Three Phase Input & Output UPS
Smart Online UPS
True Double Conversion

S33 Plus Series
(15KVA-250KVA)

- Dalton embedded High S33 series plus double conversation technology with a very advanced design criteria improves the performance of components, minimizes the quantity of raw material with minimum space, fewer components and controlled levels of noise pollution, the S33 Series has a significantly reduced environmental impact. and reduces the number of semiconductors thus reducing servicing time and ownership costs. process control devices and machine tooling, critical infrastructures, Medical equipment, industrial sector and smart loads. Highly power protection. The inverter protections prevents the direct feed-through of the battery potential into the critical load and allows a very high rejection ratio of the power supply disturbances .

- **Short circuit sopper protection (Three phase short . Phase to neutral short & Phase to phase short) Auto recovery.**
- **High Efficiency 95%.**
- **Maintenance Bypass Switch.**
- **Dual Input.**
- **Charge / discharge Current Indicator.**
- **Generator-friendly design & compatibility.**
- **Batteries smart management charge discharge.**
- **Online double conversion topology.**
- **ECO mode and EPO function.**
- **Intelligent RS232/RS485 communication port.**
- **Parallel operation up to 6 units (optional).**
- **SNMP communication port (optional).**
- **Intelligent battery management to prolong battery lifecycle.**
- **Control designed to withstand several loads.**
- **15 Years spare parts supply.**

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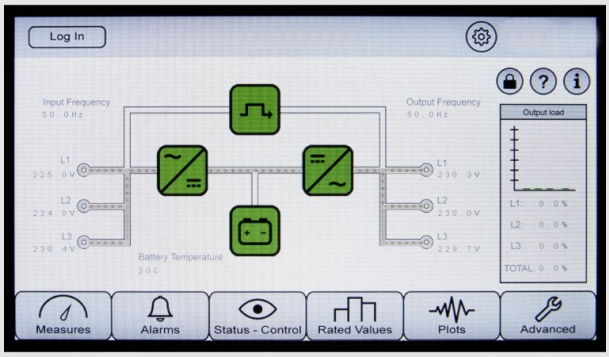
Advanced Graphic Touch LCD

Dalton S33 series precise graphic backlit display providing real time status and parameter readings via its own DSP controller.
The EF home screen shows all modular elements of the UPS in a clear and precise manner as well as an overview of the system operation.
An easy to navigate control pad allows for a complete and comprehensive overview of measurements,



Overall Frontage Maintenance Supported By Design

Front Access Design for Terminal Wiring and Easy Maintenance

The S33 series has the most advanced built in management and maintenance system (MMS).
it uses advanced front maintenance design.
convenient for installation and maintenance.
It considers operability of site maintenance for structure design,
The MMS has dynamic self-diagnostics and analyses all the internal sub assemblies, providing the engineer with recommendations on what settings need adjustment and calibration. Fast PCB replacement with all settings and adjustments are easily uploaded via the engineer's
laptop. The MMS system built into the UPS reduces the mean time to repair (MTTR) by almost half compared to other UPS systems. Four service meters track critical areas within the UPS alerting that maintenance is required.

Parallel Configuration

S33 is characterized by great flexibility that allows it to satisfy the installation requirements, even if load gets higher or a redundancy level is needed. The UPS is able to synchronize with an external source or with an external switch via Load Bus Sync. The Parallel configuration is available up to 6 units, allowing users to increase the power according to effective load requirement.

Intelligent Battery Management & Protection

Calculates true battery autonomy and remaining battery backup time during utility outage. • Measures the volts per cell of the battery system and compensates for temperature and load • During UPS startup, the SBM is programmed with specific battery information
• Programmable features allow the user to select the frequency and type of battery tests that are performed. Frequency range can be from once per week to annually. Test type range can be from deep cycle to 3-min discharges. • All tests logged in the UPS events menu and any failure is reported on the UPS front alarm panel.
• All tests done automatically with the UPS online.
• Manual tests can be performed at any time.
• Remote programming and configuration is available through the S33 Series UPS protection software.

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Advanced IGBT Technology Rectifier and Inverter

The S33 series is designed with internal DSP architecture, with separate DSP for Rectifier, Inverter and display. With the use of a CAN Bus System, other modules can be added easily to update or configure the system for multiple use design. The modular DSP design future proofs your UPS: • Latest features can be easily upgraded • Multiple applications for Lifts, Medical, Solar IGBT rectifier and inverter module Rectifier of this series UPS uses IGBT three phases rectifier bridge with full digital control, and it can transfer the voltage of three phases of main power to continuous DC voltage. Design power is inverter with full load and supplies maximum

- charging current for battery.
- Rectifier has the function of power factor

calibration, which can reduce the harmonic distortion of main power to 5% and less. It can ensure that, no matter how is the load, the rectifier cannot cause voltage distortion of main power and can avoid overheat of cable caused by overcurrent of harmonic wave.
between inverter output and static bypass power supply is realized by controlling circuit through inverter. When static bypass power frequency is within allowed synchronization range, inverter control circuit always let the inverter output frequency trances static bypass power frequency

Accessory dry contact programmable
This card provides six output dry contacts and six input contacts. The dry contacts are programmable and upon request, can be customized.

