



# Nonstop Performance.

NSP Series Industrial UPS



# Aplab

[www.aplab.com](http://www.aplab.com)

NSP Industrial UPS series from Aplab is a true on-line, digitally processed double conversion Uninterruptible Power Supply system that provides continuous, clean, regulated power for critical AC loads. Designed specifically for process control and industrial applications, the NSP Series utilize state of the art PWM technology, incorporating high power IGBT semiconductors, and digital control for enhanced communications, monitoring, control and diagnostics capabilities. The NSP series also include LCD Matrix Data Logger in the front assures user-friendly operation. Design topology enables N+1 Parallel Operation for 100% reliable clean power feeding critical loads.

## Performance

- Designed for powering critical Industrial and IT systems
- DSP controlled IGBT based PWM technology
- Design topology enables N+1 parallel redundancy
- Industrial grade high speed CAN bus communication
- User Friendly Matrix LCD and LED mimic front control and digital monitoring
- Fully rated make before break maintenance bypass operation
- Optional break-less load transfer via static switch
- Low harmonic distortion
- High crest factor tolerance and dynamic stability
- Lower TCO
- Continuous full rated power at ambient as high as 45°C
- N+1 Parallel operation of UPS without any common hardware
- Advanced Communication Capability (RS485/Modbus/SNMP)
- High branch fuse clearing capacity
- On-line battery bank test without load disconnection
- Compact, elegant, and light weight enclosure
- Easy installation with wheels for maneuverability and front bottom terminals

## Optional

- Isolation Transformer at Line Input
- Input Circuit Breaker 50 kA
- 3 Quadrant IGBT Rectifier to Handle Regenerative Loads
- 12 Pulse Rectifier
- Lower DC Bus Voltage
- Field Implementable NSP Paralleling Kit
- Parallel Operation with One Common Battery Bank
- Remote Status Panel
- Bypass Line Equipment:
  - Servo Controlled Voltage Stabilizer (SCVS)
  - Constant Voltage Constant Frequency (CVCF) Stabilizer
- Front access
- Panel color
- N+1 scalability

- 1 The system panel shows the current state of operation. Alarm and indication LED displays possible faults and alarms.
- 2 Emergency switch to instantly disconnect power to your critical loads.
- 3 The keypad is used to view system measurements and interact with the system including displaying event logs.

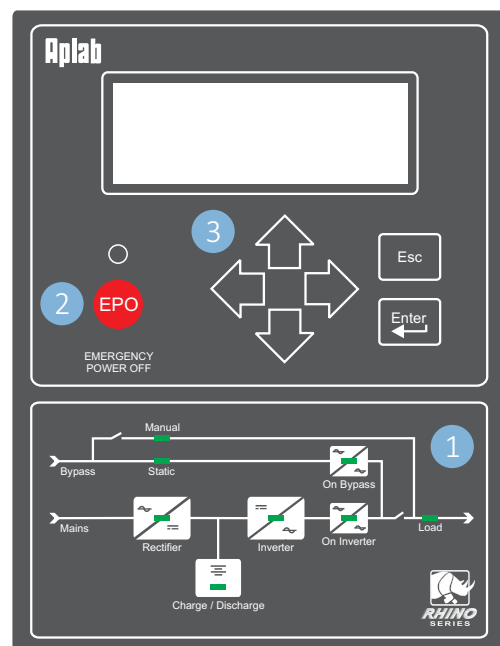
## Flexibility and Scalability via N+1 Parallel Operation

Parallel Redundant NSP series are designed for your mission critical loads. In N+1 configuration, multiple same-sized NSP modules can be paralleled to share the load. Clean UPS power required for user's mission critical load is ensured, and transfer to the utility supply is limited. Your critical loads are protected from the variations and outages in the utility supply that are common in harsh environments. Critical industrial load need scalable parallel redundant systems .



## Battery Care System

Back-up batteries are kept fully charged by the built-in rectifier. On commercial mains power failure, NSP uses the stored energy in the battery to power your loads. Proper battery care is critical to ensuring seamless UPS operation under emergency conditions. NSP series UPS battery care system consists of a series of functions designed to optimize battery management and achieve the best performance and operating life possible. NSP is compatible with different battery technologies: vented open lead acid, VRLA AGM, Gel, Ni Cd, and Lithium ion.



## Technical Specifications

MODELS *	NSP 1005	NSP 1010	NSP 1015	NSP 1020	NSP 1030	NSP 1040	NSP 1060	NSP 1080	NSP 1100
<b>INPUT</b>									
Nominal Voltage	400 - 415V AC three-phase								
Voltage Tolerance	415V +10% / -15%								
Frequency	47 - 63 Hz								
Soft-start	0-100% in 45 sec								
Technology	32-bit microprocessor with CAN bus communication								
Standard Equipment	Split Bypass								
<b>OUTPUT</b>									
Nominal Power (kVA)	5kVA	10kVA	15kVA	20kVA	30kVA	40kVA	60kVA	80kVA	100kVA
Active Power (kW)	4kW	8kW	12kW	16kW	24kW	32kW	48kW	64kW	80kW
Number of Phases	1 Phase								
Nominal Voltage	220-230-240V AC Single-Phase +N (selectable)								
Static Stability	±1%								
Dynamic Stability	±5% 10ms								
Voltage Distortion	<2% with linear load / <5% with non-linear load								
Crest Factor	3:1								
Frequency Stability on Battery	0.05% Hz								
Frequency	50Hz								
Overload	125% for 10 min, 150% for 60 sec.								
Remote Signals	Dry contacts								
Communications	RS485 / Modbus								
Colour	RAL 7807 (Structured Black) (other Colour on request)								
Features	In-built output Isolation Transformer Paralleling kit (optional) Paralleling UPS modules to the load bus without load interruption Field upgradeable UPS capacity Event log Battery online test facility Battery back-up time Common Battery Bank Configuration (optional) Independent Battery Bank configuration Input Isolation Transformer (optional) 12 Pulse Rectifier (optional) IGBT Rectifier (optional) ***								
<b>BYPASS</b>									
Nominal Voltage	230-240V Ac single-phase +N								
Nominal Frequency	50Hz								
<b>METERING</b>									
Input Voltage (L-N), Output Voltage (L-N), Output Current, Battery Voltage, Battery charging current, Battery discharging current, Battery %, Output Frequency, Bypass Voltage									
<b>ENVIRONMENTAL</b>									
Operating Temp.	0 to 45°C								
Storage Temp.	-10°C to +70°C								
Relative Humidity	95% RH Non condensing								
Altitude	<1000m without power reduction, >1000m with reduction of 0.5% per 100 meter								
Noise level at 1 meter	60dBA								
Enclosure Protection	IP20 (IP21 to IP54 optional)								
<b>BATTERY</b>									
DC Voltage	360V								
Type	VRLA / AGM / (Life PO4 option available)								
Residual Ripple Voltage with Battery	< 1%								
Typical Charge Current	0.2 x C10								
<b>DIMENSIONS**</b>									
Height (mm)	1000			1325			1650		2000
Width (mm)	500			600			700		1150
Depth (mm)	800			800			1000		900
<b>EMI/EMC COMPLIANCE</b>									
Safety IEC EN 62040-1, IEC EN 62040-3									

\* Also available with Redundant Parallel Configuration.

\*\*Dimensions will vary as per Enclosure Protection.

\*\*\* Contact us for IGBT Rectifier Specifications.

+ Specifications are examples. All parameters are customizable.

+ Please contact us for Three Phase Systems.

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