
**PERFORMANCE
SPECIFICATIONS**



Introducing the PowerSafe® SBS Battery



The PowerSafe® SBS battery range utilizes unique and proven technology to provide a superior range of valve regulated batteries with an extended service life in compact and energy dense configurations. PowerSafe SBS batteries are manufactured to the highest international standards and are ideal for reliable use in all wireless and fixed-line communication applications. PowerSafe SBS batteries are also widely used in cable TV, emergency lighting, power generation and offshore applications.

The PowerSafe SBS battery range is available in several configurations including the front terminal series, which is becoming increasingly popular in leading edge telecom applications. Smaller than the competition, the front terminal series offers design flexibility where space is limited and will easily fit in cabinets and 19" or 23" rack configurations.

PowerSafe SBS batteries are designed to cope with raised temperatures and harsh environments. The advanced thin plate, pure lead technology and unique manufacturing methods, used by EnerSys®, make PowerSafe SBS batteries the choice for long and trouble-free service. The maximum operating temperature of the PowerSafe SBS J series batteries can be extended to 176°F (80°C) via an optional metal jacket.

- Capacity range: 7Ah - 360Ah
- Proven long service
- High energy density
- Up to two year shelf life
- Very low ventilation requirement
- 2V, 6V, and 12V configurations
- Wide operating temperature range: -40°F (-40°C) to 122°F (50°C)

Construction

- Positive plate - pure lead grid using a unique manufacturing process
- Negative plate - pure lead grid
- Separator - superior quality microporous glass mat separator with high absorption and stability
- Jar material - impact resistant material, flame retardant to UL94 V-0 (J types are PPO resin, all others are ABS)
- Electrolyte - high grade dilute sulfuric acid absorbed into separator material
- Terminal design - leak resistant patented dual seal terminal design

Operation

- Recommended float charge voltage: 2.29Vpc @ 68°F (20°C) or 2.27Vpc @ 77°F (25°C)
- Can be mounted in any orientation except inverted
- Designed for use in cabinets, or on stands, close to the point of use. A separate battery room is not required
- Ideal for installation as an integral part of a standby system due to its long life
- Also available for underwater applications

Standards

- Fully compliant with BS 6290 Part 4 (1997)
- Conforms to IEC 60896-21 and Telcordia SR-4228
- Recognized by UL (UL Standard 1989)
- Approved as non-hazardous cargo for ground, sea and air transportation in accordance with US DOT Regulation 49 and ICAO & IATA Packing Instruction 806
- Manufactured in EnerSys ISO 9001:2000 registered production facilities
- NEBS Certified

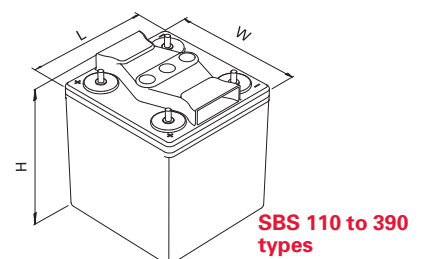
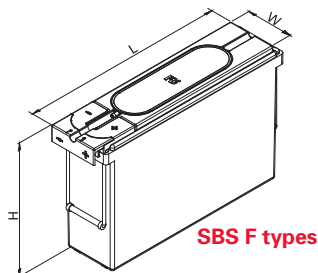
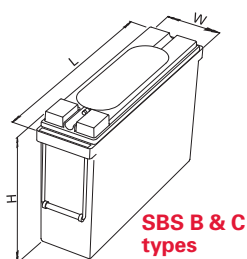
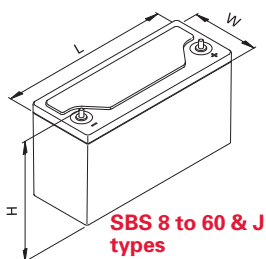
General Specifications