RS485 port

RS485 ports with JBUS MODBUS protocol.

2nd slot accessory cards
This slot can accommodate a relay Board or SNMP interface.

SNMP interface
Ethernet network adapter with TCP/IP, HTTP and SNMP protocols. The Simple Network Management Protocol, is a universal protocol communication standard used to monitor any device on the network with a simple control language.

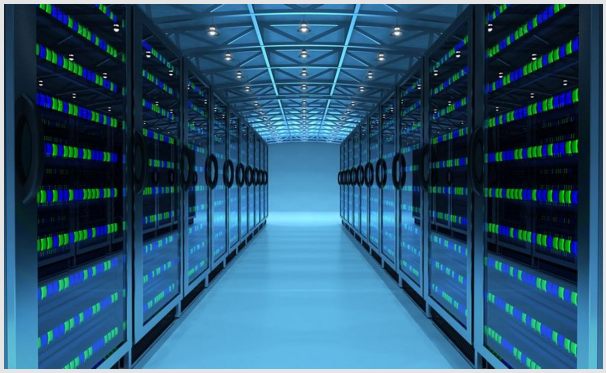
Efficiency

As UPS systems are often viewed as one of the biggest culprits regarding energy loss in power distribution, it makes sense to consider efficiency, along with reliability, as a primary factor in the selection of a UPS.

Advanced Communications

Dalton S33 Series comes with internal and external SNMP options with full environmental features. The UPS has a specially designed USB memory stick to record the internal history of the system, providing an easy solution for analysing performance and operation. This also provides an easy way to send the information of the UPS faults to the Dalton Technical team for analysis if there are any concerns with the UPS operation.

- Four fully programmable dry port relays as standard upgradable to twelve, with over 40 selectable alarms.
- Dedicated communication port for service engineer diagnosis and adjustment via laptop or notepad.
- Emergency Power Off (EPO) connection for external switching control.
- External temperature input monitoring.



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Technical Specifications

Part Number	S33L15	S33L25	S33L30	S33L37.5	S33L50	S33L75	S33L100	S33L150	S33L200	S33L250
Rating Power	15 KVA 12000W	25 KVA 20000W	30 KVA 24000W	37.5 KVA 30000W	50 KVA 40000W	75 KVA 60000W	100 KVA 80000W	150 KVA 120000W	200 KVA 160000W	250 KVA 200000W
INPUT										
Rated voltage	3 x 380VAC/400VAC/415VAC (3Ph + N)									
Voltage range	165VAC ~ 280VAC (Ph-N) - 285VAC ~ 485VAC (Ph-Ph)									
Frequency range	50/60 Hz ± 10 %									
Power factor	≥ 0.99									
Total harmonic distortion (THDI)	≤ 2%									
Input current-limiting	1.1 times of rated current (0.1 ~ 1.1 settable)									
Rectifier delay start	10 s (1 ~ 300 settable)									
Bypass voltage range	± 20% (settable)									
OUTPUT										
Rated voltage	380 V / 400 V / 415 VAC									
Precision	Stationary: ±1% - Transitory: ±5% (load variations 100-0-100%)									
Frequency	Synchronized with utility in mains mode; 50 / 60 Hz ± 0.1% in battery mode									
Waveform	Pure sinewave									
Power factor	0.8									
Crest factor	3:1									
Total harmonic distortion (THDV)	<2% (Linear Load) - <5% (Non-linear Load)									
Unbalanced load	100% - independent phase regulation									
Transfer time	0 ms									
Inverter overload capability	100-110% for 60 min, 111-125% for 10 min, 126%~150% for 1 min; >150% immediately shutdown									
Maintenance Bypass	Without interruption									
BATTERIES										
DC voltage	384 VDC (Based on 32pcs batteries)									
Number of battery	12VDC x 32 pcs (29~32 pcs adjustable)									
Charging current	Default 10A; Maximum 40A; 5A@ full load									
Charging Method	CC/CV									
Precision	±1%									
Battery self test	Settable periodic self-test; manually configurable test time and voltage									
SYSTEM										
Efficiency	Line mode ≥ 95%, ECO mode ≥ 98%									
Max. parallel numbers	Up to 6 units parallel									
Fully Protections	Short-circuit, overload, over temperature, overvoltage, under voltage, battery low voltage and fan failure									
Communications	RS232 / RS485 / dry contacts (standard), SNMP (optional)									
IP rating	IP 20									
Positioning	Min. 20cm rear space for fan ventilation									
Display	7'' inches LCD touchscreen									
OTHERS										
Operating temperature	0 ~ 40℃									
Storage temperature	- 25℃ ~ 55℃ (without battery)									
Humidity	0 ~ 95% (non-condensing)									
Altitude (AMSL)	< 1000 m without power reduction, > 1000 m with reduction of 0.5% per 100 m									
Noise level at 1 m	< 55 dB				< 65dB					
Dimensions (D×W×H) (mm)	630 x 250x 827			817x 302 x 1000		790x 364 x 1014		978x605x1646		
Net weight (kg)	30	45	55	59	63	69	90	270	288	389

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