



**Three Phase Input Single Phase Output UPS**  
**Online Double Conversion UPS**  
**Smart UPS Pure Sinewave**



**B31 Series**  
(10 –40KVA)



Dalton B31 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 B31 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
- Transformer less UPS Technology
- High Efficiency 94%
- Emergency power off function (EPO)
- Maintenance Bypass Switch
- Generator compatible
- Active power factor correction in all phases
- Output power factor 0.8
- 3 Level IGBT Technology
- Optional SNMP Communication Port
- Parallel operation with common battery
- Smart Battery Management
- 15 Years Spare parts Support
- ECO mode operation for energy saving (ECO)



## Advanced control panel

Dalton B31 is equipped with a LCD 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.



### 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

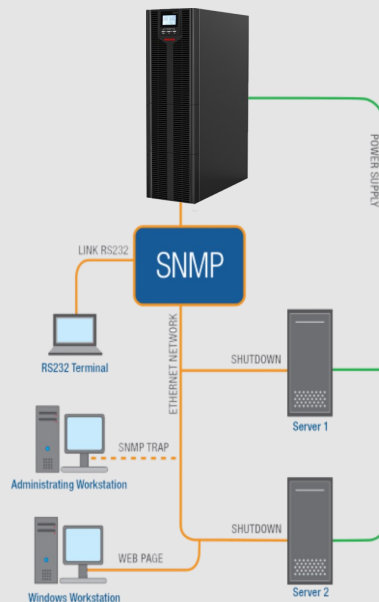
This slot can accommodate a relay Board or SNMP interface.

### 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.

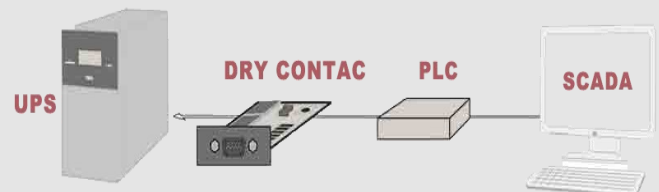


## Direct Connection with Ethernet Network



## Advanced communications

- Compatible with TeleNetGuard 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



## Flexibility

The B31 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

B31 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.

## Network

### Management Card

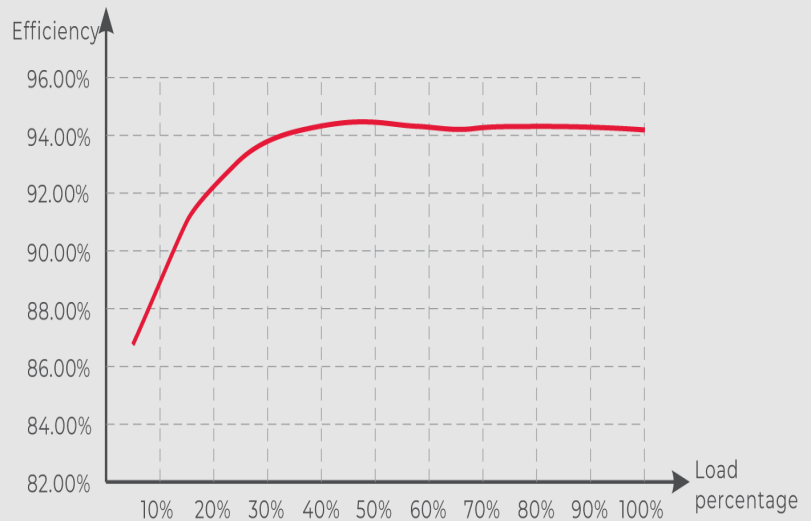
B31 provide a SNMP which is a popular protocol for network management.

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 94% efficiency in double conversion

Dalton B31 range combines the best in terms of UPS features (current rectifier, filter, charger, UPS, DS controller) to ensure the best possible efficiency and performance. The B31 UPS provides a high overall efficiency of 94%. Total protection of critical devices The UPS delivers a pure sine wave output for critical mission applications. It includes all the technical features that are necessary to effectively protect activities such as: -Industrial production sites -Datacentres -Banks - Medical laboratories



## backup time extension

In order to benefit from extended backup time in unstable or demanding environments, the B31 offers the possibility of adding battery expansion modules (optional). Different types of cabinets exist depending on the type of batteries required, but also on the configuration of the premises. The wide and flexible range of battery cabinets can meet most needs. The S versions (long backup time) are delivered with a more powerful charger, without an internal battery but with external battery packs.

