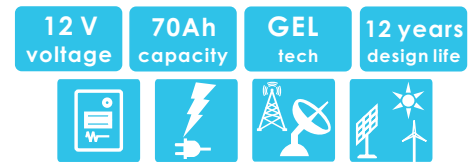


SOLRA SERIES VRLA BATTERY

The Solar series is designed for frequent cyclic charge and discharge applications under extreme environments. By combining the newly developed Nano Gel electrolyte with high density paste, the Solar range offers high recharge efficiency at very low charge current. The acid stratification is highly reduced by adding Nano Gel.

This series is suited for energy storage for renewable energies such as PV, wind turbine power systems and CATV.



TECHNICAL SPECIFICATIONS

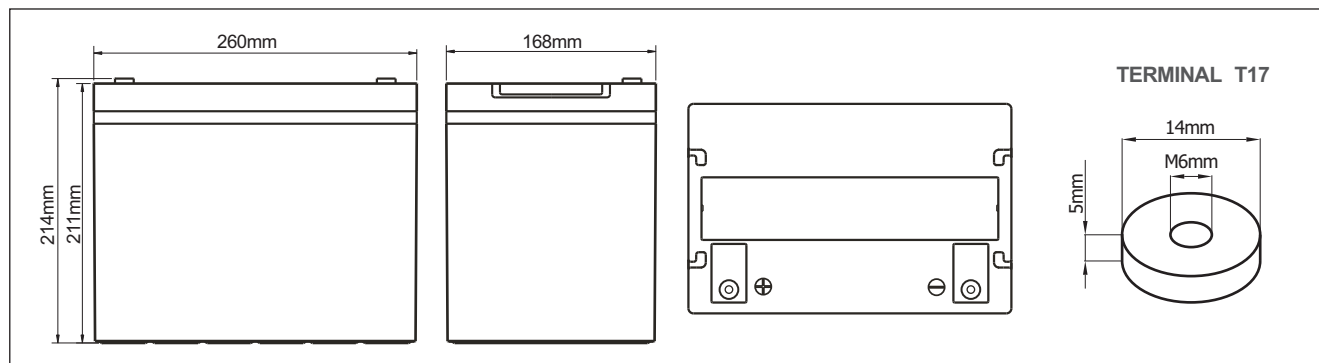
| | |
|---|--|
| Nominal Voltage (V) | 12 (6 cells per unit) |
| Designed Floating Life (20°C) | 12 Years |
| Nominal Capacity (20°C) | 70 Ah @ 10HR-rate (to 1.80Vpc) |
| Dimension (mm) | L260mm x W168mm x H214mm |
| Approx. Weight | 23 kg (50.7 lbs) |
| Terminal Type | Female Copper Insert M6 (torque:6~7N.m) |
| Internal Resistance | Approx. 0.006 Ohm (fully charged @ 20°C) |
| Max. Charge Current | 17.5A |
| Max. Discharge Current (5S) | 700 A |
| Short Circuit Current | 2000 A |
| Self Discharge | Approx. 3% per month @ 20°C |
| Ambient Temperature | Discharge: -25~65°C Charge: -25~60°C Storage: -25~45°C |
| Float Charge Voltage (20~25°C) | 13.6-13.8V (-3mV/ cell/ °C) |
| Equalize and cycle Use Charge Voltage (20~25°C) | 14.4-14.8V (-5mV/ cell / °C) |
| Container Material | ABS (UL94-V0 optional) |



Complied standards

- IEC 60896-21/22
- IEC 61427
- UL1989
- JIS C8704
- GB/T19639

BATTERY DIMENSIONS



BATTERY DISCHARGE TABLE

| F.V/Time | 30min | 1h | 2h | 3h | 4h | 5h | 8h | 10h | 20h |
|----------|-------|------|------|------|------|------|------|------|------|
| 1.70V | 72.5 | 45.0 | 26.6 | 19.4 | 15.4 | 12.9 | 8.77 | 7.24 | 3.82 |
| 1.75V | 70.0 | 44.1 | 26.2 | 19.1 | 15.3 | 12.7 | 8.65 | 7.14 | 3.75 |
| 1.80V | 66.9 | 42.6 | 25.6 | 18.7 | 14.9 | 12.4 | 8.44 | 7.00 | 3.67 |
| 1.85V | 63.1 | 40.8 | 24.6 | 18.1 | 14.5 | 12.1 | 8.26 | 6.82 | 3.59 |

| F.V/Time | 30min | 1h | 2h | 3h | 4h | 5h | 8h | 10h | 20h |
|----------|-------|------|------|------|------|------|------|------|------|
| 1.70V | 136 | 85.0 | 50.7 | 37.1 | 29.7 | 24.9 | 17.1 | 14.2 | 7.52 |
| 1.75V | 132 | 83.9 | 50.3 | 36.8 | 29.6 | 24.8 | 17.0 | 14.1 | 7.42 |
| 1.80V | 127 | 81.9 | 49.6 | 36.4 | 29.2 | 24.4 | 16.7 | 13.9 | 7.34 |
| 1.85V | 122 | 79.1 | 48.2 | 35.5 | 28.6 | 24.0 | 16.5 | 13.6 | 7.21 |