| Type | Number of Cells | Nominal Voltage (V) | Nominal Capacity (Ah) | | Nominal Dimensions | | | | | | Typical Weight | | Short Circuit Current (A) ⁽²⁾ | Internal Resistance (mΩ) ⁽²⁾ | Terminals |
|-------------------------|-----------------|---------------------|------------------------------|-----------------------------|--------------------|-----------|----------|----------|-----------|-----------|----------------|-------|--|---|-----------|
| | | | 10 hr rate to 1.80Vpc @ 20°C | 8 hr rate to 1.75Vpc @ 77°F | Length mm | Length in | Width mm | Width in | Height mm | Height in | | | | | |
| SBS 8 | 6 | 12 | 7 | 7 | 138 | 5.4 | 86 | 3.4 | 99 | 3.9 | 2.7 | 5.9 | 455 | 27.1 | M4 F |
| SBS 15 | 6 | 12 | 14 | 14 | 200 | 7.9 | 77 | 3.0 | 140 | 5.5 | 5.7 | 12.5 | 891 | 13.5 | M6 M |
| SBS 30 | 6 | 12 | 26 | 26 | 250 | 9.8 | 97 | 3.8 | 156 | 6.1 | 9.5 | 20.9 | 1556 | 7.9 | M6 M |
| SBS HB30 ⁽¹⁾ | 6 | 12 | 26 | 26 | 250 | 9.8 | 97 | 3.8 | 156 | 6.1 | 9.6 | 21.1 | 1556 | 7.9 | harness |
| SBS 40 | 6 | 12 | 38 | 38 | 250 | 9.8 | 97 | 3.8 | 206 | 8.1 | 12.7 | 28.0 | 2184 | 5.6 | M6 M |
| SBS 60 | 6 | 12 | 51 | 51 | 220 | 8.7 | 121 | 4.8 | 261 | 10.3 | 18.5 | 40.7 | 2618 | 4.4 | M6 M |
| SBS 110 | 3 | 6 | 115 | 116 | 200 | 7.9 | 208 | 8.2 | 239 | 9.4 | 21.2 | 46.6 | 3804 | 1.7 | M8 M |
| SBS 130 | 3 | 6 | 132 | 133 | 200 | 7.9 | 208 | 8.2 | 239 | 9.4 | 22.7 | 49.9 | 4111 | 1.4 | M8 M |
| SBS 300 | 1 | 2 | 310 | 307 | 200 | 7.9 | 208 | 8.2 | 239 | 9.4 | 21.7 | 47.7 | 8700 | 0.23 | M8 M |
| SBS 390 | 1 | 2 | 360 | 361 | 200 | 7.9 | 208 | 8.2 | 239 | 9.4 | 23.2 | 51.0 | 11101 | 0.18 | M8 M |
| | | | | | | | | | | | | | | | |
| SBS J13 | 6 | 12 | 12 | 12 | 175 | 6.9 | 83 | 3.3 | 129 | 5.1 | 5.7 | 12.6 | 957 | 13.0 | M6 F |
| SBS J16 | 6 | 12 | 15 | 15 | 181 | 7.1 | 76 | 3.0 | 167 | 6.6 | 6.7 | 14.8 | 1111 | 11.0 | M6 F |
| SBS J30 | 6 | 12 | 26 | 26 | 166 | 6.5 | 175 | 6.9 | 125 | 4.9 | 11.8 | 26.0 | 1766 | 7.0 | M6 F |
| SBS J40 | 6 | 12 | 39 | 39 | 197 | 7.7 | 165 | 6.5 | 170 | 6.7 | 17.4 | 38.2 | 2400 | 5.2 | M6 F |
| SBS J70 | 6 | 12 | 64 | 64 | 329 | 12.9 | 166 | 6.5 | 174 | 6.9 | 27.6 | 60.9 | 3500 | 3.5 | M6 F |
| | | | | | | | | | | | | | | | |
| SBS B8F | 6 | 12 | 31 | 31 | 303 | 11.9 | 97 | 3.8 | 159 | 6.3 | 10.3 | 22.7 | 1270 | 10.0 | M6 M |
| SBS B10F | 6 | 12 | 38 | 38 | 303 | 11.9 | 97 | 3.8 | 184 | 7.2 | 12.8 | 28.2 | 1390 | 9.0 | M6 M |
| SBS B14F | 6 | 12 | 62 | 62 | 303 | 11.9 | 97 | 3.8 | 264 | 10.4 | 19.1 | 42.0 | 1800 | 7.0 | M6 M |
| SBS C11F | 6 | 12 | 92 | 91 | 417 | 16.4 | 105 | 4.1 | 256 | 10.1 | 28.0 | 61.6 | 2300 | 5.5 | M6 M |
| SBS 100F | 6 | 12 | 100 | 100 | 395 | 15.6 | 108 | 4.3 | 287 | 11.3 | 32.6 | 71.9 | 2210 | 5.6 | M6 M |
| SBS145F | 6 | 12 | 145 | 145 | 452 | 17.8 | 172 | 6.8 | 238 | 9.4 | 47.6 | 105.0 | 4100 | 3.0 | M6 M |
| SBS170F | 6 | 12 | 170 | 170 | 561 | 22.1 | 125 | 4.9 | 283 | 11.1 | 52.5 | 115.7 | 3400 | 4.0 | M6 M |
| SBS190F | 6 | 12 | 190 | 190 | 561 | 22.1 | 125 | 4.9 | 316 | 12.4 | 60.0 | 132.3 | 3800 | 3.3 | M6 M |
| | | | | | | | | | | | | | | | |
| SBS B8 | 6 | 12 | 31 | 31 | 280 | 11.0 | 97 | 3.8 | 159 | 6.3 | 10.3 | 22.7 | 1270 | 10.0 | M8 F |
| SBS B10 | 6 | 12 | 38 | 38 | 280 | 11.0 | 97 | 3.8 | 184 | 7.2 | 12.8 | 28.2 | 1390 | 9.0 | M8 F |
| SBS B14 | 6 | 12 | 62 | 62 | 280 | 11.0 | 97 | 3.8 | 264 | 10.4 | 19.1 | 42.0 | 1800 | 7.0 | M8 F |
| SBS C11 | 6 | 12 | 92 | 91 | 395 | 15.6 | 105 | 4.1 | 264 | 10.4 | 28.0 | 61.6 | 2300 | 5.5 | M8 F |
| SBS 100 | 6 | 12 | 100 | 100 | 395 | 15.6 | 108 | 4.3 | 287 | 11.3 | 32.6 | 71.9 | 2210 | 5.6 | M8 F |
| SBS145 | 6 | 12 | 145 | 145 | 430 | 16.9 | 172 | 6.8 | 238 | 9.4 | 47.6 | 105.0 | 4100 | 3.0 | M6 F |

