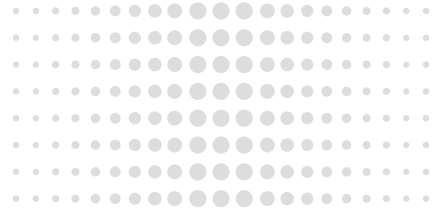


BORRI[®]
Uninterruptible Power Solutions



BORRI B8000
10kVA - 40kVA

BORRI B8000

10kVA - 40kVA



The B8000 is designed to protect against the electrical threats that frequently affect a computerised infrastructure. Most individuals believe power failures are caused by lightning strikes or an “act of God”. However this is far from the truth.



In actual fact most power failures can be attributed to everyday occurrences.

In reality, a computer suite is far more vulnerable to the contractor down the road cutting through an electric cable with his JCB, an act of vandalism or the most common causes of a computer crash, a local circuit breaker tripping.

There is a misguided belief that a UPS is there essentially to protect against power failure. Whilst this is partly true, in reality electrical threats come in far more guises than a straightforward power failure. Detailed on the following page are some of the main problems associated with mains power and how the B8000 can protect your installation.

● Brown Outs

A “brown out” occurs when the network voltage drops to a point whereby it can cause a server or PC to stop working. The effect can be the same as a full power failure, but may only last a second or two. Consider how frequently you experience the lights briefly flickering or dimming – this is caused by a brown out.

The B8000 is designed to deal with this threat by providing your servers with a fully regulated and clean electrical supply, regardless of the input voltage. It will even record when a brown out occurs so that you can investigate the cause at a later time.

○ Spikes

Spikes or power surges are temporary increases in the electrical supply voltage, often caused by the stopping and starting of electrical equipment such as the motors or compressors used in air conditioning, chiller units, laser printers, etc. Spikes have a nasty habit of locking or freezing a computer programme.

There is a significant danger that larger spikes can easily damage a power supply, therefore many quality servers have two. The B8000 incorporates high energy absorbing filters that will mitigate this threat thereby ensuring the network has a clean and regulated electrical supply.



○ Installation Simplicity

A 15kVA B8000 weighs only 90Kg (no batteries), and even its larger brother the B8000 40kVA weighs a meagre 141Kg. This means that unlike heavier UPS, the B8000 can be transported to upper floors in a lift without the necessity of reinforcing the floor.

In addition the siting procedure is made safer as the Borri B8000 has integrated wheels making it easy to manoeuvre into place. With the addition of convenient cable access and battery installation, it makes it easy to understand why we described the B8000 as compact.

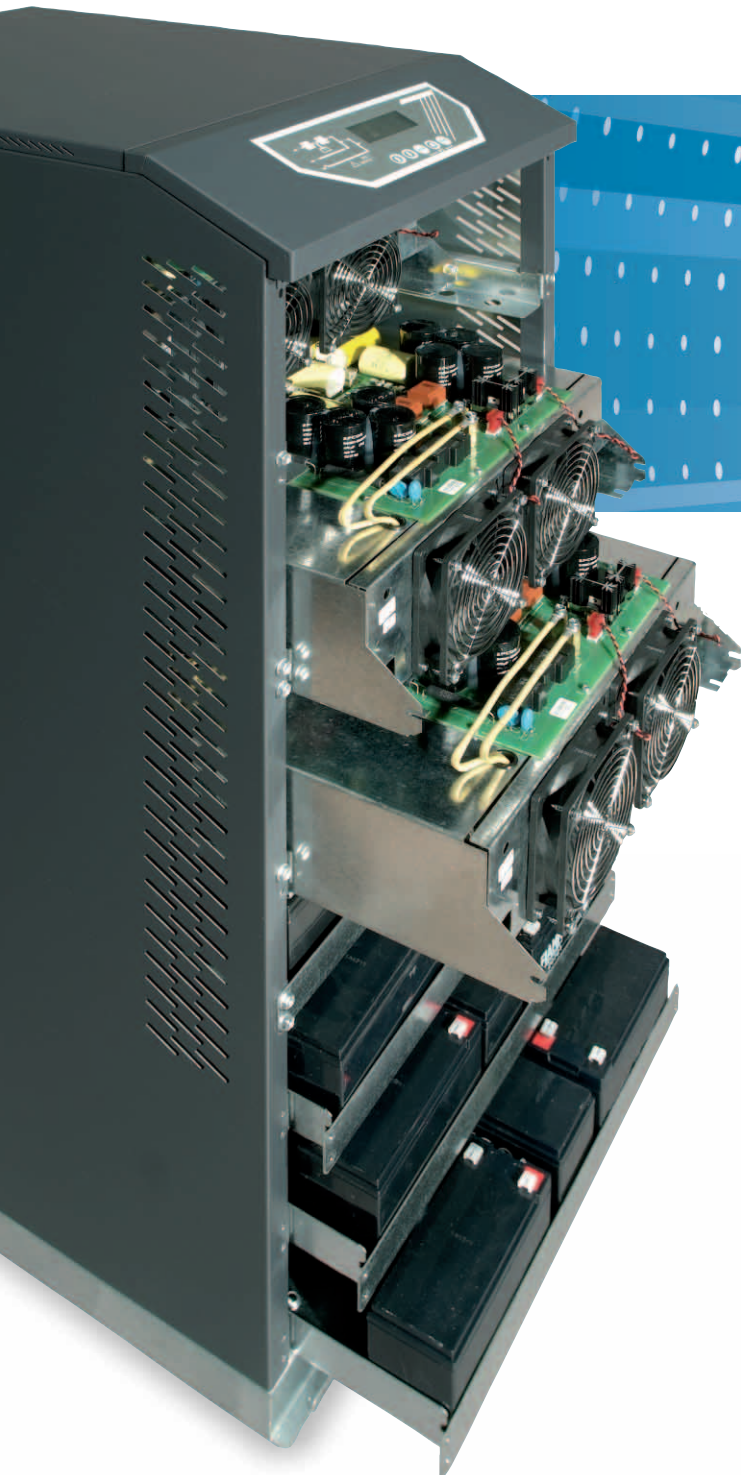
“Performance, compactness and reliability for critical applications.”



