



Three Phase Input & Output UPS  
Online Double Conversion UPS  
Smart UPS Pure Sinewave



**B33 Series**  
(10 –60KVA)



Dalton B33 Friendly Uninterruptible Power Supply is a combination of Dalton advanced digital Signal Processor (DSP) control online double conversion technology in accordance with VFI-SS-111 classification (as set out in standard IEC EN 62040-3) and a firm pursuit of a green manufacturing philosophy. With minimum space, fewer components and controlled levels of noise pollution, the B33 Series has a significantly reduced environmental impact. Therefore, it is feasible to design a UPS with reduced carbon footprint whilst achieving clean, continuous power for industrial and computing loads.

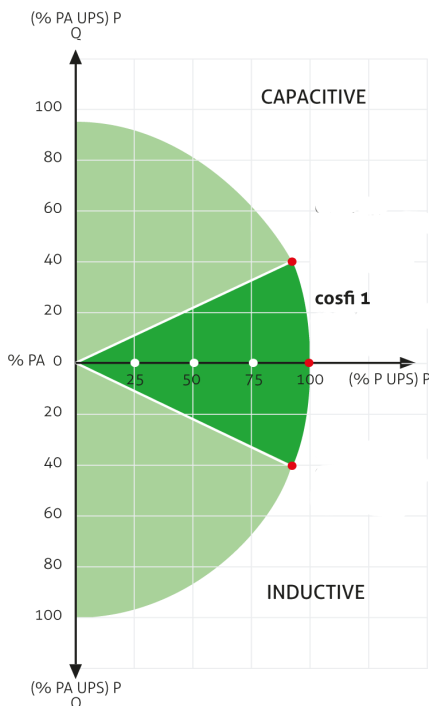
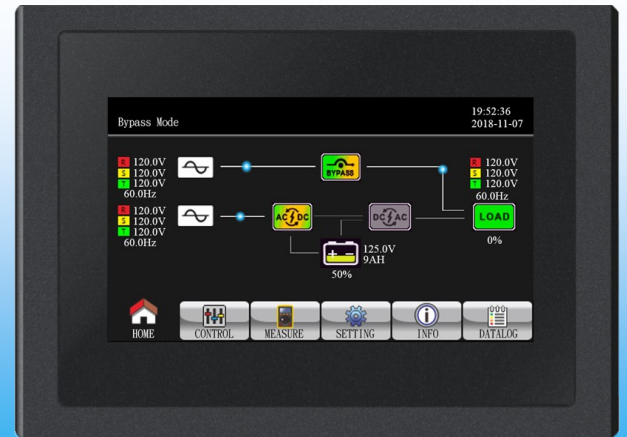
- True double-conversion technology.
- Advanced dual-core DSP control technology.
- Software configuration and online upgrade.
- Fully protected UPS (Short circuit, Over load,...).
- High Efficiency 96%.
- Emergency power off function (EPO).
- Maintenance bypass switch.
- Dual Input.
- Generator compatible.
- Active power factor correction in all phases.
- Unity output power factor 1.0
- 3 Level IGBT Technology.
- Active Power Factor Correction Technology.
- Optional SNMP Communication Port.
- Parallel operation with common battery.
- Cold start function
- LCD touch screen 5" inches.
- Smart Battery Management.
- 15 Years Spare parts Support.
- ECO mode operation for energy saving (ECO).



## Advanced control panel

Dalton B33 is equipped with a 5" LCD Touch screen which provides measurements, power history and alarms in multiple languages. You can also implement it by adding other languages if necessary.

The graphical user interface is designed with 3 levels of access (user and maintenance) to allow multiple users to access or modify only specific parameters. From the LCD display you can read and download all the event logs to analyze the UPS status and keep the UPS correctly. You can also a graphic personalization on demand.



## Flexibility

The B33 Series with its flexible configuration, performance, accessories and options, is suitable for use in a wide range of applications suitable for powering capacitive loads, such as blade servers, without any reduction in active power from 1 lead to 1 lag

On-line, Eco, Smart Active and Stand By Off operating modes - compatible with centralized power systems (CSS) applications. • frequency converter model configurable energy share sockets to preserve runtime for the most critical loads or to be activated only when mains power fails. • Cold Start to switch on the UPS even when there is no mains power present.

## IGBT Rectifier

B33 is equipped with an IGBT rectifier and is designed to provide an output power factor equal to 1. It supply loads for both leading and lagging without de-rating, and therefore it meets the needs of capacitive loads such as next generation server.

Low harmonic distortion of input current THDI equal to 3% provides greater reliability of the system.