Notes

⁽¹⁾ SBS HB30 is fitted with a 21"/533mm harness that terminates in a 2-pin polarized plug-in connector which is compatible with embedded power SLC systems.

⁽²⁾ Figures obtained via BS6290 method.



Temperature Correction

The following table shows the effect of battery temperature on the discharge performance at different discharge rates. Performance is given as a factor of the performance at 77°F / 25°C

| Rate | Temperature °F/°C | | | | | | | | |
|--------|-------------------|--------|---------|---------|---------|---------|---------|---------|----------|
| | 32 / 0 | 41 / 5 | 50 / 10 | 59 / 15 | 68 / 20 | 77 / 25 | 86 / 30 | 95 / 35 | 104 / 40 |
| 5 Min | 0.636 | 0.705 | 0.777 | 0.850 | 0.924 | 1.000 | 1.076 | 1.153 | 1.230 |
| 10 Min | 0.681 | 0.746 | 0.811 | 0.875 | 0.938 | 1.000 | 1.060 | 1.117 | 1.172 |
| 15 Min | 0.706 | 0.768 | 0.829 | 0.889 | 0.946 | 1.000 | 1.051 | 1.099 | 1.144 |
| 20 Min | 0.723 | 0.783 | 0.842 | 0.898 | 0.951 | 1.000 | 1.046 | 1.088 | 1.126 |
| 25 Min | 0.736 | 0.794 | 0.851 | 0.904 | 0.954 | 1.000 | 1.042 | 1.080 | 1.113 |
| 30 Min | 0.746 | 0.803 | 0.858 | 0.909 | 0.957 | 1.000 | 1.039 | 1.074 | 1.104 |
| 35 Min | 0.754 | 0.810 | 0.864 | 0.913 | 0.959 | 1.000 | 1.037 | 1.069 | 1.096 |
| 40 Min | 0.761 | 0.816 | 0.869 | 0.917 | 0.949 | 1.000 | 1.035 | 1.065 | 1.090 |
| 45 Min | 0.767 | 0.822 | 0.873 | 0.920 | 0.962 | 1.000 | 1.033 | 1.061 | 1.085 |
| 1 Hr | 0.781 | 0.834 | 0.882 | 0.927 | 0.966 | 1.000 | 1.029 | 1.054 | 1.073 |
| 2 Hrs | 0.812 | 0.859 | 0.903 | 0.940 | 0.973 | 1.000 | 1.022 | 1.039 | 1.051 |
| 3 Hrs | 0.827 | 0.875 | 0.912 | 0.947 | 0.976 | 1.000 | 1.019 | 1.032 | 1.041 |
| 4 Hrs | 0.837 | 0.880 | 0.918 | 0.951 | 0.978 | 1.000 | 1.017 | 1.029 | 1.036 |
| 5 Hrs | 0.843 | 0.885 | 0.922 | 0.953 | 0.979 | 1.000 | 1.016 | 1.027 | 1.034 |
| 8 Hrs | 0.855 | 0.894 | 0.928 | 0.957 | 0.981 | 1.000 | 1.014 | 1.024 | 1.030 |
| 10 Hrs | 0.859 | 0.897 | 0.930 | 0.958 | 0.982 | 1.000 | 1.014 | 1.024 | 1.030 |



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