ONLINE UPS SYSTEM

Online UPS (Uninterruptible Power Supply) is an advanced power backup solution that provides continuous, high-quality electrical power to connected devices. It is designed to protect sensitive equipment from power interruptions, voltage fluctuations, surges, and other power quality issues.

05kVA to 500kVA

- Computer and Data Centers.
- Process Control in industries like CNC, Laser Printing Application.
- Broadcasting / systems.
- Safety System in Power Plants.
- Medical imaging equipment like MRI, CT, scan, laser, etc.
- Elevator backup and rescue operations.
- Applications requiring constant frequency and constant voltage.
- A DSP advanced technology-based control for power and monitoring.
- IGBT (Insulated Gate Bipolar Transistor) inverter technology.
- Pure sine wave output.
- True online dual conversion design for UPS.
- Wide input range, robust design for harsh environment.
- With isolation transformer at output.
- Engineered design, easy for maintenance, and minimize MTTR.
- CNC-fabricated sheet enclosure for better aesthetics and consistency.
- Three-phase separate control, realizes the control of instantaneous overloading balance, so as to reach 100% unbalanced load in three-phase UPS.
- SNMP Intelligent communication optional and dry contact.
- Perfect protection: input/output over/low voltage protection displayed on display with alarm LCD function.
- Excellent load feature, it is completely capable to load from 0-100%.
- Specification can be customized to suit specific requirements.

Model	NXS 250 Series
Rating	10 KVA to 250kVA
AC Input	415 ± 15%, 3 Phase
DC Voltage	360 / 384 VDC
Charging Time	12 hours for 90% of full capacity
Charger Type	CVCC (Constant Current Constant Voltage Type)
Frequency	50Hz ± 6%
DISPLAY:	
Digital LCD Display	R,Y,B Output Voltage, Output current & frequency, DC Voltage
	Battery and load percentage and all faults
INVERTER:	
Technology	DSP based, IGBT Switching
Output Voltage	380 / 400 / 415 AC Three Phase
Voltage Regulation	±1%
Frequency	50Hz ± 6%
Waveform	PWM Sine Wave
Harmonic Distortion	Less than 3% on linear load
Inverter Efficiency	Up to 90% till 30kVA and 93% above 30kVA
Power Factor	0.8
Overload	110% for 1 min, 150% for 30 sec
Crest Factor	3:01
Phase Displacement	120 ± 1 Deg
Audible Noise	Less than 65 DBA
INDICATIONS AND ALARMS:	
Mains on	LED indication
Inverter	LED indication
Battery Low	LED indication
Fault	LED indication
Overload	LED indication
PROTECTIONS:	Output overload, Short circuit, Output UV & OV, DC under & overvoltage
	Mains under & overvoltage, Mains single phasing
GENERAL:	
Operating temperature	40 Deg C
Humidity	Max 95%, Non-condensing
OPTIONAL:	
Communication	SNMP
Bypass	Static Switch

NXSERA SYSTEMS

Servo Stabilizer - Static Stabilizer - Online UPS System

05 kVA to 500kVA

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SERVO CONTROL VOLTAGE STABILIZER

Servo Stabilizer Application

Servo stabilizers have a wide adjustment range and strong load adaptability, making them suitable for installation in industrial environments where there is frequent voltage fluctuation. Suitable areas include factory workshops, such as CNC machines and large production lines.

Common Causes of Voltage Fluctuations

- Power grid load fluctuations: Sudden changes in the electrical load within the grid can cause voltage instability.
- Distance from power supply center: Remote areas located far from power supply centers tend to experience more severe voltage fluctuations.
- Frequent startup of equipment: High-power industrial equipment's frequently starting up can lead to localized voltage dips and surges.

Air-cooled
10kVA to 150kVA

Oil-cooled
100kVA to 500kVA

Over-voltage protection
When the input voltage is higher than a specific value, the regulator automatically cuts off the power supply to protect the equipment from over-voltage damage.

Undervoltage protection
When the input voltage is lower than a specific value, the voltage regulator automatically cuts off the power supply to prevent equipment damage due to insufficient voltage.

Short circuit protection
When a short-circuit condition is detected, the voltage regulator quickly cuts off the power to avoid serious damage to the equipment and the regulator itself.

