



## Battery Range Summary

The outstanding EON Technology<sup>®</sup> of EnerSys<sup>®</sup> further extends the technical leadership of PowerSafe<sup>®</sup> SBS<sup>®</sup> batteries: not only do PowerSafe SBS EON Technology cells and monoblocs retain the benefits typically associated with EnerSys Thin Plate Pure Lead Technology (long life, high energy density, superior shelf life, etc.), they also deliver exceptional cyclic performance in both float and fast charge applications, even in the hottest and harshest operating environments.

Where conventional VRLA AGM batteries struggle to cope with harsh conditions and frequent power outages, EON Technology makes PowerSafe SBS 2V and 12V batteries the perfect solution for the challenging operating conditions of today's telecommunication networks. The specification of PowerSafe SBS EON Technology also makes SBS B14 - 3900 suitable for large-scale UPS and off-grid energy storage applications.

The PowerSafe SBS EON Technology battery range is available in several configurations: the front terminal SBS B14 - 190F designs which make installation and inspection quick and easy, the classic top terminal SBS 410 design and the SBS 320 - 3900 series which offers industry-leading capacities (up to 3900Ah) in OPzV's DIN container sizes.

For superior energy and power, high performance and proven reliability, there is no substitute to PowerSafe SBS EON Technology batteries.

### Features & Benefits

- Capacity range: 62 - 3900Ah
- Superior cyclic performance
- Exceptional fast charge acceptance ability
- High energy density
- Resilient to harsh environments
- Long design life: 15 years at 20°C
- Up to two year shelf life

## Construction

- Positive plates - pure lead grids manufactured using a unique process
- Negative plates - provide perfect balance with the positive plates to ensure optimum recombination efficiency
- Separators - superior quality microporous glass mat separators with high absorption and stability
- Containers and lids - UL94 V-0 rated flame retardant ABS material, highly resistant to shock and vibration
- Electrolyte - high grade dilute sulphuric acid absorbed into separator material
- Terminal design - proven, high integrity leak resistant terminal seal design
- Self-regulating pressure relief valves - prevent ingress of atmospheric oxygen
- Flame arrestors - built into each bloc/ cell for increased operational safety

## Installation & Operation

- Designed for operation in traditional float applications and cyclic/hybrid applications
- PowerSafe® SBS® batteries are designed for use in cabinets or on stands, close to the point of use. A separate battery room is not required
- SBS EON Technology® models can be mounted in any orientation except inverted. In cyclic/hybrid applications, EnerSys® recommend to install SBS 320 - 3900 cells in horizontal orientation
- Up to two year shelf life (20°C)
- Low maintenance: no water addition required
- Wide operating temperature range: -40°C to +50°C

## Standards

- Designed to be compliant with international standard IEC 60896/21 & 22
- Classified as “Very Long Life” (>12 years) according to Eurobat guide 2015
- UL recognised component
- Batteries must be installed in accordance with the IEC 62485-2 standard and national regulations
- Classified as non-spillable battery and approved as non-hazardous cargo for land, sea and air transportation in accordance with the requirements of ADR / RID, IMDG and IATA respectively
- The management systems governing the manufacture of PowerSafe SBS B14 - SBS 3900 products are ISO 9001, ISO 14001 and OHSAS 18001 certified

## General Specifications

Battery Type	Nominal Voltage (V)	Nominal Capacity (Ah)		Nominal Dimensions (mm)			Typical Weight (Kg)	Short Circuit Current (A) <sup>(1)</sup>	Internal Resistance (mΩ) <sup>(1)</sup>	Terminals
		10 hr rate to 1.80Vpc @ 20°C	8 hr rate to 1.75Vpc @ 77°F	Length	Width	Height (over insulation)				
<b>SBS B14</b> <sup>(2)</sup>	12	62	62	280	97	264	19.1	1800	7.0	2 x M8 F
<b>SBS B14F</b> <sup>(2)</sup>	12	62	62	303	97	264	19.1	1800	7.0	2 x M6 M
<b>SBS C11</b> <sup>(2) (3)</sup>	12	92	91	395	105	264	28.0	2300	5.5	2 x M8 F
<b>SBS C11F</b> <sup>(2) (3)</sup>	12	92	91	417	105	256	28.0	2300	5.5	2 x M6 M
<b>SBS 100</b> <sup>(2) (3)</sup>	12	100	100	395	108	287	32.6	2210	5.6	2 x M8 F
<b>SBS 100F</b> <sup>(2) (3)</sup>	12	100	100	395	108	287	32.6	2210	5.6	2 x M6 M
<b>SBS 150F</b> <sup>(2) (4)</sup>	12	151	156	561	125	283	49.0	3330	3.8	2 x M6 M
<b>SBS 170F</b> <sup>(2) (4)</sup>	12	170	170	561	125	283	52.5	3500	3.5	2 x M6 M
<b>SBS 190F</b> <sup>(2) (4)</sup>	12	190	190	561	125	316	60.0	3990	3.2	2 x M6 M
<b>SBS 410</b> <sup>(2)</sup>	2	410	410	200	208	239	23.2	4181	0.50	2 x M8 M
<b>SBS 320</b>	2	320	320	103	206	403	20.0	6320	0.33	2 x M10 F
<b>SBS 400</b>	2	400	400	124	206	403	24.0	7320	0.28	2 x M10 F
<b>SBS 480</b>	2	480	480	145	206	403	28.0	8050	0.25	2 x M10 F
<b>SBS 580</b>	2	580	580	124	206	520	33.0	7470	0.28	2 x M10 F
<b>SBS 680</b>	2	680	680	145	206	520	38.5	8800	0.24	2 x M10 F
<b>SBS 780</b>	2	780	780	166	206	520	44.0	9000	0.23	2 x M10 F
<b>SBS 900</b>	2	900	900	145	206	695	50.0	8110	0.26	2 x M10 F
<b>SBS 970</b>	2	970	970	145	206	695	56.5	9100	0.23	2 x M10 F
<b>SBS 1200</b>	2	1260	1260	210	191	695	78.0	11300	0.19	4 x M10 F
<b>SBS 1500</b>	2	1560	1560	210	233	695	93.5	14100	0.15	4 x M10 F
<b>SBS 1800</b>	2	1870	1870	210	275	695	112	16900	0.12	4 x M10 F
<b>SBS 2700</b>	2	2700	2700	212	397	820	163	25300	0.08	6 x M10 F
<b>SBS 3100</b>	2	3100	3100	212	487	820	190	29100	0.07	8 x M10 F
<b>SBS 3900</b>	2	3900	3900	212	576	820	239	36600	0.06	8 x M10 F

