

DS POWER SH

10-20kVA

3-Level Technology

IGBT Rectifier

DSP Control



DS Power SH Online UPS has emerged as an affordable alternative to the DS Power H model with its compact and small-footprint design. It stands out with its ergonomic design that occupies less space with the same power as the battery cabinet that can be positioned one above the other with the UPS. It features the latest DSP technology, which is programmed to suit a wide variety of electrical environments without impending performance. With the 3-Level topology, efficiency, reliability and functionality are elevated to levels unattainable with legacy analog technology. This technology does not only create significant increase in MTBF, but the capability of DSP to accurately process signals at very high speed permits all the UPS subsystems to be controlled with greatly increased precision.

GENERAL SPECIFICATIONS

- Small footprint
- Transformerless UPS topology
- 3 DSP controlled modular structure
- Separate main control board advantage for rectifier and inverter
- 3-Level technology and fully digital structure
- Less electronic components and SMD technology
- Low input current total harmonic distortion (THDi)
- High input power factor
- High efficiency up to 94%
- Selectable input/output voltage/frequency range
- Static and maintenance by-pass switch
- Optional 0.8 and 1.0 output power factor (PF) option
- Cold start function
- Compliant with IEC EN62040 directive
- Conforms to CE, TSE and GOST standards
- ISO9001, ISO14001 compliant production
- Advanced control at the input
- 3 level battery protection
- Temperature compensated charge system
- Output current limitation
- Output DC leakage protection
- Output short circuit and overload protection
- External REPO switch input
- 512 events memory (46.000 alarm)
- Clock and calender (battery supported)
- Automatic battery test, remaining battery time indicator
- 1 RS232 serial port and 3 dry contact outputs
- Optional SNMP, MODBUS and Remote Monitoring Panel
- Viewing device operating parameters
- Advanced remote control features
- User and central service passwords protected security
- 2 years warranty

TECHNICAL SPECIFICATIONS

MODEL	DS310SH	DS315SH	DS320SH
Power (kVA)	10	15	20
INPUT			
Voltage	380/400 VAC 3P + N + G \pm 20%		
Frequency	50Hz / 60Hz, \pm 10%		
Power factor (at 100% load)	\geq 0.99		
THDI (at 100% load)	\leq 4% (depends on mains input conditions)		
By-pass voltage	380/400 VAC 3P + N, 4 Wires, \pm 10%		
Voltage distortion	\leq 10%		
Protection	Fuses, Voltage & Frequency Tolerance		
OUTPUT			
Power (kW)	9	13.5	18
Power factor (*)	0.9		
Voltage	380/400 VAC 3P + N, \pm 1%		
Frequency	50Hz / 60Hz		
Frequency tolerance	Line synchronized: \pm 2% / Free running: \pm 0.1%		
Efficiency (at 100% load)	94%		
Crest factor	3:1		
Overload protection	100% - 125% load: 10 min, 125% - 150% load: 1 min, - > 150% load: by pass		
Protection	Fuses, Advanced short circuit, Voltage tolerance, DC balance, Regenerative load, Current limiting		
Voltage THD	\leq 2% (at 100% linear load)		
BATTERIES			
Type	VRLA AGM / GEL / NiCd		
Number of batteries	60 (\pm 30) batteries		
Float charging voltage	\pm 405 VDC (adjustable)		
End of discharge voltage	\pm 300 VDC (adjustable)		
Battery cabinet	External (attached cabinet at the bottom of UPS)		
Battery ambient temperature	25°C		
Battery protection	3 level alarms, Battery fuses, Charging current limit, Temperature compensation (optional)		
Automatic battery test	Standard: every 72 hours (adjustable)		
GENERAL			
Standards	EN62040-1, EN62040-2, EN62040-3		
User interface	4 lines LCD panel, Mimic leds, 5 vector buttons, buzzer		
Indicators	P-N voltage, P-P voltage, Current, Power, Crest Factor, Frequency, PF, Service Time		
Advanced	Self diagnostics, 3 maintenance time indicators, Calibration over RS232, operating hour meter		
Communication	RS232 serial port, 3 programmable dry contact outputs		
Inputs	EPO input		
Genset kit	Standard (programmable)		
Software	Standard T-Mon UPS Management Software (3 clients + 1 server management)		
Alarm logging	Standard: with time & date 512 events		
Protection	Power module over temperature, Over current, Temperature high alarms		
Operating temperature	0°C - 40°C		
Protection degree	IP20		
Relative humidity	90% max. (non-condensing)		
Altitude	< 1000m. above sea level		
Acoustic noise	< 55 dBA		< 57 dBA
Weight (kg)	47.5	49.5	51
Dimensions (mm) HxWxD	700x300x770 (without batt.) / 1170x300x800 (with 7-9ah batt.)		
OPTIONS			
Different input / output voltage	Please ask		
Adaptors	SNMP, MODBUS, RS485, Remote panel		
Software	T-Mon Admin Multi UPS monitoring 10-50-100-200 clients, T-Mon Server 50-100-200 clients		
(*) Ask for 0.8 and 1.0 power factor			