



10 - 20 kVA

DS POWER SH SERIES

UNINTERRUPTIBLE POWER SUPPLIES

3 phase in / 3 phase out

IGBT RECTIFIER DSP CONTROL

The new Tescom DS Power SH Series UPS appears as a cost effective and smaller footprint UPS. Using the 3 level inverter topology and control system, this series UPS have the latest DSP technology to be programmed to suit a wide variety of electrical environments without impeding its performance. Efficiency, reliability and functionality are enhanced to levels unattainable with the old analogue technology. This technology does not only create significant increase in MTBF, but the capability of DSP to accurately manipulate signals at very high speed permits all the UPS subsystems to be controlled with greatly increased precision.

GENERAL SPECIFICATIONS

- Smaller footprint
- 3 Level topology
- Transformerless UPS topology
- Low input current total harmonic distortion (THD)
- High input power factor
- High efficiency up to 94%
- Cold start function
- Static and maintenance by-pass switch
- Output short circuit and overload protection
- External REPO switch input
- 192 events memory (192 events 14.400 alarms)
- Clock and calendar (battery supported)
- Automatic battery test ,remaining battery time indicator
- Temperature compensated charge system (optional)
- 1 RS232 serial port and 3 dry contact outputs (+2 optional)
- 3 DSP controlled modular structure
- Optional SNMP and MODBUS adaptors
- Full digital structure
- Fewer electronic components
- Output current limiting
- Advanced diagnostics for the input
- Selectable input/output voltage/frequency range
- Output DC leakage protection
- Separate DSP for PFC 3 level battery protection
- Charge / discharge current indicator
- Advanced remote control features
- Manufactured under CE,ISO9001,ISO14001,TSE and GOST international standards
- 10 years spare parts support
- 2 years warranty





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TECHNICAL SPECIFICATIONS



MODEL	DS310SH	DS315SH	DS320SH
Power (kVA)	10	15	20
INPUT			
Voltage	380/400 VAC 3P + N + G $\pm 20\%$ (415VAC +15%, -25% optional)		
Frequency	50Hz / 60Hz, $\pm 5\%$		
Power factor (at 100% load)	≥ 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, $\pm 1\%$ (415 VAC optional)		
Frequency	50Hz / 60Hz		
Frequency tolerance	Line synchronized: $\pm 2\%$ / Free running: $\pm 0,1\%$		
Efficiency	94,5%	94%	93%
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	$< 2\%$ (at 100% linear load)		
BATTERIES			
Type	VRLA AGM / GEL / NiCd		
Number of batteries	60 (± 30) batteries		
Float charging voltage	± 405 VDC (adjustable)		
End of discharge voltage	± 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, 4 standard DRY contact alarm relays		
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	< 1000 m. above sea level		
Acoustic noise	< 55 dBA	< 57 dBA	< 61 dBA
Weight (kg)	47.5	49.5	51
Dimensions (mm) HxWxD	700x300x770 (without batt.) / 1000x300x800 (with 5ah 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		
Parallel operation	Not Available		