EN www.centiel.com

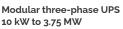














# centiel StratusPower<sup>TM</sup> The ultimate UPS for net-zero data centers StratusPower is an innovative uninterruptible power supply (UPS), specifically designed to meet the rigorous demands of today's IT infrastructure. Designed and manufactured in Switzerland, StratusPower's superior topology, referred to as DARA, ensures full availability with **no single point of failure**, providing data center operators with complete peace of mind.

Furthermore, installation of StratusPower is straightforward and maintenance is simple and non-intrusive.

Minimise your total cost of ownership while achieving the highest levels of availability and reliability for your data center.

97.6% VFI efficiency
Reliable semiconductor technology

1 MW/m² Space-saving footprint









99.999999 % availability No single point of failure

Fully redundant DARA - fault-tolerant architecture

Fully connected multi-protocol and a full range of communication channels available From 10 kW - 3.75 MW In cabinets from 10 kW to 1.5 MW

Non-intrusive maintenance 15+ years caps and smart fans

**Smart energy** peak-shaving, self-test

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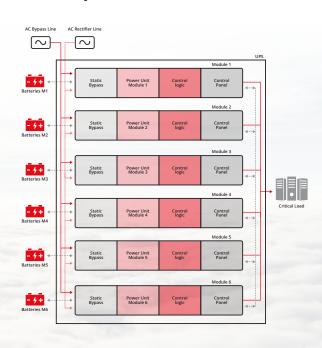
# DARA Take your power availability to the next level

#### When it comes to availability, it's what's inside that counts

With DARA, each UPS module is independent, redundant and interconnected. Each module is a complete UPS system in its own right, with three independent power converters, a static bypass and all the hardware devices needed to safely isolate a fault without impacting the load. This maximises the mean time between failures (MTBF) and safeguards the power to your critical applications.

DARA's Distributed Decision Making technology, referred to as DDM™, elevates redundancy by enabling collaborative decision-making among all modules. This ensures the continuous power supply to your load, even during crucial decision-making moments. With DDM, the UPS can make distributed decisions, eliminating the single point of failure typically associated with masterslave technology. As a result, downtime is minimised, and critical loads remain protected.