### 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

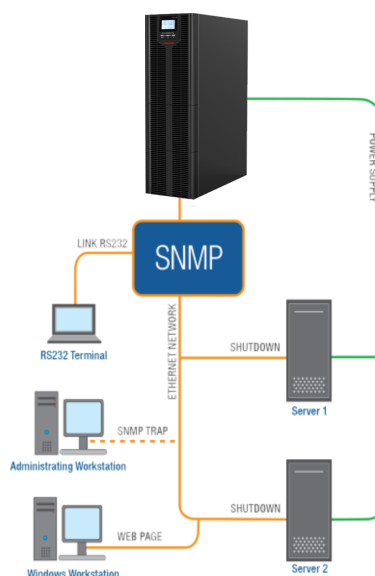
This slot can accommodate a relay Board or SNMP interface.

### 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.



## Direct Connection with Ethernet Network



## Advanced communications

- Compatible with Tele NetGuard for remote monitoring.
- Advanced multi-platform communications for all operating systems and network environments: PowerShield3 monitoring and shutdown software included for Windows operating systems 10, 8, 7, Hyper-V, 2016, 2012, and previous versions, Mac OS X, Linux, VMWare ESXi, Citrix XenServer and other Unix operating systems.
- Double RS232 serial versions, Mac OS X, Linux, VMWare ESXi, Citrix Xen Server and other Unix operating systems.

B33 provide a SNMP which is a popular protocol for network management. It used for collecting information from, and configuring, network devices, such as servers, printers, hubs, switches, and routers on an Internet Protocol network.

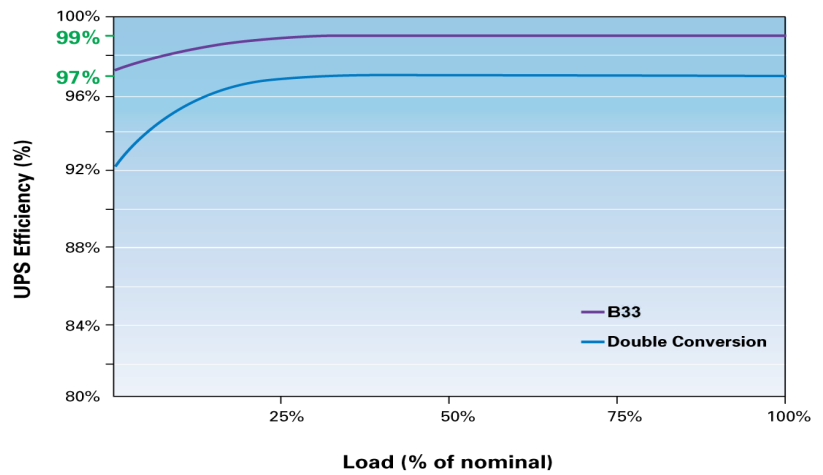
## High efficiency

### Up to 95 & 96% efficiency in double conversion

Even small increases in UPS efficiency can quickly translate into thousands of dollars, realized in more real power and lower cooling costs. Energy Saver System (B33) enables efficiency levels of over 99% across the typical UPS operating range.

In B33, load is powered securely through static bypass line with double conversion available on-demand with typical two millisecond transition time in the event of any abnormality on supply source. When operating in B33, load is protected with inherent surge suppression.

When utility power quality is high, B33 can reduce UPS power losses by 70% as it runs on double conversion only when needed.



## Fast and easy installation

- A wide range of UPS from 10 to 60 kVA with the same performance and functionality.
- Free eRULER online sizing tool to get dimensions and electrical information in advance before installation.
- Tutored UPS installation with eWIRE mobile app.
- Quickly get online product documentation by simply inputting the Serial Number.

## Easy to maintain

- Front and rear access for service
- Quickly and easily replace the dust filter conveniently located behind the front door
- Dalton service team available to make service easy and improve uptime with proper maintenance of your UPS and batteries.

## Intelligent battery care system

The B33 is provided with a three levels battery charger to optimize battery management and obtain the best performance and operating life.

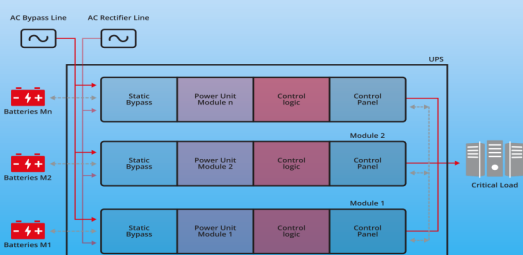
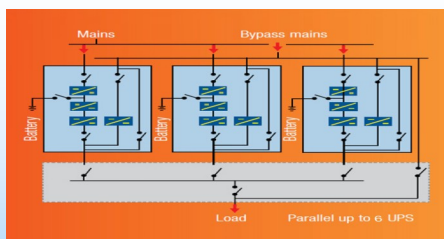
The B33 also incorporates temperature compensated charging, which monitors temperature changes and adjusts the rate of charge accordingly, to prolong battery life.