## Fast and easy installation

- A wide range of UPS from 10 to 40kVA 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

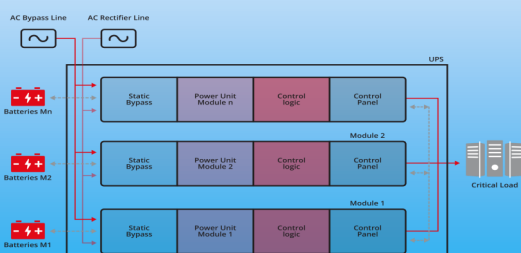
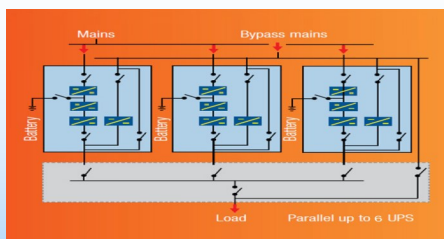
- Front and rear access for service
- Quickly and easily replace the dust filter conveniently located behind the front door
- Dalton service team available to make service easy and improve uptime with proper maintenance of your UPS and batteries

## Digital signal processor (DSP)

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 configuration



B31 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.

# Technical Specifications

Model			B3110 10K	B3115 15K	B3120 20K	B3130 30K	B3140 40K
Rating Power			10KVA 8KW	15KVA 12KW	20KVA 16KW	30KVA 24KW	40KVA 32KW
Input	Input system		3 x 380 x 400 x 415 VAC				
	Voltage range		-30% ~ +20%				
	Power factor		≥0.99 @ 100% load				
	Frequency		40~70 Hz				
	Harmonic distortion (THDi)		< 3% at full linear load				
	Inrush current		Absent				
Output	Output system		220/230/240VAC				
	AC Voltage Regulation		± 1%				
	Power factor		0.8				
	Harmonic Distortion (THDv)		≥1% THD (Linear Load) ≥3% THD (Non-linear Load)				
	Output waveform		Pure Sinewave				
	Output frequency		50/60 Hz ± 1%				
	Overload capability		10min@105%~125% load;30s@125%~150% load;500ms@>150% load				
	Transfer time		AC mode to Battery mode ( 0ms )				
			Inverter to Bypass ( 0ms )				
	Crest factor		3:1 (max.)				
	Efficiency	Online mode	94%				
		Eco mode	98%				
	Unbalanced load			100% - independent phase regulation			
BYPASS	Nominal Voltage		3 x 380/400/415 VAC (3Ph+N)				
	Voltage range		-30% ~ +20% (Adjustable)				
	Overload Capability		> 130% 1 minute (default) - Continuously working until breaker protection (optional)				
	Frequency Range		46~54Hz or 56~64Hz				
	Communication software		Windows XP/ 2003 and later version; Linux; Unix				
Battery	Standard model	Battery type	192VDC/216VDC/240VDC optional				
		Numbers	default 16PCS(External), 16/18/20PCS Adjustment				
	Charging Voltage		+/-136.5 VDC ± 10%	+/-218 VDC ± 10%			
	Long run model	Type	Depending on the capacity of external batteries				
		Numbers	20PCS External				
	Charging Voltage		+/-136.5 VDC ± 10%	+/-13.65V*N (N=16~20)			
	Charging Current		1A ~ 12A (Adjustable)				
	Typical Recharge Time		6 hours recover to 90% capacity				
	Battery type		Sealed maintenance-free lead –acid battery / Gel Battery / NiCd				
General	Storage temperature		-25°C ~ 55°C (without batteries)				
	Operating temperature		0°C ~ 40°C				
	Humidity		20%~95%				
	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, output over voltage, output low 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 40dB @1 Meter		Less than 45dB @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				
	Protection degree		IP20				
L*W*H (mm)			440× 188× 700		821 × 257× 830	821× 300× 1010	821× 370 × 1015
Weight (kg) Standard			67	89	127	230	254
Weight (kg) Long			31	45	59	75	89