# Maximised availability at module, frame and system level





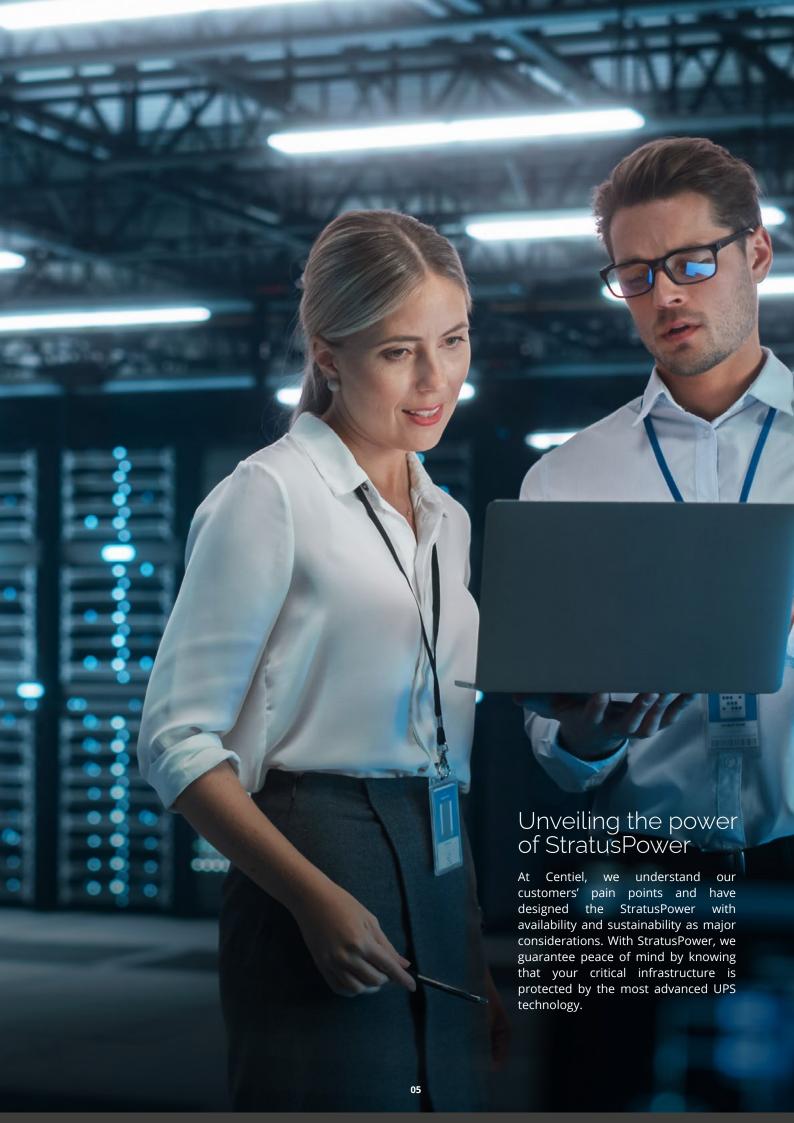


#### Mean time to repair (MTTR)

DARA's technology on the frame level has been designed to accommodate **non-intrusive maintenance** and to **minimise mean time to repair (MTTR)**, ensuring that any downtime is kept to an absolute minimum. For example, in the event of a power failure, frontal access to components avoids the need for removing modules, thereby reducing the risk of human error.

	Availability	Downtime (10 years)	Source
Tier IV	4-nines	31,000 sec (8.6h)	Uptime Institute
Other UPS architectures	6-nines	310 sec (5.1 min)	Manufacturer's information
DARA architecture	9-nines	0.31 sec	3rd party verified 45 years of experience Real measured UPS data





# •

# The future-ready UPS





#### **Advanced computing power**

Multi-core
Trigonometric math unit
Control law accelerator
Parallel processing
IEEE 754 double-precision math



## **100+ Measuring points**

At the module level



#### **External ambient monitoring**

Temperature Humidity Hydrogen Water leak



#### **Cybersecure connection**

Compliant IEC-4-62443-2

# Supporting HPC and AI workloads

StratusPower is designed to handle the **unpredictable and intense power demands** of High-Performance Computing **(HPC)** and Artificial Intelligence **(AI)** workloads.

Unlike standard cloud computing systems that rely mostly on CPUs, HPC and Al systems utilize GPUs that drive power spikes during high-intensity tasks like deep learning and complex simulations.

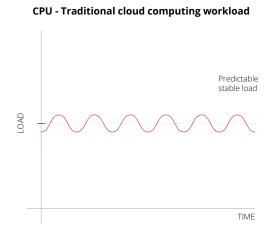
**GPU - HPC, AI computing workload** 

These sudden spikes in load can overwhelm traditional UPS systems, risking system failure and data loss. StratusPower's modular design is specifically designed to manage these unpredictable power surges with outstanding **continuous overload capability** ensuring your critical infrastructure remains protected.

With StratusPower, you can trust that even the most power-hungry applications are safeguarded, preventing costly disruptions.

Base line

Base line



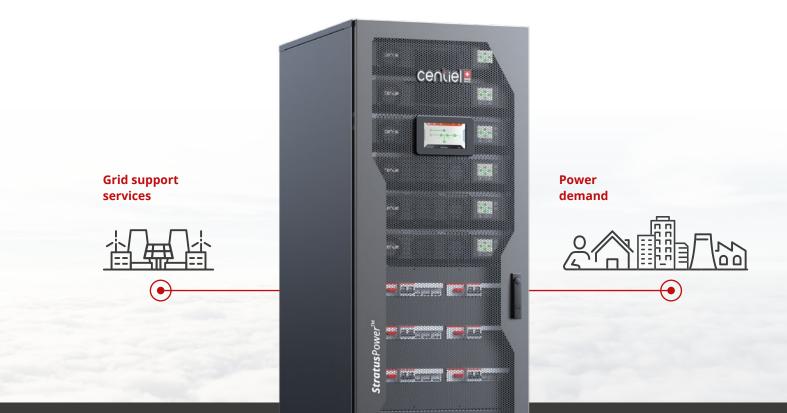
# Future proof your design

Load profile

StratusPower is **future-ready** and can connect to a variety of power generation sources. It is equipped to provide grid support and manage energy efficiently based on the specific requirements of each application.

#### Adapt to new revenue streams

- FFR Fast Frequency Response and Reserve
- PSH Peak Shaving Mode
- FCR Frequency Containment Reserve
- aFRR Automatic Frequency Restoration Reserve





#### DC Flex technology



#### Robust and reliable semiconductor technology



Our unique DCFlex© technology offers unparalleled flexibility when it comes to battery storage installation and configuration, as well as preparing the infrastructure to manage both current and future energy sources.

