



Sinexcel

SINEXCEL UNINTERRUPTIBLE POWER SUPPLY

Reliable is essential
Energy saving is the breakthrough
upgrading application

COMPANY PROFILE

Sinexcel Electric devotes to Low Voltage Power Quality Solutions, Uninterruptible Power Supply together with other PQ products & solutions, independent design, development, production, marketing and sales network covering more than 50 countries to provide our customers with a full range of power quality protection.

300693

Public listed enterprise Stock code 300693

13

13 years industry leader of Power quality

50

Biggest inverter-based Power Quality manufacture,
reference covering more than 50 countries

RELIABLE IS ESSENTIAL

Energy saving is the breakthrough upgrading application



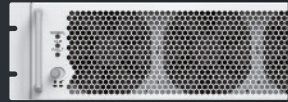
1

Reserved for power module



2

Power module



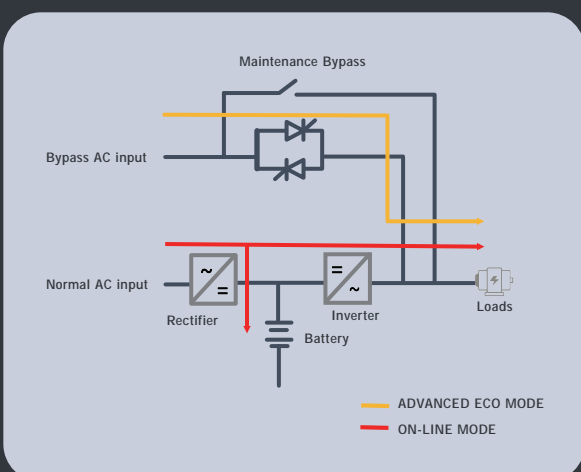
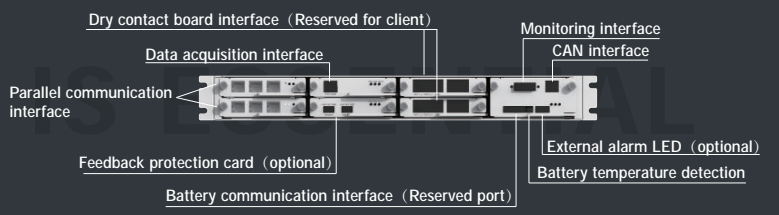
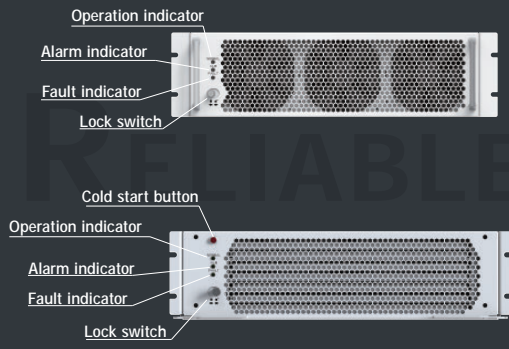
3

Bypass module



4

Control module



One unit is equipped with two working modes, struggling to meet different requirements.

