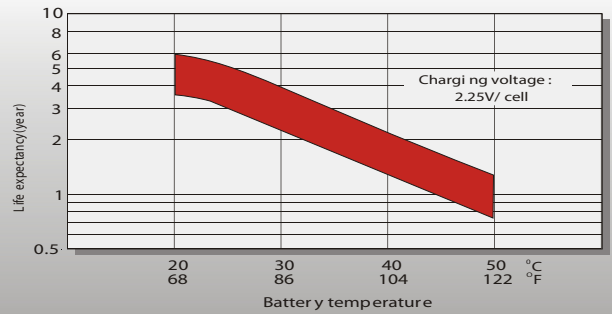
## Float Charging Characteristics



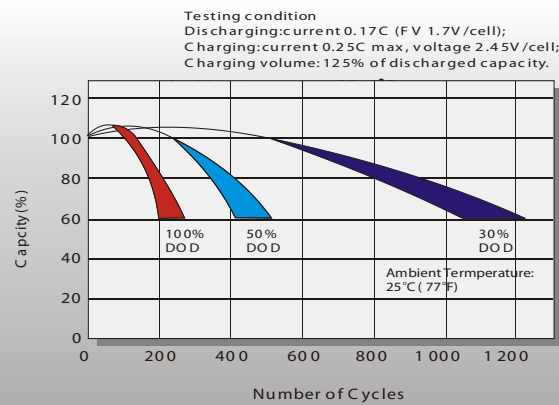
## Temperature Effects in Relation to Battery Capacity



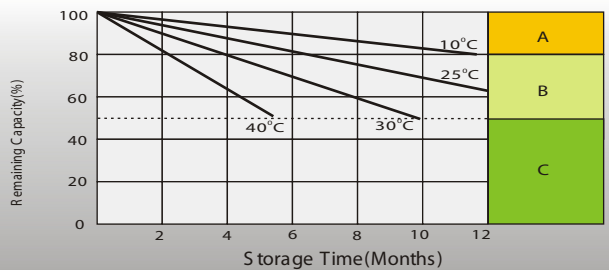
## Effect of Temperature on Long Term Float Life



## Cycle Life in Relation to Depth of Discharge



## 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 ways as below:
  - Charged for a above 3 days at limited current 0.25CA and constant voltage 2.25V/cell.
  - Charged for a above 20 hours at limited current 0.25CA and constant voltage 2.45V/cell.
  - Charged for 8 ~10 hours at limited current 0.05 CA.
- C** Supplementary charge may often fail to recover the capacity. The battery should never be left standing till this is reached.

## Sales Office

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