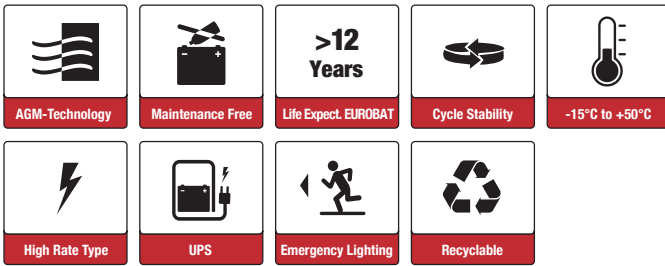




# SBL41-12HR (12V1022W)



## 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



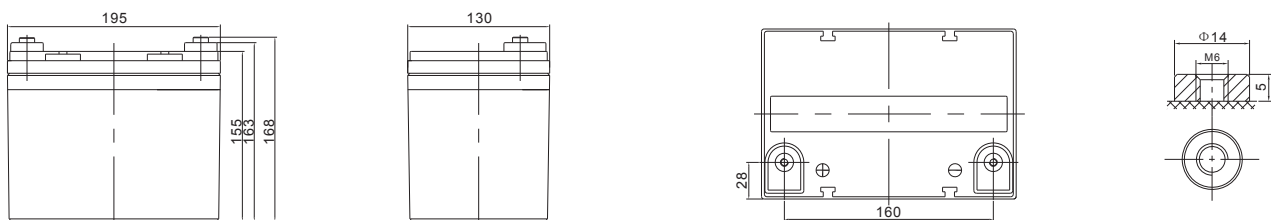
## Specifications

|                                               |                                  |                                   |                                                                                                                                                             |
|-----------------------------------------------|----------------------------------|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Nominal Voltage</b>                        | 12V                              | <b>Nominal Oper. Temp. R.</b>     | 20±3°C                                                                                                                                                      |
| <b>Nominal Capacity</b>                       | 33.3 Ah (C <sub>10</sub> , 9.6V) | <b>Operating Temp. Range</b>      | Discharge: -20~50°C                                                                                                                                         |
| <b>Approx. Weight</b>                         | 10kg                             |                                   | Charge: -10~50°C                                                                                                                                            |
| <b>Terminal</b>                               | M6                               |                                   | Storage: -20~50°C                                                                                                                                           |
| <b>Container Material</b>                     | ABS UL94 HB                      | <b>Standby Use</b>                | No limit on Initial Charging Current.                                                                                                                       |
| <b>Nominal Power</b>                          | 5 min 1377.0W                    |                                   | Voltage 2.295 V/cell at 20° C.                                                                                                                              |
| (20°C / 9.6V/Block)                           | 10 min 1022.4W                   | <b>Capacity affected by Temp.</b> | Temperature Coefficient -20mV/°C.                                                                                                                           |
|                                               | 15 min 790.8W                    |                                   | 40°C 103%                                                                                                                                                   |
| <b>Nominal Power</b>                          | 5 min 229.50W                    |                                   | 25°C 100%                                                                                                                                                   |
| (20°C / 1.6V/Cell)                            | 10 min 170.4W                    |                                   | 0°C 86%                                                                                                                                                     |
|                                               | 15 min 131.8W                    | <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>Max. Discharge Current</b>                 | 330A (5s)                        | <b>Life Expectancy</b>            | >12 years according to EUROBAT                                                                                                                              |
| <b>Internal Resistance / Impedance (1kHz)</b> | Approx. 10mΩ                     |                                   |                                                                                                                                                             |

## Dimensions

### ■ M6 Terminal

Unit: mm | Dimensions: 195 Length X 130 Width X 155 Height (168 Height incl. Terminal)



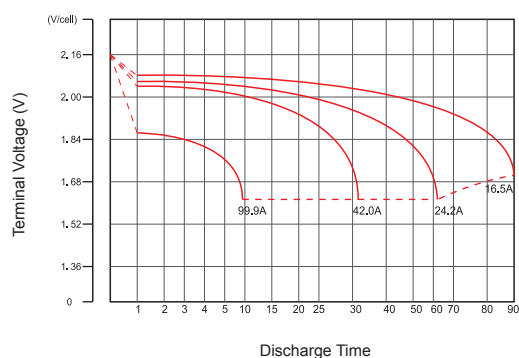
## Constant Current Discharge (Amperes) at 20°C

