

# SBL830-12HR (12V220Ah)

## 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



Conform to  
IEC60896-21&22



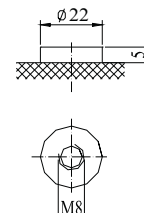
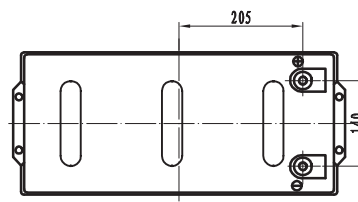
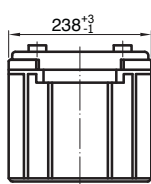
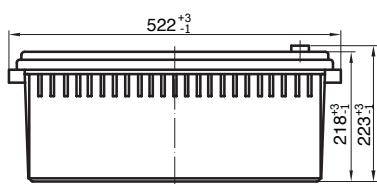
## Specifications

|                                               |                                   |                                   |                                                                                                                                                             |
|-----------------------------------------------|-----------------------------------|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Nominal Voltage</b>                        | 12V                               | <b>Operating Temp. Range</b>      | Discharge: -20~60°C                                                                                                                                         |
| <b>Nominal Capacity</b>                       | 220Ah (C <sub>10</sub> 1.8V/cell) |                                   | Charge: -10~45°C                                                                                                                                            |
| <b>Approx. Weight</b>                         | 67.5kg                            |                                   | Storage: -20~60°C                                                                                                                                           |
| <b>Terminal</b>                               | M8                                | <b>Standby Use</b>                | Initial Charging Current less than 69A.                                                                                                                     |
| <b>Container Material</b>                     | ABS UL94 HB                       |                                   | Voltage 2.295 V/cell at 20° C.                                                                                                                              |
| <b>Rated Capacity (20°C)</b>                  | 220Ah/22A, 10hr, 10.8V            |                                   | Temperature Coefficient -20mV/°C.                                                                                                                           |
|                                               | 188.3Ah/37.66A, 5hr, 10.5V        | <b>Capacity affected by Temp.</b> | 40°C 103%                                                                                                                                                   |
|                                               | 172.71Ah/57.57A, 3hr, 10.5V       |                                   | 25°C 100%                                                                                                                                                   |
|                                               | 171Ah/171A, 1hr, 9.6V             |                                   | 0°C 86%                                                                                                                                                     |
| <b>Max. Discharge Current</b>                 | 2500A (5s)                        | <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>Internal Resistance / Impedance (1kHz)</b> | Approx. 2.2mΩ                     |                                   |                                                                                                                                                             |
| <b>Nominal Oper. Temp. R.</b>                 | 20±2°C                            | <b>Life Expectancy</b>            | 10-12 years according to EUROBAT                                                                                                                            |

## Dimensions

### ■ M8 Terminal

Unit: mm | Dimensions: 522 Length X 238 Width X 218 Height (223 Height incl. Terminal)



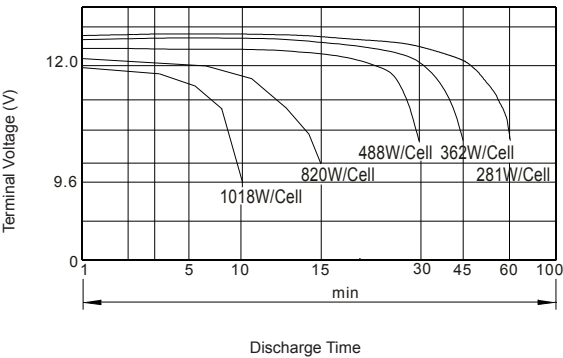
Constant Current Discharge (Amperes) at 20°C

