



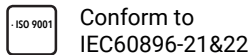
# SBL18-12i (12V18Ah)



## Applications

- Uninterruptable Power Supply (UPS)
- Electric Power System (EPS)
- Emergency backup power supply
- Emergency light
- Railway signal
- Alarm and security system
- Communication power supply
- DC power supply

## Certificates



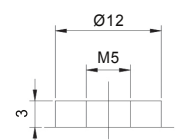
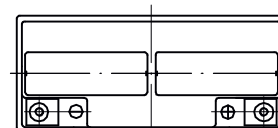
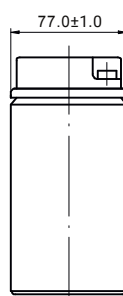
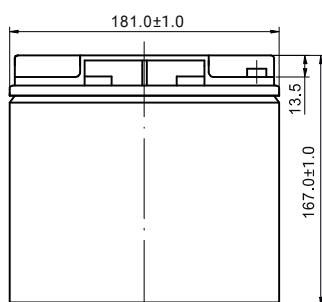
## Specifications

|                                               |                                |                                   |                                                                                                                                                             |
|-----------------------------------------------|--------------------------------|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Nominal Voltage</b>                        | 12V                            | <b>Operating Temp. Range</b>      | Discharge: -20~50°C                                                                                                                                         |
| <b>Nominal Capacity</b>                       | 18Ah (C <sub>20</sub> , 10.5V) |                                   | Charge: -10~50°C                                                                                                                                            |
| <b>Approx. Weight</b>                         | 5.3kg                          |                                   | Storage: -20~50°C                                                                                                                                           |
| <b>Terminal</b>                               | M5                             | <b>Cycle Use</b>                  | Initial Charging Current less than 5.4A.                                                                                                                    |
| <b>Container Material</b>                     | ABS UL94 HB                    |                                   | Voltage 14.55V +1% at 20°C.                                                                                                                                 |
| <b>Rated Capacity (20°C)</b>                  | 18.0Ah/0.90A, 20hr, 10.5V      | <b>Standby Use</b>                | Temperature Coefficient -30mV/°C.                                                                                                                           |
|                                               | 16.7Ah/1.67A, 10hr, 10.5V      |                                   | No limit on Initial Charging Current.                                                                                                                       |
|                                               | 15.84Ah/1.98A, 8hr, 10.5V      |                                   | Voltage 13.65V +1% at 20°C.                                                                                                                                 |
|                                               | 15.3Ah/3.06A, 5hr, 10.5V       |                                   | Temperature Coefficient -20mV/°C.                                                                                                                           |
|                                               | 13.5Ah/4.5A, 3hr, 10.5V        | <b>Capacity affected by Temp.</b> | 40°C 103%                                                                                                                                                   |
|                                               | 11.7Ah/11.7A, 1hr, 9.6V        |                                   | 25°C 100%                                                                                                                                                   |
| <b>Max. Discharge Current</b>                 | 270A (5s)                      |                                   | 0°C 86%                                                                                                                                                     |
| <b>Internal Resistance / Impedance (1kHz)</b> | Approx. 16mΩ                   | <b>Self Discharge</b>             | SSB batteries may be stored for up to 6 months at 20°C and then a freshening charge is required. For higher temperatures the time interval will be shorter. |
| <b>Nominal Oper. Temp. R.</b>                 | 20±3°C                         | <b>Life Expectancy</b>            | 10-12 years according to EUROBAT                                                                                                                            |

## Dimensions

### ■ M5 Terminal

Unit: mm | Dimensions: 181 Length X 77 Width X 167 Height (167 Height incl. Terminal)