Our UPS solution is compatible with various battery storage devices, allowing you to reuse the DC supply or to choose the option that best suits your needs and budget.

The StratusPower battery charging current capability is 500 percent higher than our closest competitors, meaning faster charging times and more efficient use of your batteries.

The StratusPower incorporates proprietary technology for inverter physical isolation in the event of an IGBT failure, ensuring maximum uptime for your critical infrastructure.

The **triple-mode parallel** bus provides an extra layer of redundancy, eliminating any single point of failure in communication between frames and modules.

At Centiel, we take reliability very seriously. That's why we designed our technology with extra-safe power of 24%, ensuring a higher level of reliability and redundancy. With continuous operating capacity, each 62.5kW module can operate at 75 kW even under overload conditions. The 750 kW StratusPower UPS has the ability to operate in online mode, supporting loads up to 900 kW.





75 W UPS module capacity at continuous overload

# Predictive and remote health monitoring



**Exceeding performance** expectations



With its computing capabilities and more than 100 measurement points, StratusPower does the work for you, ensuring that maintenance is performed promptly and accurately. This not only saves time and effort but also improves your system's overall reliability and safety.

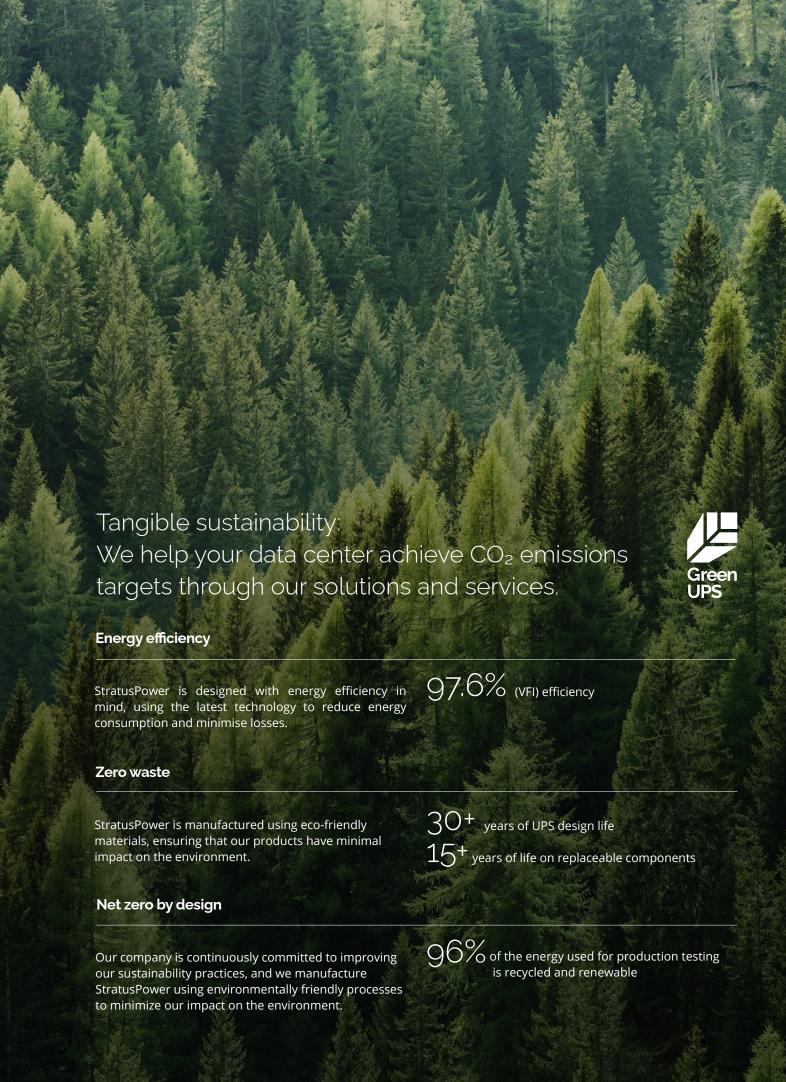
Bluetooth connectivity allows technicians for easy, non-intrusive monitoring via mobile devices, with the Centiel app providing real-time status updates and alerts.

StratusPower provides advanced cybersecurity features in compliance with IEC-4-62443-2, making certain that your critical data and systems are protected from cyber threats.

With a THDi of less than 1 percent, StratusPower provides excellent performance that exceeds regulatory requirements.