| End Voltage | 3min | 5min | 10min | 15min | 20min | 25min | 30min | 45min | 60min | 90min  | 3h    | 5h    | 8h    | 10h   |
|-------------|------|------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|
| 1.60V/cell  | 971  | 748  | 558   | 447   | 389   | 341   | 303   | 222   | 171   | 114.99 | 62.04 | 40.17 | 26.87 | 22.88 |
| 1.65V/cell  | 931  | 721  | 544   | 433   | 377   | 332   | 294   | 215   | 167   | 111.76 | 60.28 | 39.34 | 26.29 | 22.66 |
| 1.67V/cell  | 915  | 711  | 538   | 428   | 372   | 328   | 291   | 212   | 165   | 110.59 | 59.84 | 38.81 | 25.99 | 22.66 |
| 1.70V/cell  | 882  | 695  | 511   | 409   | 355   | 312   | 279   | 204   | 159   | 109.27 | 59.18 | 38.41 | 25.69 | 22.44 |
| 1.75V/cell  | 876  | 675  | 486   | 390   | 337   | 296   | 267   | 194   | 151   | 106.77 | 57.57 | 37.66 | 25.22 | 22.22 |
| 1.80V/cell  | 862  | 643  | 465   | 381   | 320   | 281   | 254   | 185   | 145   | 103.99 | 55.95 | 36.74 | 24.64 | 22.00 |

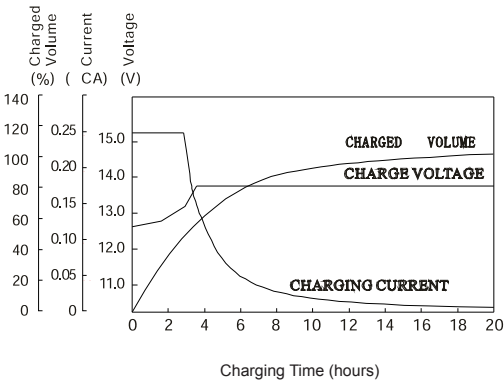
Constant Power Discharge (Watts/cell) at 20°C

| End Point  | 3min | 5min | 10min | 15min | 20min | 25min | 30min | 45min | 60min | 90min  | 3h     | 5h    | 8h    | 10h   |
|------------|------|------|-------|-------|-------|-------|-------|-------|-------|--------|--------|-------|-------|-------|
| 1.60V/cell | 1486 | 1276 | 1018  | 827   | 683   | 601   | 534   | 394   | 305   | 210.14 | 123.46 | 79.50 | 52.55 | 43.53 |
| 1.65V/cell | 1451 | 1265 | 997   | 822   | 671   | 584   | 523   | 386   | 299   | 204.56 | 120.52 | 77.88 | 51.43 | 42.68 |
| 1.67V/cell | 1437 | 1261 | 984   | 820   | 667   | 578   | 519   | 383   | 297   | 201.72 | 118.85 | 77.02 | 50.89 | 42.24 |
| 1.70V/cell | 1402 | 1200 | 966   | 780   | 645   | 554   | 504   | 373   | 289   | 198.97 | 117.22 | 76.20 | 50.38 | 41.82 |
| 1.75V/cell | 1376 | 1138 | 907   | 752   | 621   | 531   | 488   | 362   | 281   | 193.39 | 114.27 | 74.58 | 49.30 | 40.90 |
| 1.80V/cell | 1347 | 1114 | 857   | 680   | 578   | 508   | 463   | 352   | 273   | 188.11 | 110.97 | 72.60 | 48.18 | 40.05 |

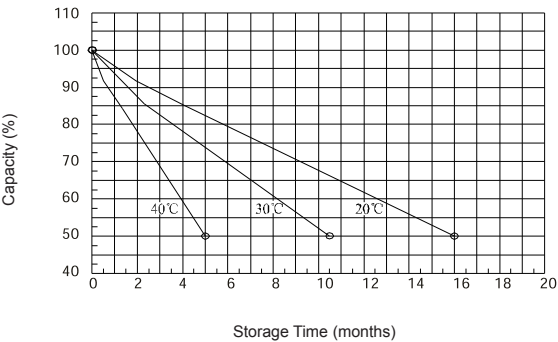
Discharge Characteristics



Float Charging Characteristics



Self-Discharge Characteristic



Effect of Temperature on Long Term Float Life