Innovative Advanced ECO mode,
99% high efficiency & 2ms switching time

Classic on-line double conversion working mode,
high precision & 97% efficiency

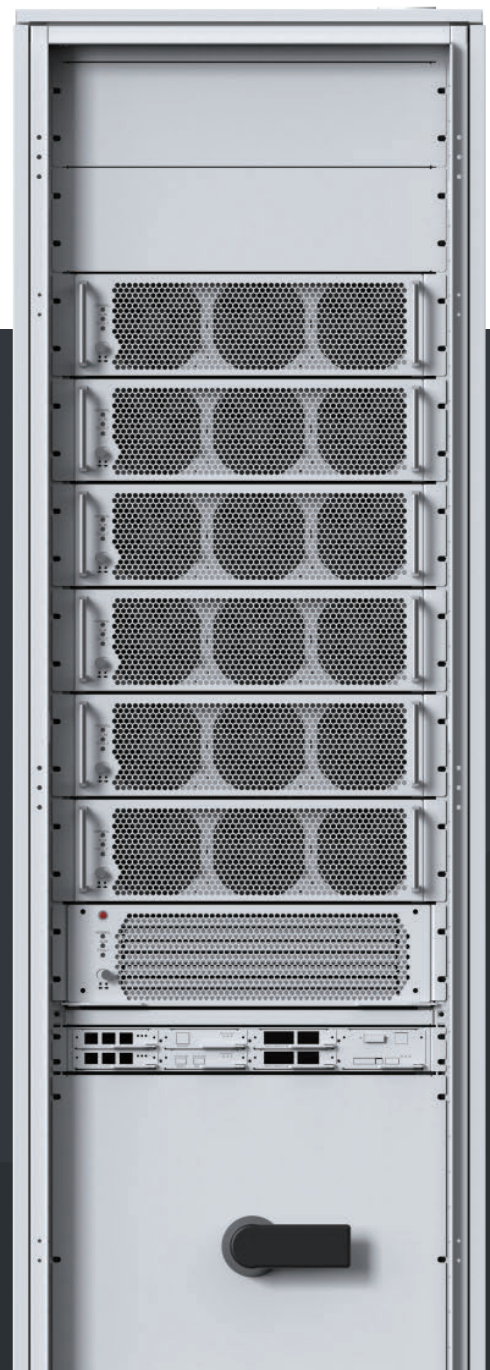
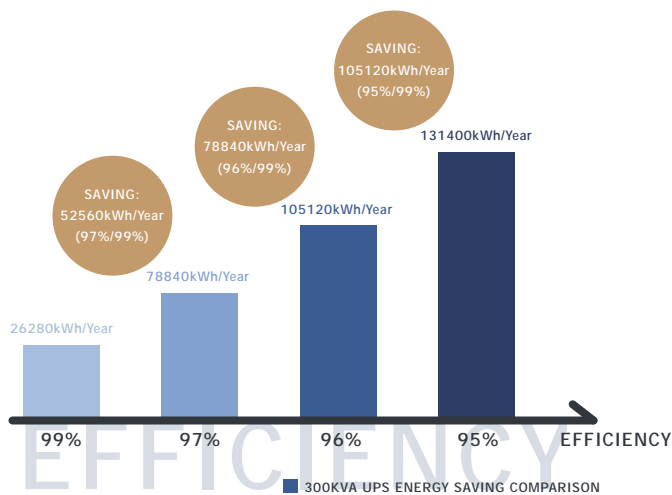
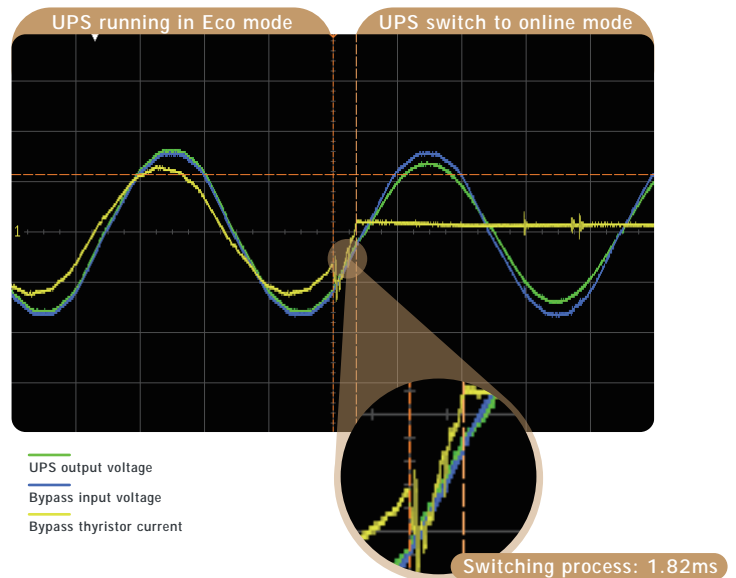
ADVANCED ECO MODE

99% EFFICIENCY & 2MS TYPICAL SWITCHING TIME

Loads can sustain for 5ms such short time voltage outage at switching time. This is the reason Sinexcel Advanced ECO mode UPS can be used as default mode.