The UPS is able to handle 124% of continuous overload and 150% overload for 1 minute, ensuring uninterrupted power delivery during times of peak demand.

A **short circuit capability above 3xIn** safeguards your equipment and system integrity despite electrical faults.



# centiel

# The versatile Universal Rack UPS solution

Available as a Universal Rack UPS, StratusPower offers a blend of technical and commercial benefits tailored to meet a variety of power protection needs. This adaptable system includes the UPS, communication components, battery breakers and output switches, making it ideal for integrated IT, telecom or other critical processes. The UPS integrates seamlessly into **any 19-inch rack**, regardless of the rack manufacturer.

With its versatile design, StratusPower simplifies the engineering and deployment of custom power protection solutions. System integrators can leverage their expertise and implement unique solutions to meet specific design requirements. The UPS can be seamlessly integrated into weatherproof enclosures, making it ideal for applications in harsh environments.

The Universal Rack Solution provides **efficient heat management** by directing warm air to the rear of the cabinet for optimal cooling without affecting the entire enclosure.

For system integrators, the Universal Rack solution offers efficient **customisation with standard products** and the opportunity to add significant local value to their power protection solutions.

The Universal Rack offers versatile battery placement options, allowing either top or bottom customisation to suit specific preferences and operational requirements.

Thanks to the minimal size of the 10/20/25 and 30kW modules, the Universal Rack UPS solution is available in compact depths from 600 mm, providing a space-saving solution without compromising performance.





# Universal Rack UPS solution

#### **Available UPS power rating configurations**







Model	CAB-SR030-E-1S-C0	CAB-SR060-E-2S-C0	CAB-SR120-E-4S-C1		
Power per module (kVA =KW)	10/20/25/30 kW	10/20/25/30 kW	10/20/25/30 kW		
N-modules	1	1 to 2	1 to 4		
Height	6 HU	11 HU	21 HU		
Nominal power / cabinet	30 kW	60 kW	120 kW		

## The Universal Rack UPS includes

Fits seamlessly into any 19" rack

Up to four UPS modules online double conversion

Individual module display

**Electrical distribution** 

DC battery MCB protection 1 x module

Bypass fuses

3 x module

Output parallel isolator

System manual bypass

**Connectivity board** 5x dry output, 5x dry input, RS232, RS485,Bluetooth, Ethernet, slot for SNMP

Up to four battery modules in a single cabinet

Free placement of internal battery modules

bottom or top

Available in depth from 600 mm





# Unmatched flexibility and scalability for diverse power needs

#### Comprehensive options for StratusPower modules

Designed to meet a variety of applications, StratusPower offers a range of modules to meet your needs, including compact modules up to 30 kW and more powerful modules up to 62.5 kW. The adaptability extends further

with the capability to consolidate power in a single cabinet, spanning from 10 kW to an impressive 1500 kW. Scaling doesn't stop there—StratusPower cabinets can be seamlessly expanded to a staggering 3.75 MW.

#### Available models

Power per module (kVA =KW)

Dimensions h x w x d (mm)



	centrel (control
Module type	SM10 / SM20 / SM25 / SM30

10/20/25/30 kW 18/20 132 x 443 x 522



# **SM50 / SM62**50 / 62.5 kW 46 132 x 581x 848

## **StratusPower**

Weight (kg)

#### SM10/SM20/SM25/SM30



Model	CAB-SP060-I080-2S-A1
Modules	Up to 2 x SM10/20/25/30
Nominal power / cabinet	60 kW
Internal battery capacity	80 x (7/9Ah)
Dimensions h x w x d (mm)	1315 x 510 x 815
Footprint	0.41 m <sup>2</sup>



CAB-SP060-I240-2S-A0				
Up to 2 x SM10/20/25/30				
60 kW				
240 x (7/9Ah)				
1980 x 510 x 815				
0.41 m <sup>2</sup>				



CAB-SP120-l320-4S-B0
Up to 4 x SM10/20/25/30
120 kW
320 x (7/9Ah) or 80 x (28Ah)
1980 x 730 x 815
0.59 m <sup>2</sup>



120 kW

**CAB-SP120-E-4S-A1**Up to 4 x SM10/20/25/30

1315 x 510 x 815

Model
Modules
Nominal power / cabinet
Internal battery capacity
Dimensions h x w x d (mm)
, ,
Footprint



CAB-SP180-E-6S-A0
Up to 6 x SM10/20/25/30
180 kW
External
1980 x 510 x 815
0.41 m <sup>2</sup>



