

# SBL410-12HR V0 Xtreme (12V90Ah)

## Applications (for industrial standby use)

- 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



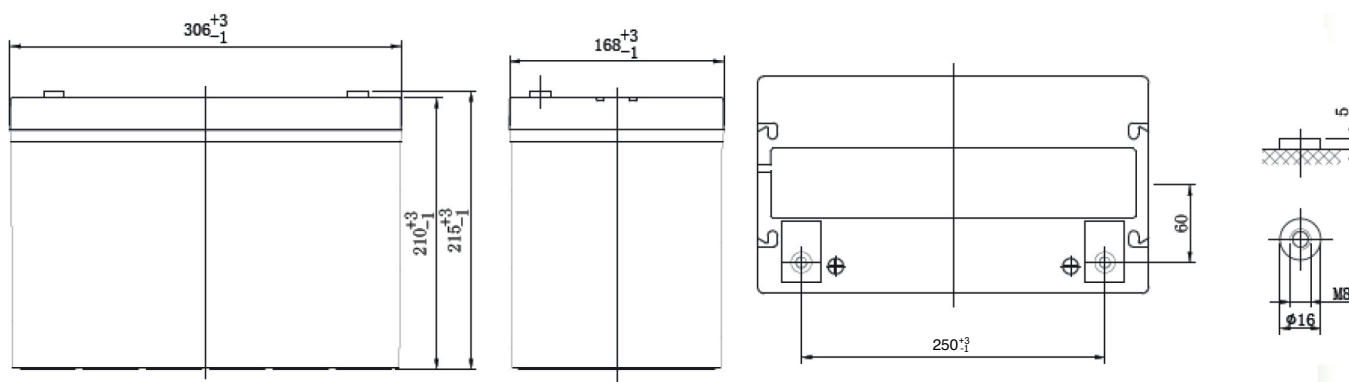
## Specifications

|                                               |                                                                                                               |                                   |                                                                                                                                                             |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Nominal Voltage</b>                        | 12V                                                                                                           | <b>Operating Temp. Range</b>      | Discharge: -20~60°C                                                                                                                                         |
| <b>Nominal Capacity</b>                       | 90Ah (C <sub>10</sub> , 1.8V/cell)                                                                            |                                   | Charge: -10~45°C                                                                                                                                            |
| <b>Approx. Weight</b>                         | 29.2kg                                                                                                        |                                   | Storage: -20~40°C                                                                                                                                           |
| <b>Terminal</b>                               | M8                                                                                                            | <b>Standby Use</b>                | Initial Charging Current less than 28.2A.                                                                                                                   |
| <b>Container Material</b>                     | ABS UL94 V0                                                                                                   |                                   | Voltage 2.295 V/cell at 20°C.                                                                                                                               |
| <b>Rated Capacity (20°C)</b>                  | 90Ah/9.0A, 10hr, 10.8V<br>77.05Ah/15.41A, 5hr, 10.5V<br>70.65Ah/23.55A, 3hr, 10.5V<br>71.2Ah/71.2A, 1hr, 9.6V | <b>Capacity affected by Temp.</b> | Temperature Coefficient -20mV/°C.                                                                                                                           |
| <b>Max. Discharge Current</b>                 | 950A (5s)                                                                                                     |                                   | 30°C 103%                                                                                                                                                   |
| <b>Internal Resistance / Impedance (1kHz)</b> | Approx. 4.4mΩ                                                                                                 | <b>Self Discharge</b>             | 20°C 100%                                                                                                                                                   |
| <b>Nominal Oper. Temp. R.</b>                 | 20±2°C                                                                                                        |                                   | 0°C 89%                                                                                                                                                     |
|                                               |                                                                                                               | <b>Life Expectancy</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. |
|                                               |                                                                                                               |                                   | >12 years according to EUROBAT                                                                                                                              |

## Dimensions

### ■ M8 Terminal

Unit: mm | Dimensions: 306 Length X 168 Width X 210 Height (215 Height incl. Terminal)



