

S3300 Plus Series

60-200 kVA/KW

Exceptional Performance and efficiency.



FINANCE



TELECOMMUNICATION



ENERGY



MEDICAL



GOVERNMENT

VFI
type

UPS ONLINE



TOWER

PF=
0,9

POWER FACTOR



SERVICE

HIGHLIGHTS

- Complete range 60-200 KVA
- Small footprint
- High efficiency up to 96.5%
- Zero impact
- Flexibility of use
- Advanced communications

The **S3300 Plus** series is ideal for protecting data centres and telecommunications systems, IT networks and critical systems in general, where the risks connected with poor energy supply can compromise the continuity of activities and services.

The **S3300 Plus** series is available in 60-80-100-125-160-200 kVA models with three-phase input and output and ON LINE double conversion technology in accordance with VFI-SS-111 classification (as set out in standard IEC EN 62040-3).

S3300 Plus is designed and built using state-of-the-art technology and components. It has a fully controlled IGBT rectifier to minimize the impact on the grid. It is controlled by a DSP (Digital Signal Processor) microprocessor to provide maximum protection to the powered loads with no impact on downstream systems, and optimised energy savings

ZERO IMPACT SOURCE

S3300 Plus solves installation problems in systems where the power supply has limited power available, where the UPS is supported by a generator or where there are compatibility problems with loads that generate harmonic currents; S3300 has a zero impact on its power source, whether this is the mains power supply or a generator:

- Input current distortion <2.5%
- Input power factor 0.99
- Power walk-in function that ensures progressive rectifier start up.
- Start-up delay function, to restart the rectifiers when mains power is restored if there are several UPS in the system.

In addition, **S3300 Plus** plays a filtering and power factor correction role in the power network upstream of the UPS, as it eliminates harmonic components and reactive power generated by the power utilities.

HIGH EFFICIENCY

State-of-the-art three-level NPC inverters are used across the power range (60-200 kVA) to achieve an operating efficiency of 96.5%.

These technology halves (50%) the energy dissipated in a year by traditional UPS, with an efficiency level of 92%. Its exceptional performance makes it possible to recover the capital investment cost in less than three years of operation.

BATTERY CARE SYSTEM

Proper battery care is critical to ensuring correct UPS operation in emergency conditions. The SATRON UPS battery care system consists of a series of features and capabilities to optimise battery management and obtain the best performance and operating life possible.

Battery recharging: **S3300 Plus** is suitable for use with hermetically sealed lead-acid (VRLA), AGM and GEL batteries and Open Vent and Nickel Cadmium batteries. Depending on the battery type, different charging methods are available:

- One-level voltage recharge typically used for widely available VRLA AGM batteries.
- Two-level voltage recharge according to IU specification.
- Charge blocking system to reduce electrolyte consumption and lengthen the life of VRLA batteries

Recharge voltage compensation based on temperature in order to prevent excessive battery charges or overheating.

Battery tests to diagnose in advance any reduction in performance or problems with the batteries.

Deep discharge protection: during extended low-load discharges, the end-of-discharge voltage is increased - as recommended by battery manufacturers - to prevent damage or reduced battery performance.

Ripple current: recharge ripple current (residual AC component) is one of the main causes of reduced reliability and battery life.

Using a high frequency battery charger, S3300 reduces this value to negligible levels, prolonging battery life and maintaining high performance over a long period of time.

Wide voltage range: the rectifier is designed to operate within a wide input voltage range (up to -40% at half load), reducing the need for battery discharge and thus helping to extend battery life.

MAXIMUM RELIABILITY AND AVAILABILITY

Distributed parallel configuration of up to 8 units per redundant (N+1) or power parallel system
The UPS continue to operate in parallel even if the connection cable is interrupted (Closed Loop).

LOW RUNNING COSTS

A combination of advanced technology high performance components allows **S3300 Plus** to provide exceptional performance and efficiency:

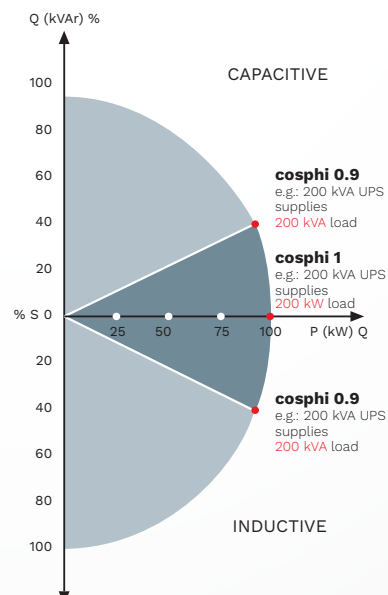
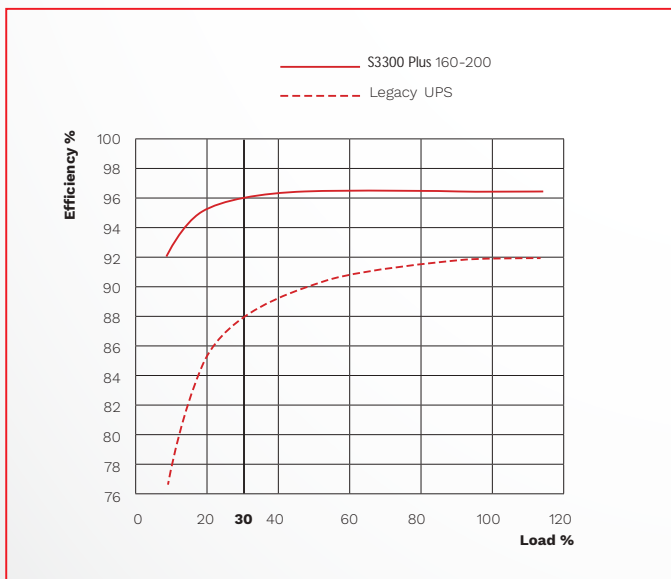
- The type of input stage (IGBT rectifier) ensures an input power factor close to 1 with low current distortion, avoiding the need for bulky and expensive filters.
- Unity output power factor for MST 160-200 make it suitable to any data centre application ensuring full power availability no matter what the utilities power factor range (typically from 0.9 lagging to 0.9 leading).
- More active power than a traditional UPS, guaranteeing a greater margin when sizing UPS for potential future load increases.
- Smart ventilation principle on S3300 160- 200 manages the number of operating fans and their speed according to room temperature and load level. This preserves the life span of the fans and at the same time we reduce noise level and overall power consumption for unnecessary UPS ventilation.

FLEXIBILITY

With its flexible configuration, performance, accessories and options, **S3300 Plus** is suitable for use in a wide range of applications:

- Suitable for powering capacitive loads, such as blade servers, without any reduction in active power from 0.9 lead to 0.9 lag
- ON LINE, ECO, SMART ACTIVE and STANDBY OFF operating Modes - compatible with centralised power systems (CSS) applications.
- Frequency Converter Mode.
- Configurable Energy Share sockets to preserve runtime for the most critical loads or to be activated only when mains power fails.
- Cold Start to switch on the UPS even when there is no mains power present.
- Optional temperature sensor for external battery cabinets, to assist recharge voltage compensation.
- High power battery chargers to optimise charge time in the event of long runtimes.
- Optional dual input mains power supply.
- Isolation transformers for modifying the neutral earthing (separate power sources), or for galvanic isolation between the input and output.
- Different sized battery cabinets and capacities, for extended runtimes.
- With the S3300 60-100 the UPS can be raised up to 25 cm from the ground to allow the cables to pass more freely to/ from the UPS terminal board.

S3300 Plus 160-200 could be equipped with a side mounted top entry cabinet to arrange UPS cabling from the top



OPTIONS

SOFTWARE

PowerShield³
PowerNetGuard

ACCESSORIES

NETMAN 208
MULTICOM 302
MULTICOM 352
MULTICOM 372
MULTICOM 384

MULTICOM 411
MULTICOM 421
MULTI I/O
MULTIPANEL
MBB 400 A 4P

PRODUCT ACCESSORIES

Battery temperature sensor
Parallel Kit
Powerful battery charger

Programmable relay board
MULTICOM 392
IP rating IP30/IP31
Top cable entry
Eyebolts kit