CAB-SP240-E-8S-A0
Up to 8 x SM10/20/25/30
240 kW
External
1980 x 510 x 815
0.41 m <sup>2</sup>

# **StratusPower**

#### SM50/SM62.5

Up to **1.5 MW** 

per frame





# Ultra-compact model



 Model
 CAB-SP625T-E-10M-LT-K
 CAB-SP1250T-E-20M-LT-2K

 Modules
 Up to 10 x SM50 / SM62
 Up to 20 x SM50 / SM62

 Nominal power / cabinet
 625 kW
 1250 kW

 Dimensions h x w x d (mm)
 2282 x 656 x 900
 2282 x 1312 x 900

 Footprint
 0.59 m²
 1.18 m²







CAB-SP375(B/T)-E-6M-(LT/AV)-K Model CAB-SP750(B/T)-E-12M-(LT/AV)-2K CAB-SP875(B/T)-E-14M-(LT/AV)-2K2 Modules Up to 6 x SM50 / SM62 Up to 12 x SM50/62 Up to 14 x SM50 / SM62 Nominal power / cabinet 375 kW 750 kW 875 kW Dimensions h x w x d (mm) 1982 x 656 x 900 1982 x 1312 x 900 2271x1312x1000 Footprint 1.18 m<sup>2</sup> 1.31 m<sup>2</sup>





Model	CAB-SP1125(B/T)-E-18M-(LT/AV)-3K	CAB-SP1500(B/T)-E-24M-(LT/AV)-4K
Modules	Up to 18 x SM50/62	Up to 24 x SM50/62
Nominal power / cabinet	1,125 kW	1,500 kW
Dimensions h x w x d (mm)	1982 x 1968 x 900	1982 x 2624 x 900
Footprint	1.77 m <sup>2</sup>	2.36 m <sup>2</sup>





# **Technical Datasheet**

		Model	CAB-SP060-l080-2S-A1	CAB-SP120-E-4S-A1				
		House	CAB-SP060-1240-2S-A0	CAB-SP120-l320-4S-B0	CAB-SP180-E-6S-A0	CAB-SP240-E-8S-A0		
		Module type	SM10/20/25/30	SM10/20/25/30	SM10/20/25/30	SM10/20/25/30		
		Nom. power per module [kVA = kW]	10 / 20 / 25 / 30	10 / 20 / 25 / 30	10 / 20 / 25 / 30	10 / 20 / 25 / 30		
м.		Cont. overload per module [kVA = kW]	12 / 24 / 30 / 36	12 / 24 / 30 / 36	12 / 24 / 30 / 36	12 / 24 / 30 / 36		
General Data		Nom. power per frame [kVA = kW]	60	120	180	240		
enera		Cont. overload per frame [kVA = kW]	72	144	216	288		
G		Number of modules per frame	1-2	1-4	1-6	1-8		
		Max. power per system [kVA = kW]	1800	1800	1800	1800		
		Topology / technology	Online double conversion / DARA (Distributed Active Redundant Architecture)					
		Input wiring	3 Ph + N + PE					
		Rated voltage	380/400/415Vac					
		Voltage range	For loads <100% (–25%	, +20%), <80% (-32.5%, +	-20%), <60% (-35%, +20%	6)		
	Rectifier	Input frequency	30-70 Hz					
		Total Harmonic Distortion	THDi<=0.9% for linear load, THDi<3% for nonlinear load					
		Input power factor	0,99					
Input		Input wiring	3 Ph + N + PE					
-	Bypass	Rated voltage	±30±10% (Voltage) (According to VFI-SS-111)					
		Input frequency	50/60 ±2/4% (selectable)					
		Rated voltage	204-600 Vdc (the number of batteries can be selected )					
		Internal batteries (7/9Ah)	1080: 80 1240: 240	E: External I320: 320	E: External	E: External		
	Battery	Туре	Lead-Acid / NiCad / Lithium / Zink / Salt / others					
		Blocks [VRLA]	17-50					
		Output wiring	3Ph+N+PE					
		Voltage	380/400/415 Vac					
		Frequency	Tracking the bypass input (Online Mode); 50 / 60 Hz ± 0.05% (Battery Mode)					
put	Inverter	Output power factor	1					
Output		Efficiency	97,6%					
		Overload capacity	Inverter: 124% continuous, 125% for 10min, 150% for 60 sec					
		Short circuit capability	Up to 3xIn - 400ms					
	Bypass	Efficiency	99,4%					
ıţ		Operating temperature	0-40°C (No power dera	ting)				
Environment		Storage temperature	-40-70°C					
viro		Relative humidity	10%-95% (No condensi	ng)				
ᇤ		Maximum operating altitude 1000 m. above 1000 m, derating 1% for		, derating 1% for each ac	lditional 100 m			
Others		Dimensions (H x W x D) [mm]	1315 x 510 x 815 1980 x 510 x 815	1315 x 510 x 815 1980 x 730 x 815	1980 x 510 x 815	1980 x 510 x 815		
		Certifications	EN/IEC 62040-1   EN/IEC	C 62040-2   EN/IEC 6204	0-3   CE   UKCA   EAC	RoHS		
		Communications	RS485, USB, Dry contacts, Ethernet, Bluetooth					