## Digital signal processor (DSP)

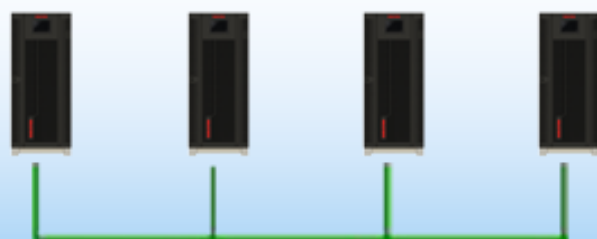
Advanced dual-core DSP (Digital Signal Processor) performance enables the high sampling rates required to achieve the appropriate bandwidth for the current and voltage controls for an efficient double conversion UPS.



## Power management



## Parallel-redundant configuration (N+1)



B33 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 4 units, allowing users to increase the power according to effective load requirement.

Model		B33K10000 10K	B33K15000 15K	B33K20000 20K	B33K30000 30K	B33K40000 40K	B33K60000 60K	
Rating Power		10KVA / 10KW	15KVA / 15KW	20KVA / 20KW	30KVA / 30KW	40KVA / 40KW	60KVA / 60KW	
Input	Rated voltage	380 / 400 / 415Vac (3Φ + N + PE)						
	Voltage range (Vac)	(-25% ~ +26%) Full load						
		228V~304Vac, load decrease linearly according to the min phase voltage						
	Power factor	≥0.99 @ 100% load						
	Frequency	40~70 Hz						
	Harmonic distortion (THDi)	< 3% at full linear load						
	Inrush current	Absent						
Output	Rated voltage	380 / 400 / 415Vac (3Φ + N + PE)						
	AC Voltage precision	±1% (linear load)						
	Power factor	1.0 (Unity)						
	Harmonic distortion (THDv)	< 1% THD (full Linear Load)						
		< 3% THD (full non-linear load according to IEC/EN62040-3)						
	Output waveform	Pure Sinewave						
	Output frequency	Synchronized with utility in mains mode, 50/60 Hz ±0.1						
	Overload capability	100-110% for 60 min, 111-125% for 10 min, 126%~150% for 1 min; >150% 200ms (Shut down safely)						
	Transfer time	AC mode to Battery mode ( 0ms )						
		Inverter to Bypass ( 0ms )						
	Crest factor		3:1 (max.)					
	Efficiency	Online mode	95%				96%	
		Eco mode	98%					
Unbalanced load		100% - independent phase regulation						
BYPASS	Voltage range	Selectable, default -20%~+15% Up limited: +10%, +15%, +20%, +25%; Down limited: -10%, -15%, -20%, -30%, -40%						
	Type of bypass	Static and Manual bypass switch						
	Overload capability	125% long term operation; 125%~130%, 10min; 130%~150%, 1min; 150%~400%, 1s; >400%,<200ms Continuously working until breaker protection (optional)						
	Frequency range	Selectable, ±1 Hz, ±3 Hz, ±5 Hz						
Battery	Part No. B33KS	Batteries	12V/9Ah	12V/7Ah	12V/9Ah	12V/9Ah	NA	
		Numbers	20pcs	(32 or 40)pcs	(32 or 40)pcs	60pcs		80pcs
	Part No. B33KH	Batteries	Depending on the capacity of external batteries					
		Numbers	Per string (32,36,38,40pcs) Adjustable					
	Charging Current		10A				15A	20A
	Charging voltage		±240VDC					
	Typical recharge time		8 hours recover to 90% capacity					
Battery type		Sealed maintenance-free lead –acid battery / Gel battery / Lithium battery / Na / NiCd						
General	Cold start	Yes						
	Parallel capability	Up to 4 Units in parallel						
	Storage temperature	-25°C ~ 55°C (without batteries)						
	Operating temperature	0°C ~ 40°C						
	Humidity	0%~95% Non-condensing						
	Altitude	≤ 1000 m, derating 1% for each additional 100 m						
	Alarm	Overload, abnormal AC input, low battery, UPS failure						
	Protections	Low battery, overload, over temperature, short circuit, Over voltage, Under voltage						
	Standards	European Directives: L V 2006/95/CE low voltage Directive EMC 2004/108/CE electromagnetic compatibility Directive Standards: Safety IEC EN 62040-1; EMC IEC EN 62040-2 C2 Classification in accordance with IEC 62040-3 ( VFI )- SS - 111						
	Noise (dB)	Less than 58dB @1 Meter				Less than 62dB@1 Meter		
	Display indicator	UPS status, Load level, Battery level, Input/output voltage, Discharge timer, and Fault conditions						
	Management	Smart RS-232/USB Supports Windows® 2000/2003/XP/Vista/2008, Windows® 7/8, Linux and MAC						
	Optional	SNMP Card/ Dry Contact AS400 Card/ CMC Card/ RS485 Card/ EMD Monitoring Device / Parallel Kit						
Protection degree		IP20						
Dimensions, W*D*H (mm) KS		350x800x722	350x900x862		350x950x1102	450x900x1400	350x850x818	
Dimensions, W*D*H (mm) KH		350x800x718	350x800x718		350x980x810	350x800x718	(KH)	
Weight (KH) Long Run Model		39	42	43	52	55	61 (KH)	
Weight (KS) Standard Model		93	141	165	225	310		