PowerSafe® SBS XC+

Battery
Range Summary

The PowerSafe® SBS® XC+ range of valve regulated lead-acid cells and monoblocs is EnerSys® number one Thin Plate Pure Plate (TPPL) solution for cyclic applications such as off-grid hybrid, unreliable grid and renewable energy. Unlike conventional VRLA AGM technology batteries, PowerSafe SBS XC+ combines innovative, advanced carbon chemistry with proven TPPL technology, an EnerSys technology already successfully and largely deployed in these applications.

Features & Benefits

- **Wide Ampere-hour range: 92 - 1870Ah (C_{10} / 1.80Vpc / 20°C)**
- **Choice of 2V DIN-size cells and 12V front terminal blocs**
- **Outstanding cyclic performance**
- **Short recharge times**
- **Deep discharge recovery**
- **Resilient to harsh environments**
- **High energy density for reduced installation footprint or easy system upgrade**
- **Up to 24 month shelf life (20°C) for maximum flexibility in project deployment**
- **Low total cost of ownership**
- **Built-in intelligence via optional EnVision™ Connect system monitor**

In many regions of the world where grid-connected power is not available, telecom networks have historically been dependent upon diesel generators. The multiple challenges and drawbacks of powering off-grid telecom networks by generators have progressively been overcome by the introduction of batteries. PowerSafe SBS XC+ delivers outstanding energy throughput and cyclic performance for longer battery life and its ability to operate in controlled partial state of charge (PSoC) reduces genset runtime for additional OPEX savings, namely significantly lower fuel consumption and generator maintenance costs. PowerSafe SBS XC+ also contributes to generator replacement avoidance as well as the reduction of CO_2 emissions and noise pollution.

The fast recharge capability, high cyclic performance and outstanding resilience against deep discharge of the PowerSafe SBS XC+ series also make it the perfect solution to meet the demands of renewable energy applications and unreliable grid environments where there is a risk of uncontrolled partial state of charge operation.

Regardless of the above applications, the outstanding performance and high reliability of PowerSafe SBS XC+ deliver a competitive total cost of ownership (TCO) through fewer battery replacements and lower operating costs during the life of network infrastructure.

EnerSys®
Power/Full Solutions

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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. With advanced carbon for improved energy throughput in cyclic applications
- Separators - superior quality microporous glass mat separators with high absorption and stability
- Containers and lids - UL94 V-0 rated flame retardant 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 controlled hybrid off-grid, unreliable grid and renewable energy applications
- PowerSafe® SBS® XC+ blocs and cells are designed for use in cabinets or on stands, close to the point of use. A separate battery room is not required.
- Products can be mounted in any orientation except inverted.
  - 12V blocs: it is recommended that blocs are installed on their base. Please consult your EnerSys representative about any other installation orientations
  - 2V cells: in cyclic applications, the recommended orientation is horizontal (refer to instruction manual)
- Voltage settings:
  - Float voltage: 2.29Vpc @ 20°C – 2.27Vpc @ 25°C
  - Fast charge voltage: 2.40Vpc @ 20°C – 2.38Vpc @ 25°C
- Storage life: up to 24 months at 20°C / 12 months at 30°C
- Wide operating temperature range: -40°C to +50°C
- Low maintenance: no water addition required

Standards

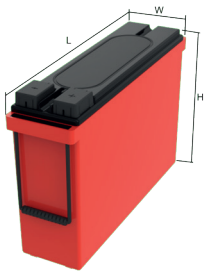
- Designed to be compliant with international standards IEC 60896-21/22 and IEC 61427-1
- Classified as "Very Long Life" (> 12 years) according to Eurobat guide
- UL recognised component
- Batteries must be installed in accordance with the IEC 62485-2 standard and local/ national regulations
- Classified 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 XC+ products are ISO 9001, ISO 14001 and ISO 45001 certified

General Specifications

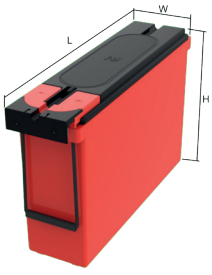
		Nominal Capacity (Ah)		Nominal Dimensions (mm)						
Battery Type	Nominal Voltage (V)	C_{10} to 1.80Vpc @ 20°C	C_{120} to 1.85Vpc @ 25°C	Length	Width	Height over insulation	Typical Weight (Kg)	Short Circuit Current (A)[1]	Internal Resistance (mΩ)[1]	Terminals
SBS XC+ 92F [2]	12	92	99	395	105	264	28.0	2300	5.5	2 x M8 F
SBS XC+ 92F-FT [2]	12	92	99	417	105	256	28.0	2300	5.5	2 x M6 M
SBS XC+ 150F-FT [2, 3]	12	151	154	561	125	283	49.0	3330	3.8	2 x M6 M
SBS XC+ 190F-FT [2, 3]	12	190	201	561	125	316	60.0	4000	3.1	2 x M6 M
SBS XC+ 210F-FT [2, 3]	12	205	228	560	126	330	63.0	3850	3.2	2 x M6 M
SBS XC+ 320	2	320	374	103	206	403	20.0	6320	0.33	2 x M10 F
SBS XC+ 400	2	400	467	124	206	403	24.0	7320	0.28	2 x M10 F
SBS XC+ 580	2	580	678	124	206	520	33.0	7470	0.28	2 x M10 F
SBS XC+ 680	2	680	795	145	206	520	38.5	8800	0.24	2 x M10 F
SBS XC+ 780	2	780	912	166	206	520	44.0	9000	0.23	2 x M10 F
SBS XC+ 900	2	900	1052	145	206	695	50.0	8110	0.26	2 x M10 F
SBS XC+ 970	2	970	1132	145	206	695	56.5	9100	0.23	2 x M10 F
SBS XC+ 1200	2	1260	1465	210	191	695	78.0	11300	0.19	4 x M10 F
SBS XC+ 1500	2	1560	1813	210	233	695	93.5	14100	0.15	4 x M10 F
SBS XC+ 1800	2	1870	2174	210	275	695	112.0	16900	0.12	4 x M10 F

Notes: [1] Figures obtained via IEC method. [2] With handles. [3] Compatible with the EnVision™ Connect system monitor.

Typical Outline Drawings

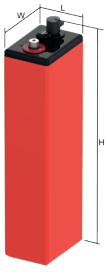


SBS XC+ 92F



SBS XC+ 92F-FT

SBS XC+ 150F-FT to SBS XC+ 210F-FT



SBS XC+ 320 to SBS XC+ 970

SBS XC+ 1200 to SBS XC+ 1800

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