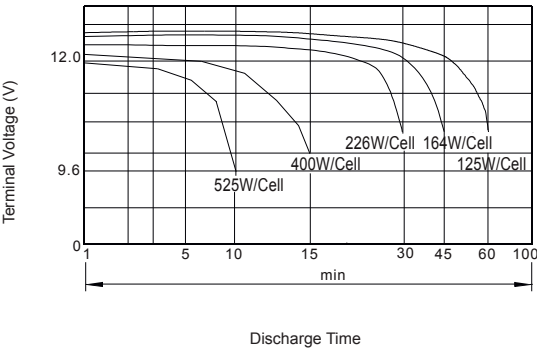
Constant Current Discharge (Amperes) at 20°C

| End Voltage | 3min | 5min | 10min | 15min | 20min | 25min | 30min | 45min | 60min | 90min | 3h    | 5h    | 8h    | 10h  |
|-------------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 1.60V/cell  | 446  | 376  | 286   | 215   | 182   | 161   | 145   | 100   | 71.2  | 47.04 | 25.38 | 16.43 | 10.99 | 9.36 |
| 1.65V/cell  | 441  | 366  | 270   | 211   | 180   | 158   | 139   | 99.5  | 68.7  | 45.72 | 24.66 | 16.09 | 10.76 | 9.27 |
| 1.67V/cell  | 439  | 362  | 264   | 210   | 179   | 156   | 137   | 99.3  | 67.7  | 45.24 | 24.48 | 15.88 | 10.63 | 9.27 |
| 1.70V/cell  | 425  | 352  | 251   | 200   | 171   | 148   | 129   | 86.1  | 65.1  | 44.70 | 24.21 | 15.71 | 10.51 | 9.18 |
| 1.75V/cell  | 408  | 339  | 245   | 194   | 167   | 144   | 125   | 84.0  | 63.2  | 43.68 | 23.55 | 15.41 | 10.32 | 9.09 |
| 1.80V/cell  | 397  | 318  | 236   | 188   | 156   | 137   | 120   | 82.6  | 60.5  | 42.54 | 22.89 | 15.03 | 10.08 | 9.00 |

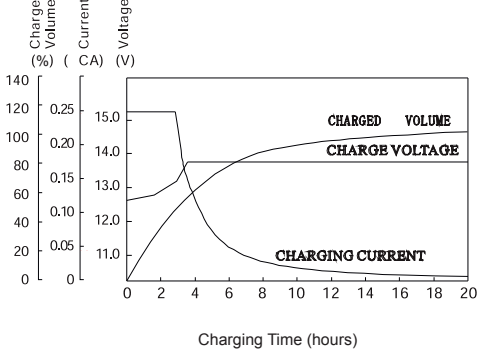
Constant Power Discharge (Watts/cell) at 20°C

| End Point  | 3min | 5min | 10min | 15min | 20min | 25min | 30min | 45min | 60min | 90min | 3h    | 5h    | 8h    | 10h   |
|------------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1.60V/cell | 874  | 719  | 525   | 412   | 349   | 300   | 259   | 187   | 141   | 85.97 | 50.51 | 32.52 | 21.50 | 17.81 |
| 1.65V/cell | 860  | 686  | 505   | 403   | 336   | 289   | 249   | 182   | 138   | 83.68 | 49.30 | 31.86 | 21.04 | 17.46 |
| 1.67V/cell | 854  | 672  | 497   | 400   | 331   | 284   | 245   | 181   | 137   | 82.52 | 48.62 | 31.51 | 20.82 | 17.28 |
| 1.70V/cell | 821  | 642  | 487   | 390   | 321   | 274   | 235   | 170   | 132   | 81.40 | 47.95 | 31.17 | 20.61 | 17.11 |
| 1.75V/cell | 764  | 607  | 457   | 358   | 311   | 264   | 226   | 164   | 125   | 79.11 | 46.75 | 30.51 | 20.17 | 16.73 |
| 1.80V/cell | 708  | 567  | 427   | 344   | 296   | 258   | 221   | 159   | 121   | 76.95 | 45.40 | 29.70 | 19.71 | 16.38 |

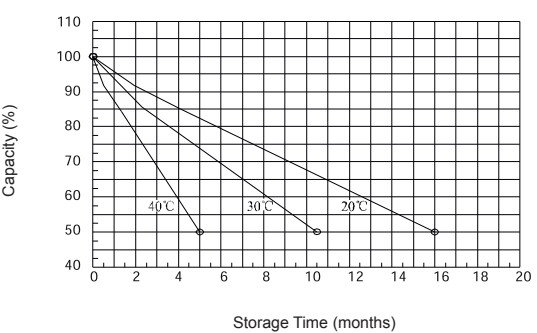
Discharge Characteristics



Float Charging Characteristics



Self-Discharge Characteristic



Effect of Temperature on Long Term Float Life

