PowerSafe® SBS XC+

Battery Summary

In many regions of the world where grid-connected power is not available, telecom networks have historically been dependent upon diesel generators, a source of energy known for huge fuel and maintenance costs, high levels of CO_2 emissions as well as poor efficiency and reliability. In recent years however, the challenge of powering networks has been successfully overcome by the use of hybrid systems. The combined use of diesel gensets and batteries is progressively enabling the industry to reduce its dependence on generators alone and lower the total cost of ownership of networks. More complex systems, incorporating renewable energy technologies such as solar and wind power, are also being implemented to provide a complimentary energy solution.

To assist operators reduce OPEX costs further, EnerSys® has developed the next generation of its industry-leading Thin Plate Pure Lead (TPPL) products. The PowerSafe® SBS XC+ range combines advanced carbon chemistry with EnerSys' proven TPPL technology, a technology already successfully and largely deployed in off-grid hybrid applications. Unlike conventional VRLA AGM technology telecom batteries, PowerSafe SBS XC+ is an innovative solution specifically engineered to cope with the operating challenges (high cyclic use, high ambient temperatures, etc.) of hybrid telecom sites. 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.

Once again, EnerSys demonstrates its commitment to the telecom industry by providing high performance, reliable application-specific battery solutions to achieve the lowest Total Cost of Ownership.

Features & Benefits

- **Nominal capacity: 190Ah / 1.80Vpc / 20°C**
- **Outstanding cyclic performance**
- **Exceptional fast charge acceptance ability**
- **Controlled PSOC operation for low TCO**
- **High energy density**
- **Resilient to harsh environments**
- **Up to 18 month shelf life**

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 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 cell for increased operational safety

Installation & Operation

- Designed for operation in controlled hybrid applications
- PowerSafe® SBS® XC+ batteries are designed for use in cabinets or on stands, close to the point of use. A separate battery room is not required
- Up to 18 month shelf life at 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 61427-1
- UL recognised component [4]
- Batteries must be installed in accordance with the IEC 62485-2 standard and national regulations
- Classified as non-spillable and approved as non-hazardous cargo for ground, sea and air transportation in accordance with US DOT Regulation 49 and ICAO & IATA Packing Instruction 872
- The management systems governing the manufacture of PowerSafe SBS XC+ products are ISO 9001, ISO 14001 and OHSAS 18001 certified

General Specifications

Battery Type	Nominal Voltage (V)	Nominal Capacity (Ah) 10 hr rate to 1.80Vpc @ 20°C	Nominal Capacity (Ah) 8 hr rate to 1.75Vpc @ 77°F	Nominal Dimensions (mm) Length	Width	Height (over insulation)	Typical Weight (Kg)	Short Circuit Current (A)[1]	Internal Resistance (mΩ)[1]	Terminals
SBS XC+ 190F-FT [2] [3]	12	190	190	561	125	316	60.0	4000	3.1	2 x M6 M

Notes:
[1] Figures obtained via IEC method. [2] With rope handles. [3] Manifold available as an option (increases product height by 12mm). [4] Approval pending

Constant Current Discharge Performance Data

Discharge Currents (Amperes) at 20°C

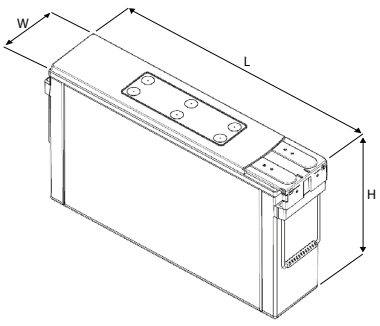
End Voltage (Vpc)	Standby Time (Hours) 1	2	3	4	5	6	7	8	9	10	20
1.75	113	70.8	52.5	42.4	35.3	30.0	26.2	23.2	20.9	19.0	9.98
1.80	108	68.8	51.6	41.8	34.9	29.8	26.1	23.1	20.8	19.0	9.98
1.85	99.8	64.3	48.6	39.3	32.8	28.0	24.5	21.8	19.6	17.9	9.47

Constant Power Discharge Performance Data

Constant Power (Watts per Cell) at 20°C

End Voltage (Vpc)	Standby Time (Hours) 1	2	3	4	5	6	7	8	9	10	20
1.75	211	134	100	81.0	68.2	58.6	51.0	45.4	40.9	37.2	19.6
1.80	204	130	98.0	80.2	67.6	58.2	50.9	45.3	40.8	37.2	19.6
1.85	191	123	93.0	76.4	64.3	55.0	48.2	42.9	38.7	35.3	18.7

Outline Drawing



SBS XC+ 190F-FT

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EnerSys®
Power/Full Solutions

EnerSys World Headquarters
2366 Bernville Road, Reading,
PA 19605, USA
Tel: +1-610-208-1991 /
+1-800-538-3627

EnerSys EMEA
EH Europe GmbH,
Baarerstrasse 18,
6300 Zug
Switzerland

EnerSys Asia
152 Beach Road,
Gateway East Building #11-08,
Singapore 189721
Tel: +65 6508 1780

Contact: