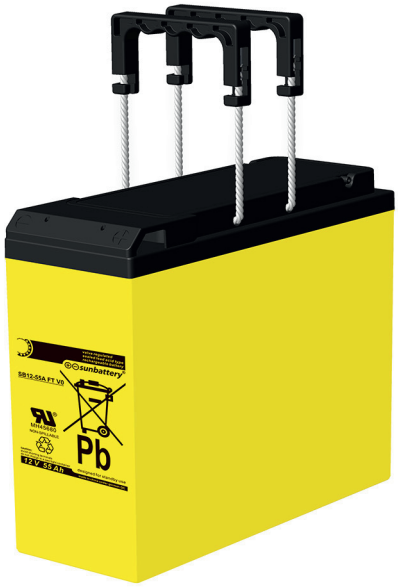
sunbattery®

# SB12-55A FT V0 (12V55Ah)

AGM-Technology | Maintenance Free | 10-12 Years Life Expect. EUROBAT | Cycle Stability | -15°C to +50°C

Standard Type | UPS | Telecommunications | Emergency Lighting | Flame Retardant | Recyclable



## 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

ISO 9001 Conform to IEC60896-21&22

## Specifications

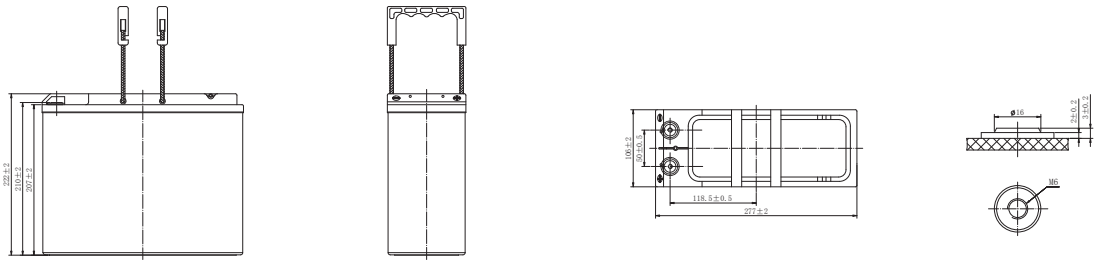
| | | |
|---|---|---|
| **Nominal Voltage** | 12V | |
| **Nominal Capacity** | 55.0Ah ($C_{10}$, 1.80V/cell) | |
| **Approx. Weight** | 17.3kg | |
| **Terminal** | M6 | |
| **Container Material** | ABS UL94 V0 | |
| **Rated Capacity (25°C)** | 58.2Ah/2.91A, 20hr, 1.80V/cell | |
| | 55.0Ah/5.50A, 10hr, 1.80V/cell | |
| | 53.6Ah/6.70A, 8hr, 1.75V/cell | |
| | 48.2Ah/9.64A, 5hr, 1.75V/cell | |
| | 36.4Ah/36.4A, 1hr, 1.60V/cell | |
| **Max. Discharge Current** | 550A (5s) | |
| **Internal Resistance / Impedance (1kHz)** | Approx. 7.6mΩ | |
| **Operating Temp. Range** | Discharge: | -15~50°C |
| | Charge: | 0-40°C |
| | Storage: | -15~40°C |

| | | |
|---|---|---|
| **Nominal Oper. Temp. R.** | 25±3°C | |
| **Cycle Use** | Initial Charging Current less than 15.0A. | |
| | Voltage 14.7V +-1% at 25°C. | |
| | Temperature Coefficient -30mV/°C. | |
| **Standby Use** | No limit on Initial Charging Current. | |
| | Voltage 13.65V +-1% at 25°C Temp. | |
| | Coefficient -20mV/°C | |
| **Capacity affected by Temp.** | 40°C | 103% |
| | 25°C | 100% |
| | 0°C | 86% |
| **Self Discharge** | SB batteries may be stored for up to 6 months at 25°C and then a freshening charge is required. For higher temperatures the time interval will be shorter. | |
| **Life Expectancy** | 10-12 years according to EUROBAT | |

## Dimensions

### M6 Terminal

Unit: mm | Dimensions: 277 Length X 106 Width X 222 Height (222 Height incl. Terminal)



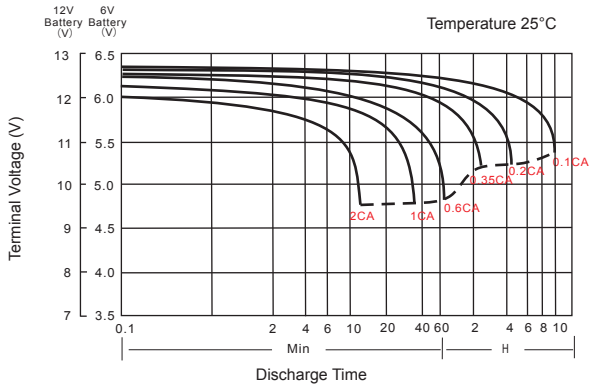
## Constant Current Discharge (Amperes) at 25°C

