

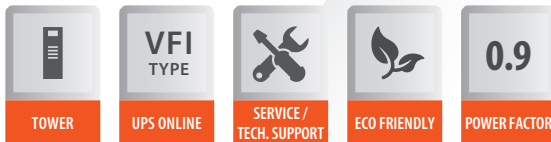
DS POWER SH

10-20kVA

3-Level Technology

IGBT Rectifier

DSP Control



Tescom DS Power SH 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
- 2 years warranty

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 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 (1 optional) | 0.9 (0.8 and 1.0 optional) | |
| 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 (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, 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 | < 1000m. above sea level | | |
| Acoustic noise | < 55 dBA | < 57 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 | | |