BATTERY CABINET

MODELS

UPS MODELS

BTC 1900 480V BB V6 3T
BTC 1900 480V BB V7 3T
BTC 1900 480V BB V8 3T
BTC 1900 480V BB V9 3T
BTC 1900 480V AB V9 3T

up to 200 kVA¹

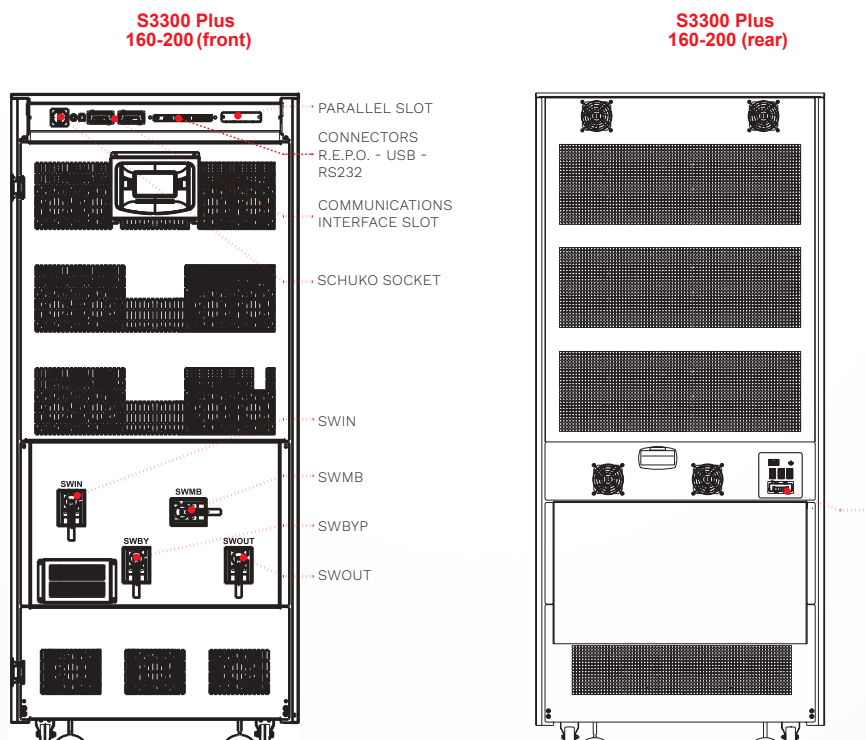
860x800x1900

Dimensions WxDxH [mm]

BTC 1900 480V BB V6 3T
BTC 1900 480V BB V7 3T
Not available for MST 160-200
(when connected individually)

¹According with battery cabinet fuse associated.

DETAILS



ADVANCED COMMUNICATIONS

S3300 Plus is equipped with backlit graphic display (240x128 pixels) providing UPS information, measurements, operating states and alarms in different languages.

It can also display waveforms and voltage/current forms.

The default screen displays UPS status, graphically indicating the status of the various assemblies (rectifier, batteries, inverter, bypass).

- Advanced multi-platform communications for all operating systems and network environments:
- PowerShield3 monitoring and shutdown software included for Windows operating systems 10, 8, 7, Hyper-V, 2019, 2016, 2012, and previous versions, Mac OS X, Linux, VMWare ESXi, Citrix XenServer and other Unix operating systems.
- Compatible with SATRON Connect (remote monitoring service).
- RS232 serial and USB ports.
- 3 slots for the installation of optional communications accessories such as network adapters, potential free contacts, etc.
- REPO Remote Emergency Power Off for switching off the UPS via a remote emergency button.
- Input for the connection of the auxiliary contact of an external manual bypass.
- Input for synchronisation from an external source.
- Graphic display panel for remote connection.



S3300 Plus TECHNICAL SPECIFICATIONS

Model	S3300 Plus					
	Capacity (KVA)	60	80	100	120	160
Input						
Rated voltage [V]	380 / 400 / 415 three-phase + N					
Rated frequency [Hz]	50 / 60					
Voltage tolerance [V]	400 ±20% @ full load1					
Frequency tolerance [Hz]	40 - 72					
Power factor @ full load	0.99					
Current distortion	THDI ≤3%			THDI ≤2.5%		
Bypass						
Rated voltage [V]	380 / 400 / 415 three-phase + N					
Rated voltage [V]	3 + N					
Voltage tolerance (Ph-N) [V]	180 / 264 (selectable)					
Rated frequency [Hz]	50 or 60 (selectable)					
Frequency tolerance	±5% (selectable)					
Bypass overload	125% for 60 min., 150% for 10 min.					
Output						
Nominal power [kVA]	60	80	100	120	160	200
Active power [kW]	54	72	90	112.5	160	200
Power factor	0.9			1		
Number of phases	3801 / 400 / 415 three-phase + N (selectable)					
Rated voltage [V]	3801 / 400 / 415 three-phase + N (selectable)					
Rated frequency [Hz]	50 or 60					
Frequency stability on battery operation	0.01%					
Voltage stability	±1%					
Voltage distortion	<1% with resistive linear load / ≤3% with non-linear load					
Crest factor [Ipeak/Irms]	3:1					
Static variation	±1%					
Dynamic variation	±3%					
Batteries						
Type	VRLA AGM/GEL/NiCd/Li-ion/SuperCaps					
Recharging method	One level, Two level, Cyclic recharge (selectable)					
Number of battery cells @ 2V	120+120					
Battery arrangement	20+20 blocks (@ 12V) with Neutral central point					
Recharge time	5h					
Overall Specifications						
Weight without batteries [kg]	190	200	220	250	450	460
Dimensions (WxDxH) [mm]	500x830x1600			650x830 x1600	840x1035x1900	
Communications	3 slots for communications interface / USB / RS232					
Ambient temperature	0 °C - +40 °C					
Battery Temperature	+20 °C - +25 °C					
Range of relative humidity	5-95% non-condensing					
Colour	RAL 7016 Anthracite grey					
Protection Degree	P20					
Noise level at 1 m [dBA ±2]	<63			<50		
SMART ACTIVE efficiency	up to 99%					
Standards	European directives: L V 2014/35/EU low voltage Directive EMC 2014/30/EU electromagnetic compatibility Directive Standards: Safety IEC EN 62040-1; EMC IEC EN 62040-2; RoHS compliant Classification in accordance with IEC 62040-3 (Voltage Frequency Independent) VFI - SS - 111					
Moving the UPS	castors (60 - 200 kVA)					



SATRON Power Solutions
Approach your local SATRON Power Solutions representative for further support.
Contact details can be found on:
www.satronpower.com