Overload protection
When the load current exceeds the rated value, the voltage stabilizer automatically cuts off the power to prevent the overload from causing harm to the equipment and power grid.

Missing phase protection
When the three-phase power supply input grid any phase voltage is missing, the regulator does not start, to avoid equipment damage due to phase loss.

Over-temperature protection
When the internal temperature of the regulator exceeds the safety value, the regulator automatically cut off the power to prevent the failure or fire caused by overheating.

Voltage	Three Phase
Cooling	Aircooled and Oilcooled
Input Voltage Range	340V-480V
Input Frequency	47-53 Hz
Output Voltage	415V
Output Voltage Regulation	± 1%
Servo Motor Type	Opto Coupler based traic drive
Control Design	Microcontroller (Digital Signal Processor) based system
Voltage Sensing & Correction	True RMS Sensing & Correction
Correction Speed	60V/Sec
Efficiency	≥ 98%
Under/Over Voltage Cut Off	Upper Limit +5%, Lower Limit -10% of O/P nominal voltage
Short Circuit	MCB or MCCB
Over load	Operative above 110% of rated output current
Waveform Distortion	Not generate additional waveform distortion (static)
Single Phase Protection	Built-in
Phase Reversal Protection	Built-in
Reset	Auto Start / Manual restart (User Settable)
Front Panel Indication	I/P & O/P Voltage L-L, L-N, Hz, Current R-Y-B (all phases)
Event recorder	Provided for fault detection
Ambient Temperature	Up to 50 Deg C
Design Standard	As per IS 9815

STATIC CONTROL VOLTAGE STABILIZER

Static stabilizer is a device or system designed to regulate and maintain voltage levels in electrical systems without moving components. Static Stabilizer utilize electronic components and power modules to regulate but rely on the high-complexity combination of microprocessors and electronic circuits in the detection of voltage and its corrections. Techniques such as pulse-width modulation are common with this type in maintaining the accuracy of output voltage.

Air-cooled
10kVA to 500kVA

- Regulation Speed - 20 MI / SEC - 5000V / SEC.
- Soft start.
- No mechanical moving parts.
- As good as battery-less Online UPS.
- Less maintenance.
- Small footprint, lightweight, and compact size.
- Overload sensing by CT.
- Automatic bypass (Working in controlled output high/low cut-off).
- 1:10 ratio crest factor.
- Naturally air-cooled.
- LCD display.
- Digital signal processor-based system.

Technical Specifications	Details
Capacity (KVA)	500 KVA
Weight (Kgs)	1300-1500 Kgs
Dimension In mm (L x W x H)	3600 x 1000 x 1200
Technology	IGBT Based DSP Technology
Load Type	Unbalanced
Input Voltage Range	360-460 VAC, 3PH, 4 WIRE, 50 Hz With Earthing
Output Voltage	415VAC, 3PH, 4 WIRE +/- 1%
Voltage Regulation	HIGH SPEED ENGINE +/- 1% in 20 mi / Sec - 5000v per sec
Efficiency	UP TO 99%
Protections	Output - High/ Low, Input - High / Low, Over Load, Short Circuit, Single Phasing Prevention, Phase
	Reversal, Power on Delay, Surge & Spike Protections.
Display	DSP Based LCD
Display Parameters	Input & Output Voltage, Current and Frequency, Fault Announcement and Event Log
Nature Of Cooling	Natural-Air Cooled with Fan Forced-Cooling
Trip And Restart	Auto / Manual
Duty Cycle	Continuous
Temperature	0° to 50°C
Cabinet	IP 20 - Class of Protection
Noise Filter	In – built
Surge Protection	In – built
Automatic Bypass	In - built (Working in Controlled Output HIGH / LOW Cut-Off)

Static Voltage Stabilizer vs Servo Voltage Stabilizer (Air / Oil cooled)

Technology specifications	Static Voltage Stabilizer	Servo voltage stabilizer
Correction speed	5000 VAC/sec	60 VAC/sec
Correction time	20ms	1 Sec - 3 Sec
Auto bypass	Yes	No
Stability	1%	5%
Reliability	Excellent	Less
Load protection capabilities	Excellent	Less
Size	Very Compact	Bulk
Maintenance	Less	More