



INDUSTRIAL PFC /
UPS SYSTEM

S3000 series 5 – 200 kVA

Key features

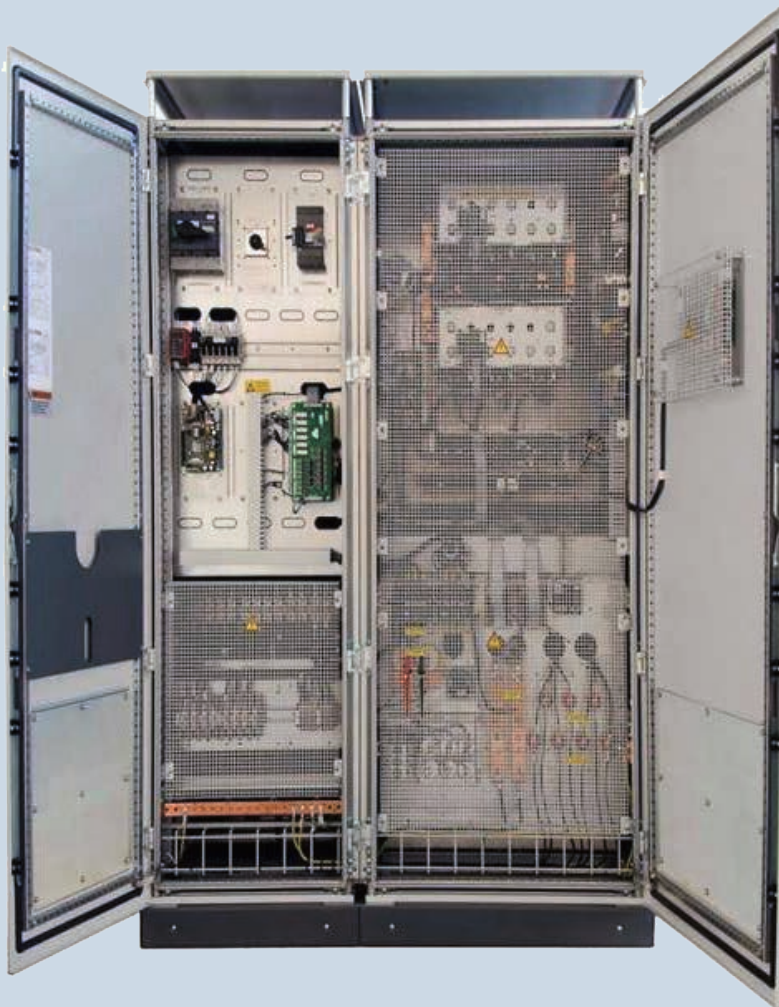
- ▶ Based on well proven technology platform
- ▶ Design life of 30 years
- ▶ Latest digital control technology
- ▶ Clear structured front panel
- ▶ State of the art communication software
- ▶ Power factor corrected (PFC) rectifier
- ▶ Rugged and heavy industrial design
- ▶ Integrated constant current battery discharge test facility

Operational benefits

- ▶ High reliability
- ▶ Long durability
- ▶ High degree of customization and flexibility
- ▶ Easy operation and control
- ▶ Easy access and intuitive communication
- ▶ Reduced input harmonics
- ▶ Low maintenance costs
- ▶ No battery load bank required

S3000 - Reliable heavy industrial UPS with unique battery features

The S3000 UPS range meets the most stringent requirements and specifications in high-end industrial applications, such as oil and gas, power generation, distribution and transmission and any other industrial application. The flexible system concept allows a fully customized solution and together with the outstanding standard features of the S3000 makes it capable to meet any specific requirement.



Reliability and durability through exceptional design

The first-class reliability of the S3000 is ensured by state-of-the-art technology and rugged design. Its exceptional features include:

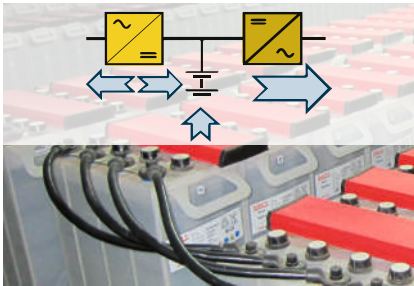
- Power factor corrected (PFC) rectifier, PF 0.99, THDi < 5%
- Up to 95% efficiency using state-of-the-art technology, optimised efficiency even at partial load
- Energy recovery by battery discharge into the mains
- Compliance to all relevant ISO and IEC/EN standards
- Design life of 30 years
- Electrical and physical integrated galvanic isolation
- Designed to withstand harsh environmental conditions (up to IP54)
- External synchronization possibility / designed for (diesel-) generator operation
- Integrated watchdog circuits
- CAN-bus internal communication bus
- Dedicated I/O board with numerous configurable analogue and digital inputs
- CAN bus for parallel operation for robust digital communication
- Control scheme for best diesel generator compliance



Exceptional Design and a PFC rectifier

The design of the Statron S3000 exceeds the requirements of international standards and benefits its users in several ways:

- PFC rectifier dramatically reduces input harmonics, no oversizing of upstream generator required
- Market leading fault clearing and short-circuit performance (300%)
- Excellent dynamic behaviour
- Up to 95% efficiency using state-of-the-art technology, optimised efficiency even at partial load
- Unlimited load power factor (0.0 lag to 0.0 lead)



Leading-edge integrated battery discharge test facility

The integrated constant current battery discharge test facility of the S3000 UPS is using sinusoidal back-feed into the mains network. This exceptional technology gives the following advantages:

- Environmentally friendly battery discharge, recycling the battery energy
- No load bank required, constant current discharge is available from the system
- No need for any additional test equipment
- Minimizes the risk of human error during maintenance



Top class communication platform

State of the art communication software and facilities support the monitoring and control of the S3000 UPS. Intuitive communication is achieved through:

- Modbus on TCP/IP interface or on RS232/RS485 serial interface
- PROFIBUS and IEC 61850 interface
- TCP/IP network interface with on-board web-server
- Programmable relay cards
- Flexible programmable Digital inputs for EPO, generator operation etc.
- Programmable analogue inputs (battery temperature etc.)
- Programmable analogue outputs (0/4-20 mA)



Reliable battery use and management

Battery monitoring and management is a key factor for a reliable and durable power back-up. The Statron S3000 has class leading built-in features, such as:

- Battery availability check
- Smart Battery Monitor (constantly updated battery capacity and battery back-up time)
- Automated / manual partial discharge testing
- Compatible with all battery types / wide DC range
- Three individual programmable battery charge voltages
- Two individual battery charge current limitation levels
- Temperature dependent charging voltage

Industrial UPS | S3000 - Technical Specification

Power Rating (p.f. = 0.8 ind.)

5-20 kVA | 30/40 kVA | 50 kVA | 60 kVA | 80 kVA | 100 kVA | 120 kVA | 160 kVA | 200 kVA

UPS Input

Rectifier AC input voltage	3x400 V $\pm 15\%$ (3x380 V, 3x415 V, others on request)
Rectifier input power factor	>0.99 (>0.97 at 25% load)
Rectifier input frequency	50 Hz / 60 Hz $\pm 5\%$
Bypass AC input voltage	3x400 V $\pm 10\%$ (3x380 V, 3x415 V, others on request)
Bypass input frequency	50 Hz / 60 Hz $\pm 5\%$

DC / Batterie Circuit

Rectifier type	IGBT (PFC) Power Factor Corrected (Thyristor Rectifier optional)
Nominal DC voltage	110 V / 125 V / 220 V / 400 V
DC voltage range	110/125 V: 89-140 V, 220 V: 185-280 V, 400 V: 317-445 V
Ripple voltage	$<1\%$
Charging characteristic to DIN 41773	I/U
Float/Boost/Initial charge voltage	individually programmable
Float/Boost battery charge current limitation	individually programmable (up to I5)

UPS Output

Nominal AC output voltage	3x400 V (3x208 V, 3x380 V, 3x415 V, others on request)
Voltage tolerance (static 0 – 100% load)	$\pm 1\%$
Voltage tolerance (dynamic 0 - 100% - 0 load)	$<5\%$ (without battery)
Regulation time ($\pm 1\%$)	<10 ms
Inverter overload 1 min	150%
Inverter overload 10 min	125%
Inverter overload, continuous	105%
Inverter short circuit current (max 3s)	300%
Bypass overload 10 min	150%
Bypass overload 100 ms	1000%
Frequency	50 Hz / 60 Hz
Frequency tolerance free running	$\pm 0.01\%$
Frequency synchronization range	$\pm 5\%$ adjustable
Allowable load power factor	0.0 lag – 0.0 lead
Voltage wave form	sinusoidal
Distortion factor linear load	$<1\%$
Distortion factor non linear load (acc. IEC/EN 62040-3)	$<5\%$
Allowable crest factor	≤ 3

General Data

Efficiency (AC-AC)	90%–95% depending on model and DC voltage
Noise level	63 dB(A) – 70 dB(A)
Cooling	forced ventilation (redundant, speed controlled and monitored)
Operating temperature	-10 to $+40$ °C (55 °C optional)
Storage temperature	-30 to $+80$ °C
Maximum altitude without derating	1000 m
Allowable relative humidity	$<95\%$ (non condensing)
Protection degree	IEC/EN 60529 IP21 (up to IP54)
Color	RAL 7035 (other color optional)
Safety	IEC/EN 62040-1
EMC	IEC/EN 62040-2 (class C3, C2 optional)
Performance	IEC/EN 62040-3 (VFI-SS-111)
Conformity	CE
Quality/Environment	ISO 9001:2008 / ISO 14001:2004

Dimensions IP21 Basic Configuration

Height (mm)	2000
Width (mm) (with Bypass Transformer) S3100	1200 (1200) 1200 (1400) 2200 (2200) 2200 (2400) 2400 (2600) 2400 (2600) 3200 (3400) 4000 (4200) 4000 (4200)
Width (mm) (with Bypass Transformer) S3300	1200 (1200) 1200 (1400) 1800 (1800) 1800 (2000) 1800 (2200) 2200 (2600) 2400 (2600) 2800 (3000) 2800 (3000)
Depth (mm)	800 1000

Further data available on request

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