For Traditional UPS bypass, the SCR must be turned off completely at the current zero crossing point, this process will take 10ms at longest.

Sinexcel has done great innovation to the UPS Advanced ECO mode from both the software to hardware design to realize 5ms fast switching time from ECO mode to online mode, typical response time 2ms.



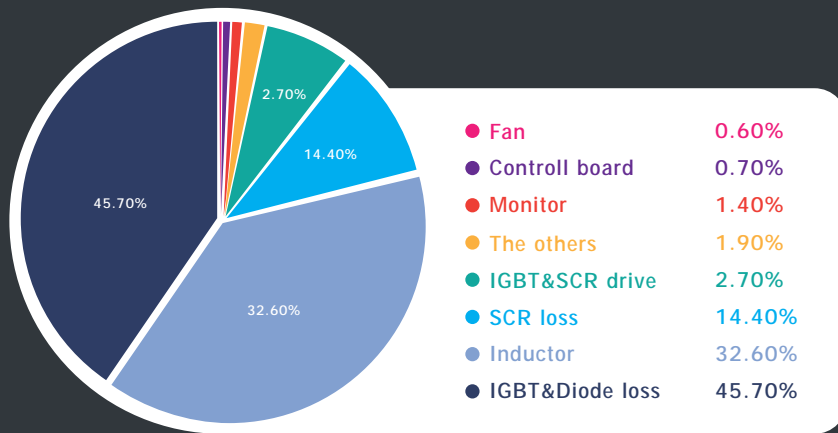
SINEXCEL APPROVED RELIABLE ADVANCED ECO MODE

UPS industry mostly put ECO mode as auxiliary function. Sinexcel evaluates the great energy saving benefits of ECO mode on the clients' aspect, with the innovative development from the R&D team, Sinexcel released Advanced ECO mode which can realize constant work and fast switching to online mode, ensuring the reliable protection to the connected loads.

The design of Sinexcel UPS Advanced ECO mode is from Sinexcel AVC-RTS (Real-time Active Voltage Conditioner), which the system structure nature is as same as ECO mode, it has been used for years in critical applications of semiconductor PLC system control, automotive robot painting process, beverage, pharmacy high automation production line .

ON-LINE MODE 97% EFFICIENCY

Semiconductor components (IGBT, diode, SCR) and the inductor account for more than 90% of system loss.



Advanced components optimization to reduce hardware loss

Infineon fifth generation low-loss technology IGBT

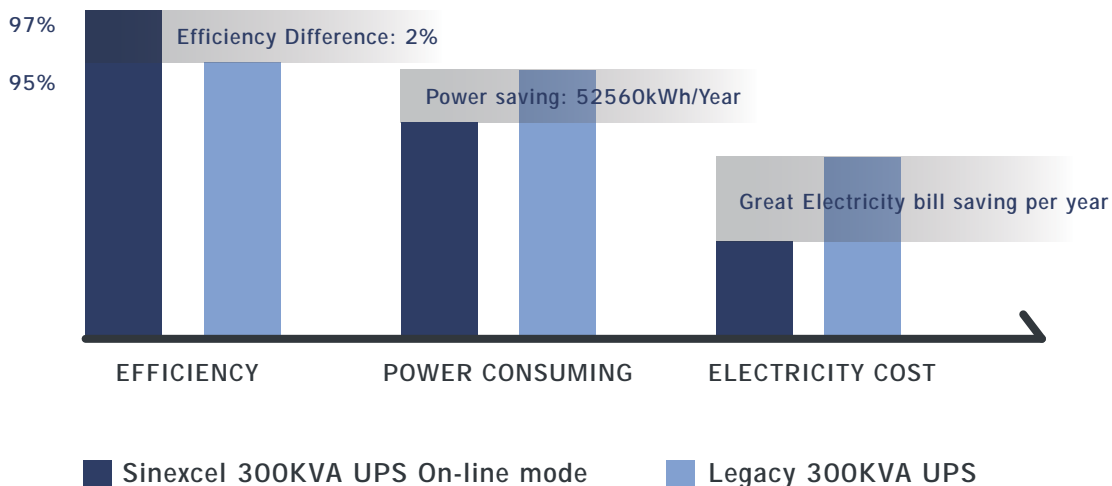
Sic Schottky diode, third generation power conversion technology