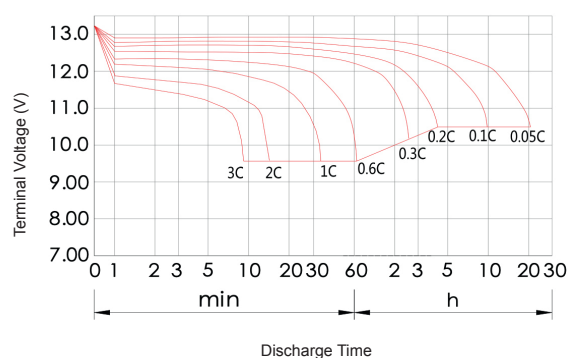
## Constant Current Discharge (Amperes) at 20°C

| F.V/Time | 10min | 15min | 30min | 60min | 90min | 2h   | 3h   | 4h   | 5h   | 8h   | 10h  | 20h  |
|----------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|
| 9.60V    | 43.2  | 34.2  | 19.1  | 11.7  | 8.59  | 6.39 | 4.59 | 3.67 | 3.12 | 2.02 | 1.70 | 0.91 |
| 9.90V    | 41.9  | 33.4  | 18.7  | 11.5  | 8.48  | 6.36 | 4.56 | 3.65 | 3.10 | 2.01 | 1.69 | 0.91 |
| 10.2V    | 40.2  | 32.1  | 18.1  | 11.2  | 8.31  | 6.30 | 4.53 | 3.63 | 3.08 | 1.99 | 1.68 | 0.91 |
| 10.5V    | 38.4  | 31.1  | 17.7  | 11.0  | 8.17  | 6.21 | 4.50 | 3.60 | 3.06 | 1.98 | 1.67 | 0.90 |
| 10.8V    | 36.3  | 29.4  | 17.0  | 10.7  | 7.96  | 6.05 | 4.37 | 3.49 | 2.97 | 1.92 | 1.64 | 0.88 |

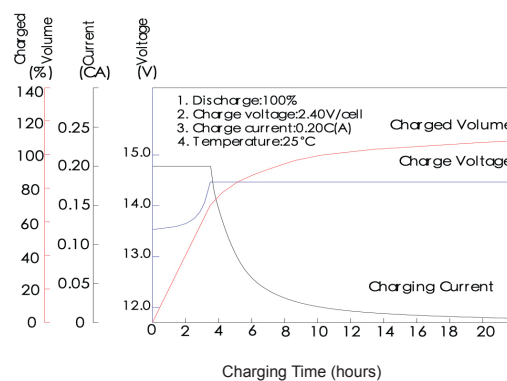
## Constant Power Discharge (Watts/cell) at 20°C

| F.V/Time | 10min | 15min | 30min | 60min | 90min | 2h   | 3h   | 4h   | 5h   | 8h   | 10h  | 20h  |
|----------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|
| 9.60V    | 487   | 390   | 219   | 135   | 99.7  | 74.8 | 54.5 | 43.7 | 37.3 | 24.2 | 20.4 | 11.0 |
| 9.90V    | 473   | 381   | 214   | 133   | 98.5  | 74.4 | 54.2 | 43.5 | 37.0 | 24.1 | 20.3 | 10.9 |
| 10.2V    | 453   | 366   | 208   | 130   | 96.8  | 73.7 | 53.8 | 43.2 | 36.8 | 23.9 | 20.2 | 10.9 |
| 10.5V    | 434   | 354   | 203   | 127   | 94.8  | 72.6 | 53.5 | 42.9 | 36.5 | 23.8 | 20.1 | 10.8 |
| 10.8V    | 409   | 335   | 195   | 124   | 92.5  | 70.8 | 51.9 | 41.6 | 35.4 | 23.0 | 19.7 | 10.6 |

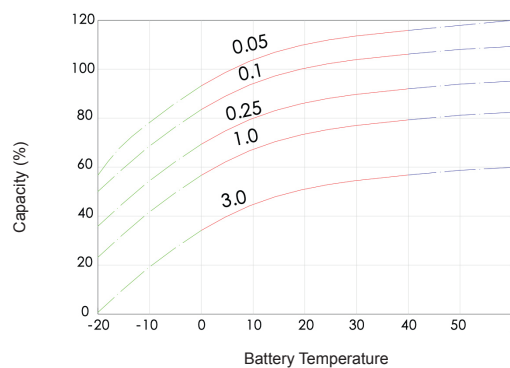
## Discharge Characteristics



## Float Charging Characteristics



## Temperature Effects in Relation to Battery Capacity



## Effect of Temperature on Long Term Float Life