### Notes:

<sup>(1)</sup> Figures obtained via IEC method.

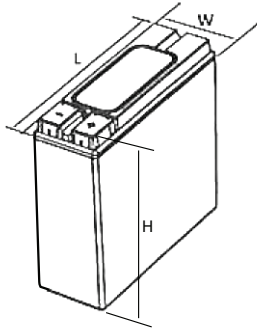
<sup>(2)</sup> With integral or rope handles.

<sup>(3)</sup> Manifold built-in as standard.

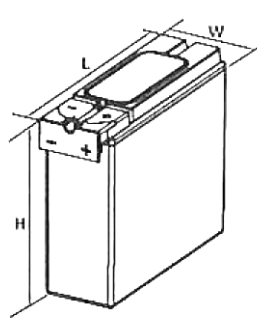
<sup>(4)</sup> Manifold available as an option (increases product height by 12mm).

**Outline Drawings**

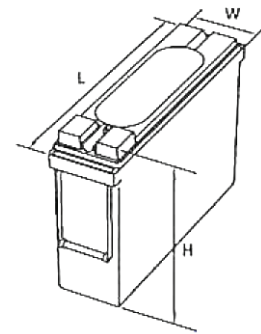
**SBS B14**



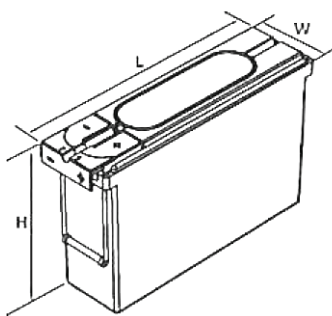
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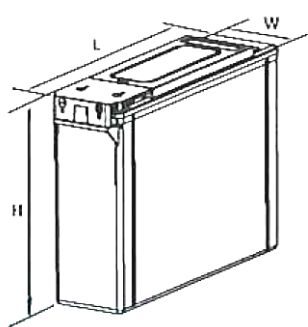
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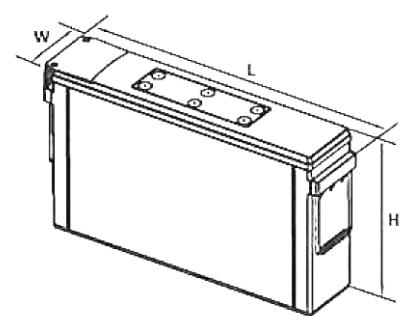
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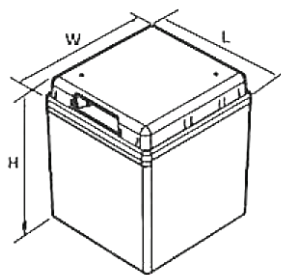
**SBS 100 & SBS 100F**



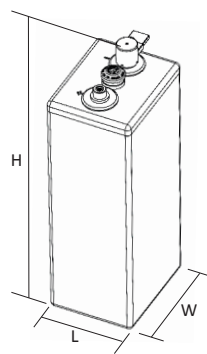
**SBS 150F, SBS 170F & SBS 190F**



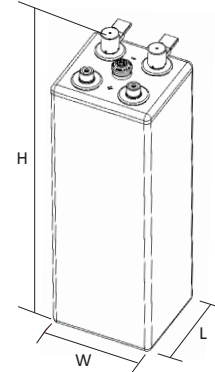
**SBS 410**



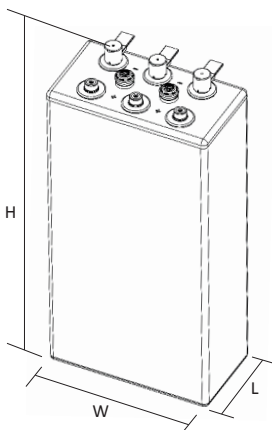
**SBS 320, SBS 400, SBS 480, SBS 580, SBS 680, SBS 780, SBS 900 & SBS 970**



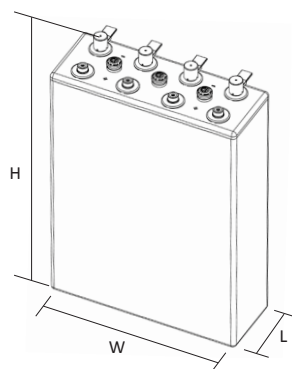
**SBS 1200, SBS 1500 & SBS 1800**



**SBS 2700**



**SBS 3100 & SBS 3900**





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