Optimized Vienna rectifier design + Interleaved parallel technology to reduce loss

Three level topology design, less loss and higher performance compared to two level design

Optimized Vienna topology with interleaved parallel technology, great reduction of the ripple current of IGBT and diodes



PRODUCT FEATURES

PRODUCT FEATURES

1

HIGH RELIABILITY

Dual controllers and dual auxiliary power supply ensure continuous system operation and reliable communication.

Power module automatic offline function for continuous operation to avoid downtime caused by single power module failure

Wide input voltage range (138V~486V) allows UPS to work in harsh electrical environments to minimize the battery use

Online dual conversion mode provides continuous, high quality power to the load

2

FULLY MODULARIZED DESIGN

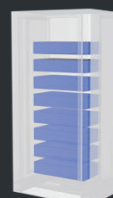
Hot-swappable modular design, easy to replace the power module, reduce the mean time to repair (MTTR) close to zero without downtime



200KVA



300KVA



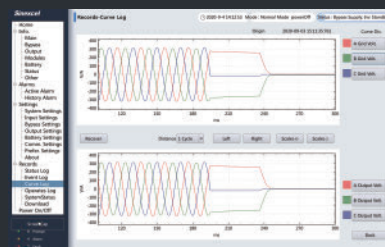
400KVA

3

ADVANCED ANALYSIS SYSTEM

Record the waveform of power abnormal event to support advanced event analysis

Record parameters: input and output voltage, current waveform display, events quantities, waveform data can be exported to USB flash