PARAMETERS FOR SOLAR & WIND APPLICATIONS

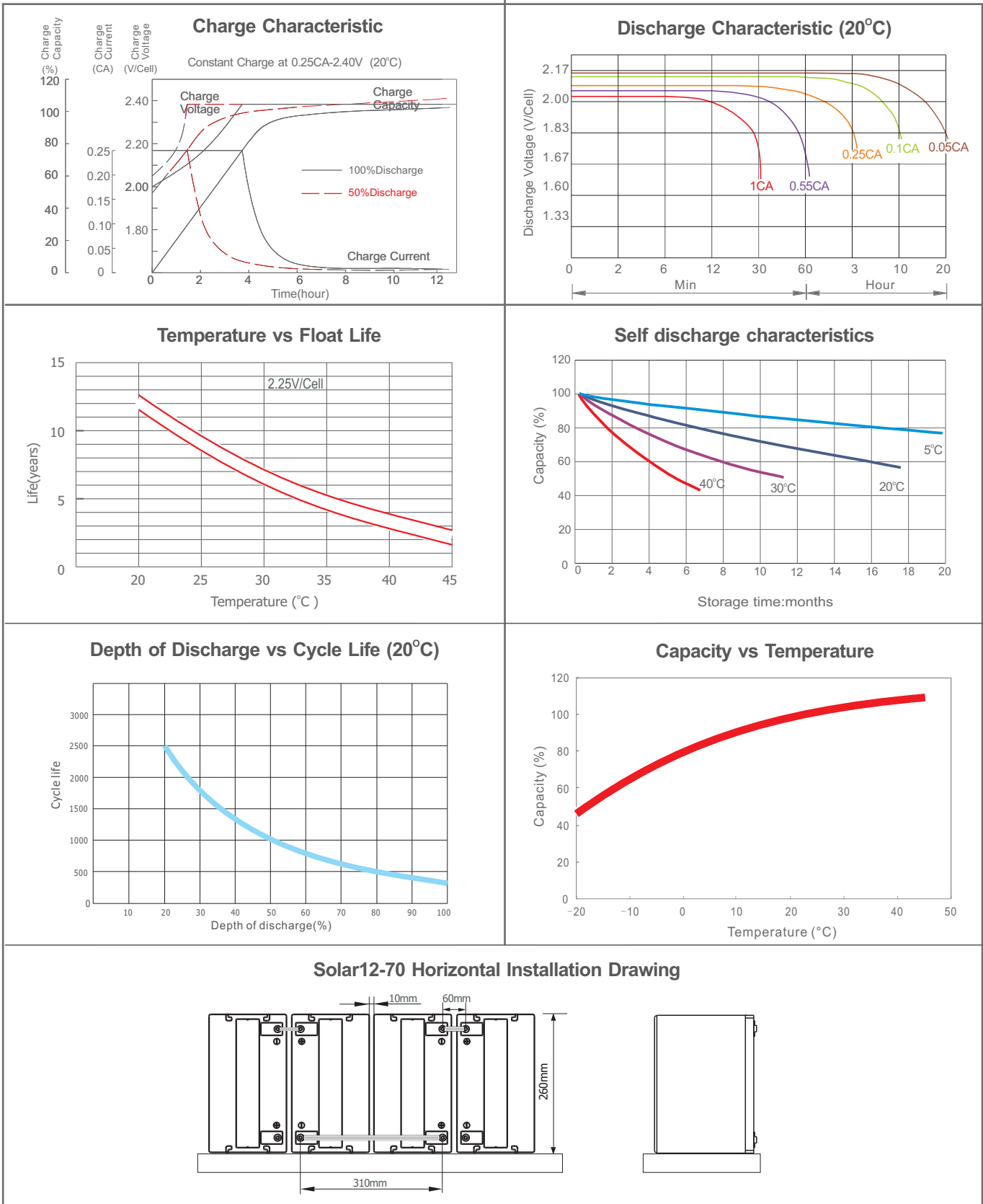
Long time discharge capacity for Solar & Wind applications

| Capacity | C ₂₄ (Ah) | C ₄₈ (Ah) | C ₇₂ (Ah) | C ₁₀₀ (Ah) | C ₁₂₀ (Ah) |
|---------------|----------------------|----------------------|----------------------|-----------------------|-----------------------|
| Solar12-70 | 74.9 | 79.1 | 81.2 | 84.7 | 87.5 |
| Final Voltage | 1.85V | | | | |

Solar & Wind applications parameters settings

| | |
|-------------------------------|----------------------------|
| Over voltage disconnect: | 2.45±0.01V/cell @ 20~25°C |
| Regulation/equalize voltage: | 2.40±0.01V/cell @ 20~25°C |
| Array reconnection voltage: | 2.25±0.005V/cell @ 20~25°C |
| Float voltage setting: | 2.27±0.005V/cell @ 20~25°C |
| Low voltage alarm voltage: | 1.95±0.005V/cell @ 20~25°C |
| Low voltage disconnect: | 1.90±0.005V/cell @ 20~25°C |
| Load reconnect voltage: | 2.09±0.01V/cell @ 20~25°C |
| Temp. compensate coefficient: | -5mV/cell/°C |

CHARACTERISTICS



FINAL VOLTAGE SETTINGS RECOMMENDED ACCORDING TO THE DISCHARGE CURRENT

| Discharge Current I (A) | $I \leq 0.08C$ | $0.08C \leq I < 0.2C$ | $0.2C \leq I < 0.6C$ | $0.6C \leq I < 1.0C$ | $I \geq 1.0C$ |
|-------------------------|-----------------|-----------------------|----------------------|----------------------|-----------------|
| Final of Voltage | $\geq 1.85V/pc$ | $\geq 1.80V/pc$ | $\geq 1.75V/pc$ | $\geq 1.70V/pc$ | $\geq 1.60V/pc$ |

HEADQUARTERS AND SUBSIDIARIES

BSB Power Company Limited (HQ)
BSB Power Europe (France)

BSB Power Malaysia Sdn. Bhd
PT. BSB Indonesia

BSB Power (Thailand) Co., Ltd
BSB Power Company Pakistan Ltd