

TECHNOLOGY:	TRUE ON LINE Double Conversion
CLASSIFICATION:	VFI-SS-111 (EN 62040-3)
POWER RANGE:	30 ÷ 120 kVA ("Hot Swap")
No. OF PHASES:	3:3



■ APPLICATIONS

- Large computer networks
- Data processing centres
- Clusters
- Medical and industrial equipment
- Tele-information systems
- Automation and control systems

■ SPECIFICATION

Three-level IGBT Inverter. Up to 6 units parallel work, for capacity or redundancy

True On-Line Double Conversion Technology provides perfect output voltage parameters, regardless of the input voltage and the load.

Modular design provides the ability to easily expand capacity and exchange power modules in "HotSwap". Scalable power in steps of 30kVA / 27kW in the range of 30 - 120KVA. N+X redundancy.

Three-Level IGBT Inverter ensures excellent parameters and higher efficiency in wide range of load.

Automatic Bypass (Static Switch) provides continuous load supply in critical conditions, such as overheating or inverter failure.

Maintenance Bypass (uninterruptible) enables service handling without necessity of shutting off the load.

Separate supplying of Bypass line provides reserve power source for load even when the UPS is damaged or main line protection is affected.

Communication:
RS-485,RS-232, MODBUS for UPS and load supervision and control,
DryContact for communication with BMS systems
Ethernet interface for computer-network communication with SNMP protocol support

High efficiency in Online mode(>96%) reduces heat dissipation and limits power consumption costs. Smart sleeping mode of power module for efficiency increasing.

ECO-Mode gives possibility of significant cost reduction and in practice stops heat emission.

Configurable number of batteries and charging current allows user to set required autonomy time.

Automatic diagnostics and fully digital control (2x 32bit DSP) ensure that components and parameters are controlled without user interference.

High input power factor 0.99 reduces the value of current drawn from the mains.

High output power factor 0.9 allows load of versatile characteristics to be powered.

Wide input voltage range for normal mode ensures that the batteries are used only if necessary - in fact, only when the input voltage is completely lost.

Wide input frequency range for normal mode gives possibility for seamless operation with different power sources - as mains or the generating set.

Simple maintenance microprocessor control and 24h/7 operation mode means that the unit doesn't require any user handling.

Advanced Battery Management gives reliability of optimal charging and using batteries, elongates its lifetime and reduces operating costs.

Excellent voltage quality is provided by 3-level IGBT inverter and high-frequency PWM technology; the output voltage has always stable parameters, independent of input disturbances and the load characteristics.

High overload capacity indicates power reliability during transient conditions and high resistance on handling faults.

User configurable settings enable user to set nominal voltages, frequency, preferred operating modes.

Remote Emergency Power Off port (REPO) provides remote shut off of the load and UPS in case of emergency.

Redundancy configurations:
 Parallel for capacity or redundancy,
 Hot Standby

NHS

Model	NHS 120
Capacity kVA / kW	30 / 27 - 120 / 108
Number of phases in:out	3:3
Topology	True On Line Double Conversion, rectifier and inverter with IGBT technology, SPWM Controlled without transformer
Type	Modular design, with Hot Swappable power modules
Input	
Voltage	380 / 400 / 415 VAC
Voltage range	-40% ÷ +25 %
Frequency	50/60 Hz
Frequency range	-20% ÷ +20 %
THDi	<2.5%
Input power factor	≥ 0.99
Output	
Voltage	380 / 400 / 415 VAC
Voltage regulation static/dynamic	±0.5% / ±2%
Frequency	50/60 ± 0.01 Hz
Overload capacity (Inverter, pf=0.9)	110% - 60 min., 125% - 10 min., 150% - 60 sec., >150% - 200msec.
Short-circuit resistance	340% of nominal voltage for 200 msec.
Efficiency	>96%
THDu linear	<0.5%
THDu nonlinear	<1%
Eco mode efficiency	99%
Crest factor	3:1
Batteries	
Type	Maintenance free, sealed VRLA AGM
Battery start up	yes
Configurable batteries	36 / 38 / 40 / 42 / 44 pcs.
Charging	3 – 8 hours up to 90% of capacity, in accordance with DIN 41773
Weight and dimensions without batteries	
Dimensions of UPS (WxHxD)	600 x 1400 x 980 mm
Weight of UPS 120kVA	250 kg
Communications	
Operation mode indicators	LCD touch display, LED indicators, sound alarm
Communication	RS-232, RS-485, Dry Contact, SNMP slot, MODBUS RTU/ASCII, REPO, parallel work connector, genset interface
Environmental	
Noise Level depending the load and temp.	< 55 dB (A)
Operating temperature for UPS	0 °C ÷ 40 °C
Recom. operating temperature for UPS	15 °C ÷ 25 °C
Storage temperature	- 20 °C ÷ 40 °C
Humidity	0 ÷ 95 % (non condensing)
Certifications	
Standards	CE, EN 62040-2:2006 (EMC), EN 62040-1:2008 (LVD)
Options	
- SNMP Web	- REPO
- Environmental sensor (EMD)	- External Maintenance Bypass
- Battery Compensation Kit	- External Battery Cabinets