4

BATTERY MANAGEMENT SYSTEM

Battery charge and discharge current, voltage monitoring and controlling

SOC check to reflect remaining capacity of battery

Temperature detection function, charging voltage

intelligent adjustment according to battery temperature



5

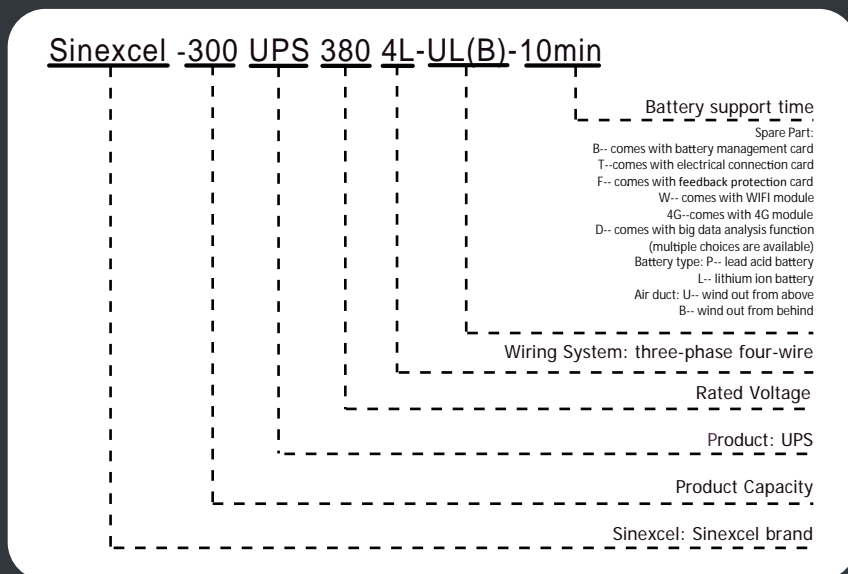
COLD-START FUNCTION

UPS can start without mains

INTRODUCTION

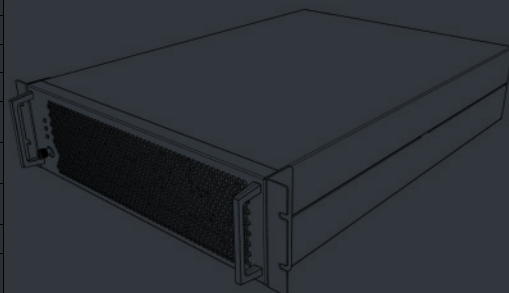
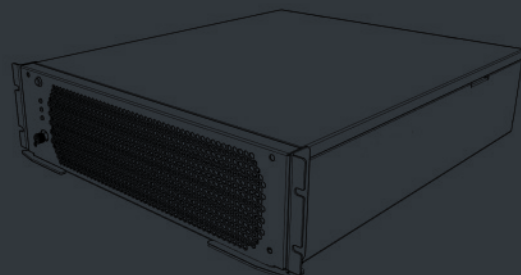
Capacity ranging from 40kVA to 2400kVA, equipped with 99% Advanced ECO mode and 97% on-line double conversion working modes that delivers continuous green backup power supply. High availability with low cost to meet different customer needs.

ORDERING INFORMATION



TECHNICAL SPECIFICATIONS

MODEL	UPS 40KVA	UPS 50-2400KVA
INPUT	Rated Voltage	380/400/415VAC
	Voltage range	138-486V (linear derating between 138-305V)
	Current harmonic distortion	< 3%
	Power factor	> 0.99
	Rated Frequency	40-70Hz
OUTPUT	Output Voltage of Converter	380/400/415Vac
	Stabilized Output Voltage Accuracy of Converter	±1%
	Efficiency	Efficiency of Advanced ECO Mode is over 99%; Online Double Conversion Mode: single module efficiency >97.5%, whole cabinet efficiency > 97%
	Response Time	Online Mode response continuously; switching time of Advanced ECO Mode ≤5ms, typical 2ms
	Overload Capacity of Inverter	110% load, switch to bypass after 60min
		125% load, switch to bypass after 10min
		150% load, switch to bypass after 1min
THDv	<1% (linear load)	
BYPASS	Voltage	380/400/415Vac
	Frequency	50/60Hz, depend on the load
	Overload	≤135%, temperature ≤30°C, long-time operating
		≤125%, temperature ≤40°C, long-time operating
		150%~200%, last for 5min
		200%~1000%, last for 1min
>1000%, last for 100ms		
SYSTEM	Parallel Operation	Max. 8 cabinets in parallel
	Charge Mode	Intelligent battery management system Battery configuration: lead acid battery, lithium battery, super capacitors
	Audible Noise (1 meter)	60-75dB
	Protection level	IP21 (can be customized)
	Cable entry	Bottom entry (side entry can be customized)
	Communication Interface	RS485, CAN, Ethernet, backfill preventing card, WIFI (optional), 4G (optional), dry contact (optional)
	Temperature	Operation ambient temperature: -10~40°C, storage temperature: -40 - 70
	Relative Humidity	0 ~ 95% without condensation
	Altitude	≤1000m (over 1000m, please take IEC62040-3 standard derating for reference, max 4000m)
	Monitoring	12-inch monitoring touch screen, supporting multiple languages
	Dimension	300kVA cabinet size 600*830*2000mm(W*D*H), for other capacity, battery cabinet, or customized size, please contact Sinexcel engineers
	Cabinet Color	Standard color is RAL7035 (can be customized)
	Certification	TLC,CE(EN602040-1,EN602040-2)



A server room with rows of server racks on both sides. In the center, there is a workstation on a mobile cart with a monitor, keyboard, and mouse. The room has a polished floor and overhead lighting. The word "Sinexcel" is overlaid in the center in a stylized font.

Sinexcel

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