| F.V/Time | 5min  | 8min  | 10min | 15min | 20min | 30min | 60min | 90min | 3h   | 5h   | 8h   | 10h  |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|
| 9.6V     | 124.9 | 103.4 | 90.6  | 69.1  | 56.3  | 41.5  | 24.0  | 17.2  | 8.79 | 7.69 | 4.03 | 3.33 |
| 10.0V    | 113.3 | 94.8  | 83.7  | 64.5  | 52.9  | 39.3  | 22.9  | 16.5  | 8.68 | 5.96 | 3.99 | 3.30 |
| 10.2V    | 108.5 | 91.1  | 80.7  | 62.5  | 51.4  | 38.3  | 22.4  | 16.2  | 8.52 | 5.87 | 3.93 | 3.25 |
| 10.5V    | 100.2 | 84.9  | 75.7  | 59.1  | 48.9  | 36.7  | 21.7  | 15.7  | 8.32 | 5.74 | 3.86 | 3.20 |
| 10.8V    | 91.8  | 78.6  | 70.6  | 55.9  | 46.6  | 35.1  | 20.9  | 15.2  | 8.04 | 5.58 | 3.77 | 3.12 |
| 11.1V    | 78.8  | 67.0  | 59.8  | 48.1  | 40.4  | 31.1  | 18.9  | 13.8  | 7.69 | 5.37 | 3.64 | 3.02 |

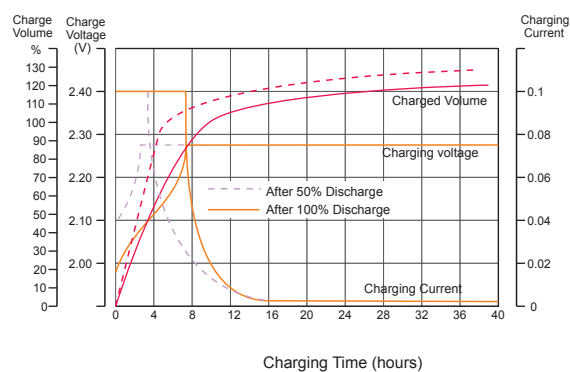
## Constant Power Discharge (Watts/block) at 20°C

| F.V/Time | 5min   | 8min   | 10min  | 15min | 20min | 30min | 60min | 90min | 3h     | 5h    | 8h    | 10h   |
|----------|--------|--------|--------|-------|-------|-------|-------|-------|--------|-------|-------|-------|
| 9.6V     | 1377.0 | 1155.6 | 1022.4 | 790.8 | 649.2 | 483.6 | 270.6 | 195.6 | 102.29 | 70.78 | 47.92 | 39.82 |
| 10.0V    | 1281.6 | 1084.2 | 964.8  | 750.0 | 619.2 | 463.8 | 260.4 | 189.0 | 101.55 | 70.33 | 47.92 | 39.53 |
| 10.2V    | 1239.6 | 1051.2 | 937.8  | 732.6 | 606   | 454.2 | 256.2 | 186.6 | 99.98  | 69.38 | 47.00 | 39.05 |
| 10.5V    | 1163.4 | 993.6  | 891.0  | 700.8 | 582   | 439.2 | 249.0 | 181.2 | 97.97  | 68.16 | 46.23 | 38.42 |
| 10.8V    | 1082.4 | 932.4  | 841.2  | 669.6 | 559.8 | 424.2 | 241.8 | 176.4 | 95.14  | 66.46 | 45.19 | 37.57 |
| 11.1V    | 943.2  | 805.8  | 722.4  | 582.0 | 490.8 | 378.0 | 219.6 | 162.6 | 91.35  | 64.12 | 43.78 | 36.45 |

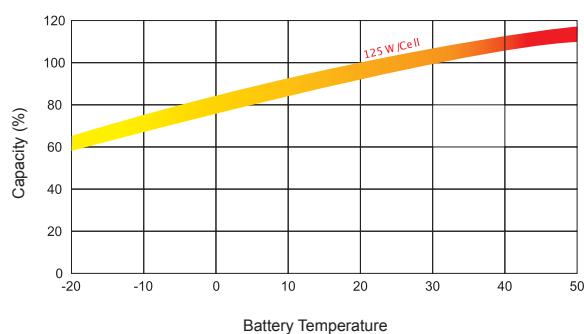
## Discharge Characteristics



## Float Charging Characteristics



## Temperature Effects in Relation to Battery Capacity



## Effect of Temperature on Long Term Float Life

