

TECHNOLOGY:	TRUE ON LINE Double Conversion
CLASSIFICATION:	VFI-SS-111 (EN 62040-3)
POWER RANGE:	50 ÷ 500 kVA
No. OF PHASES:	3:3



### ■ APPLICATIONS

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

### ■ SPECIFICATION

Up to four unit 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 topology with HOTSWAP modules** - possibility to extend UPS up to 200kVA in one case without any interruption to the load. Hot swap modules 50kVA provides very low MTTR which brings to the customer huge reliable of whole system.

**Rectifier and Inverter SPWM IGBT** - lower cost - simple hardware circuit - high IGBT utilization - excellent THDi and Input Power Factor performance.

**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.

**Power distribution system compatibility** – UPS works in different distribution system like: TN, TN-S, TN-C, TN-C-S, TT

#### Communication:

**Modbus, RS-232, USB** for UPS and load supervision and control,  
**Dry Contact** alarm indicators; work with BMS systems,  
**SNMP** integration with systems management network NMS,

**High efficiency** (>96%) reduces heat dissipation and limits power consumption costs.

**LCD Control Panel** displays UPS and power parameters as well as hundreds of useful information.

**Small dimensions** - requires small area for unit operation.

**Modular design** – fast maintenance and short MTTR.

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

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

**High output power factor** 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 specialized 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 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 shutting off the load and UPS in case of emergency.

**Configurable** batteries quantity and charging current – allows user to set required autonomy time.

#### Redundancy configurations:

- Parallel for capacity or redundancy,
- Hot Standby

## HS

Model	HS 105		HS 205		HS 305		HS 505	
Power	50 kVA	100 kVA	150 kVA	200 kVA	250 kVA	300 kVA	450 kVA	500 kVA
Number of phases in:out	3:3							
Input								
Voltage	380 400 / 415 VAC							
Voltage range	-43 % ÷ 25%							
Frequency	50/60 Hz							
Frequency range	-20% ÷ 20%							
THDi	<3%							
Input power factor	≥ 0,99							
Output								
Voltage	380 / 400 / 415 VAC							
Voltage regulation static/dynamic	±1% / ±2%							
Frequency	50/60 ± 0,05 Hz							
Overload capacity	110% - 60 min, 125% - 10 min., 150% - 60 sec., >150% - 200 ms							
Efficiency	>96%							
Eco mode efficiency	99%							
Crest factor	5:1							
Batteries								
Type	Maintenance free, sealed VRLA AGM							
Cold start	yes							
Configurable batteries	36-44 psc. 12V							
Charging	3 ÷ 8 hours up to 90% of capacity							
Weight and dimensions								
Dimensions of UPS (WxDxH)	600 x 980 x 1150 mm		650 x 960 x 1600 mm		650 x 960 x 2000 mm		1300 x 1100 x 2000 mm	
Weight of UPS	165 kg	210 kg	305 kg	350 kg	445 kg	490 kg	855 kg	900 kg
Communications								
Operation mode indicators	Touchable 7 “ LCD display, LED indicators , sound alarm, LCD in each power module				Touchable 10 “ LCD display, LED indicators , sound alarm, LCD in each power module			
Communication	RS232, RS485, MODBUS RTU/ASCII, USB, Dry Contact, SNMP , REPO, parallel slots							
Environmental								
Noise level depending the load and temp.	< 62 dB (A)							
Operating temperature for UPS	0 °C ÷ 40 °C							
Recommended operating temperature for UPS and batteries	15 °C ÷ 25 °C							
Storage temperature	- 15 °C ÷ 55 °C							
Humidity	5 ÷ 95 % (non condensing)							
Certifications								
Standards	EN 62040-2:2005, EN 62040-2:2006, EN 60950-1, CE							
Options								
<div><div><div>- SNMP card</div><div>- Uninterruptible External Maintenance Bypass</div><div>- Modbus card and Dry Contact</div></div><div><div>- Remote status panel</div><div>- Software</div><div>- Battery cabinets or rack.</div></div><div>-</div></div>								
*Option								