# Technical Datasheet

			CAB-SP375(B)-E- 6M-(LT/AV)-K	CAB-SP750(B)-E- 12M-(LT/AV)-2K	CAB-SP875(B)-E- 14M-(LT/AV)-2K2	CAB-SP1125(B)-E- 18M-(LT/AV)-3K	CAB-SP1500(B)-E- 24M-(LT/AV)-4K	
		Model	CAB-SP375(T)-E- 6M-(LT/AV)-K	CAB-SP750(T)-E- 12M-(LT/AV)-2K	CAB-SP875(T)-E- 14M-(LT/AV)-2K2	CAB-SP1125(T)-E- 18M-(LT/AV)-3K	CAB-SP1500(T)-E- 24M-(LT/AV)-4K	
		Module type	SM50 / SM62	SM50 / SM62	SM50 / SM62	SM50 / SM62	SM50 / SM62	
		Nom. power per module [kVA = kW]	50 / 62.5	50 / 62.5	50 / 62.5	50 / 62.5	50 / 62.5	
<u>_</u>		Cont. overload per module [kVA = kW]	60/75	60/75	60 / 75	60/75	60/75	
al Dat		Nom. power per frame [kVA = kW]	375	750	875	1125	1500	
General Data		Cont. overload per frame [kVA = kW]	450	900	1050	1350	1800	
9		Number of modules per frame	1-6	1-12	1-14	1-18	1-24	
		Max. power per system [kVA = kW]	3750	3750	3750	3750	3750	
		Topology / technology	Online double conversion / DARA (Distributed Active Redundant Architecture)					
		Input wiring	3 Ph + N + PE					
		Rated voltage	380/400/415Vac					
		Voltage range	For loads <100% (-25%, +20%), <80% (-32.5%, +20%), <60% (-35%, +20%)					
	Rectifier	Input frequency	30-70 Hz					
Input		Total Harmonic Distortion	THDi<=0.6% for linear load, THDi<3% for nonlinear load					
		Input power factor 0,99						
		Input wiring	3 Ph + N + PE					
'n	Bypass	Rated voltage	±30±10% (Voltage) (According to VFI-SS-111)					
		Input frequency	50/60 ±2/4% (selectable)					
		Rated voltage	360 - 600 Vdc (the	number of batterie	es can be selected )			
		Internal batteries (7/9Ah)	E: External					
	Battery	Туре	Lead-Acid / NiCad / Lithium / Zink / Salt / others					
		Blocks [VRLA]	30-50					
		Charger (Amps per module)	SM50: 50A, SM62	: 60A				
		Output wiring	3Ph+N+PE				-	
		Voltage	380/400/415 Vac±1%					
	t	Frequency	Tracking the bypass input (Online Mode); 50 / 60 Hz ± 0.05% (Battery Mode)					
Output	Inverter	Output power factor	1			3		
Out		Efficiency	97,6%					
		Overload capacity	Inverter: 124% continuous, 125% for 10 min, 150% for 60 sec					
		Short circuit capability	Up to 3.5xin - 400ms				1	
	Bypass	Efficiency	99,4%					
ent		Operating temperature	0-40°C (No power	derating)				
Environment		Storage temperature	-40-70°C				-	
nvire		Relative humidity	10%-95% (No con	O.			-	
ш		Maximum operating altitude		-	or each additional		:	
Others		Dimensions (H x W x D) [mm]				1982 x 1968 x 900		
		Certifications	·	·	· ·	UKCA   EAC   RoH	S .	
		Communications	K5485, USB, Dry C	ontacts, Ethernet, B	oluetooth			