| F.V/Time | 10min | 15min | 20min | 30min | 45min | 1h | 2h | 3h | 4h | 5h | 6h | 8h | 10h | 20h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.85V/cell | 87.8 | 76.2 | 65.9 | 51.7 | 39.4 | 31.7 | 18.3 | 13.3 | 10.7 | 8.97 | 7.86 | 6.30 | 5.26 | 2.79 |
| 1.80V/cell | 101.3 | 86.0 | 73.0 | 56.6 | 42.5 | 33.9 | 19.7 | 14.3 | 11.3 | 9.52 | 8.29 | 6.62 | 5.50 | 2.91 |
| 1.75V/cell | 111.9 | 93.1 | 78.9 | 59.5 | 43.9 | 34.9 | 20.1 | 14.5 | 11.5 | 9.64 | 8.39 | 6.70 | 5.56 | 2.93 |
| 1.70V/cell | 118.1 | 98.3 | 82.0 | 61.2 | 44.9 | 35.5 | 20.4 | 14.7 | 11.6 | 9.73 | 8.46 | 6.75 | 5.60 | 2.95 |
| 1.67V/cell | 123.4 | 102.1 | 84.5 | 62.2 | 45.5 | 35.9 | 20.5 | 14.8 | 11.7 | 9.82 | 8.53 | 6.81 | 5.64 | 2.97 |
| 1.60V/cell | 128.7 | 104.9 | 86.3 | 63.5 | 46.1 | 36.4 | 20.7 | 14.9 | 11.8 | 9.90 | 8.61 | 6.86 | 5.68 | 2.99 |

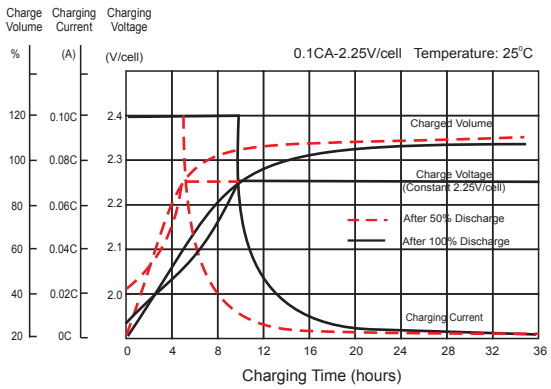
## Constant Power Discharge (Watts/cell) at 25°C

| F.V/Time | 10min | 15min | 20min | 30min | 45min | 1h | 2h | 3h | 4h | 5h | 6h | 8h | 10h | 20h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.85V/cell | 167.2 | 146.5 | 127.8 | 100.9 | 77.2 | 62.4 | 36.3 | 26.5 | 21.3 | 17.9 | 15.8 | 12.7 | 10.6 | 5.63 |
| 1.80V/cell | 191.6 | 164.4 | 140.6 | 109.9 | 82.9 | 66.5 | 38.9 | 28.3 | 22.6 | 19.0 | 16.6 | 13.3 | 11.1 | 5.87 |
| 1.75V/cell | 210.0 | 176.5 | 151.1 | 114.9 | 85.5 | 68.3 | 39.6 | 28.8 | 22.9 | 19.2 | 16.8 | 13.4 | 11.2 | 5.90 |
| 1.70V/cell | 218.8 | 184.6 | 155.6 | 117.3 | 86.7 | 69.2 | 39.9 | 28.9 | 23.0 | 19.3 | 16.9 | 13.5 | 11.2 | 5.93 |
| 1.67V/cell | 225.1 | 188.8 | 158.3 | 117.8 | 87.2 | 69.3 | 40.0 | 29.0 | 23.1 | 19.4 | 17.0 | 13.6 | 11.3 | 5.95 |
| 1.60V/cell | 229.8 | 190.9 | 159.6 | 119.0 | 87.5 | 69.8 | 40.2 | 29.1 | 23.2 | 19.5 | 17.1 | 13.7 | 11.3 | 5.98 |

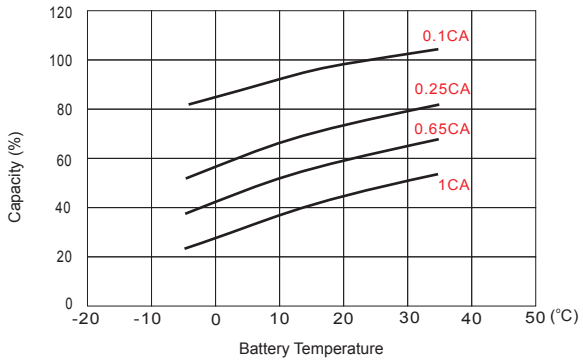
## Discharge Characteristics

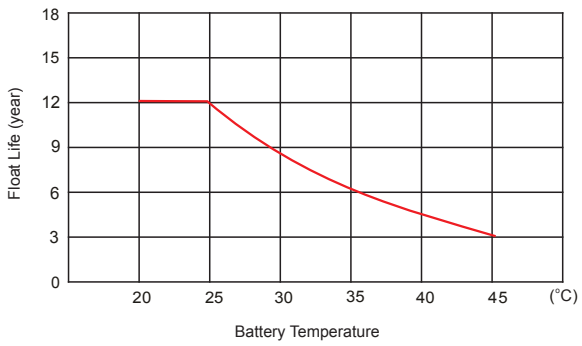



## Float Charging Characteristics




## Temperature Effects in Relation to Battery Capacity




## Effect of Temperature on Long Term Float Life