○ Configurations

Due to its cutting edge modular design, the B8000 offers the ultimate in protection for data networks, CCTV and other essential applications. Every 8000 is packed with communications options as well as optional operating modes. In normal mode the B8000 is a true double conversion UPS. Alternatively it can be configured and programmed to run as a frequency converter or in green mode as a line-interactive system, which further reduces energy costs.

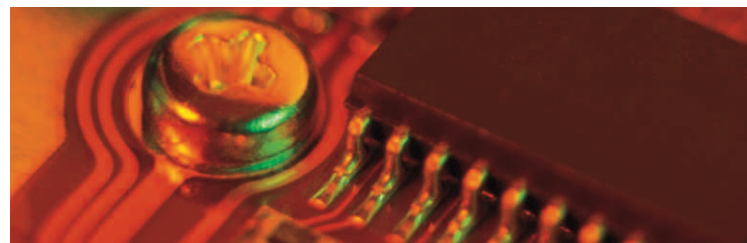
The B8000 is available from 10kVA to 30kVA in three to single phase, and from 10kVA to 40kVA three to three phase. The B8000's series true double conversion technology enables the load to run 100% of the time using a continuously rated inverter. The output voltage and frequency is regulated, cleaned and constantly monitored. Additional output filters ensures the removal of all other electrical noise, even in bypass mode.

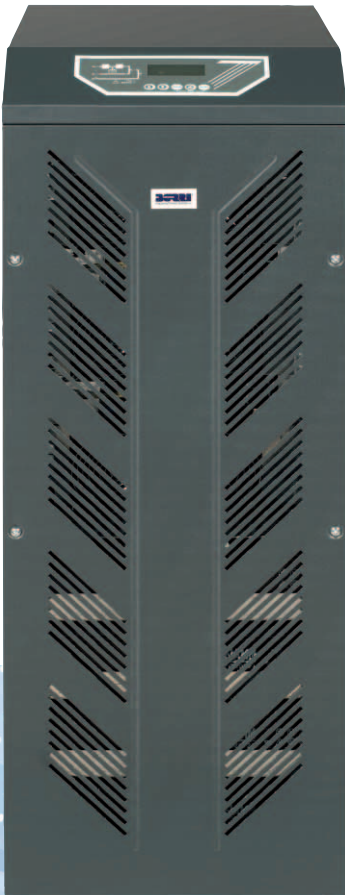


○ Reduced Power Consumption

When running in its normal On-Line mode, the B8000 offers an AC/AC efficiency of 92%, increasing to 98% in DC to AC mode. Achieving such a high DC to AC efficiency means that the batteries and your network run for longer. Should "Green Mode" be selected, the AC-to-AC efficiency increases to approximately 98%. In "Green Mode" the B8000 acts as a Line-Interactive device, so that in the event of mains failure, the load is supported within less than 2 m/s by the battery.

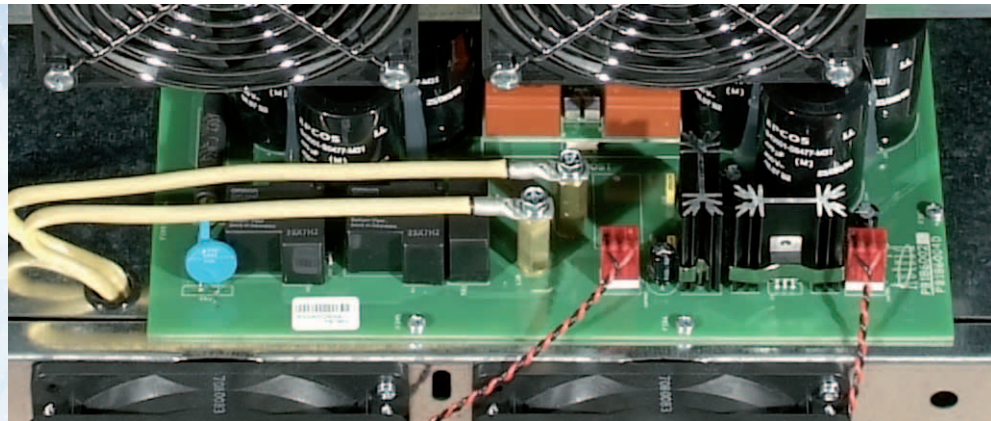
Note: When in On-Line mode there is no time delay between mains failure and battery on.





○ Serviceability

MTTR (Mean Time to Repair) means a lot more than just four letters to whoever is responsible for the efficient running of an IT network or production plant. All high intensity computer users need, and in fact demand, a low MTTR! The B8000 special features dramatically reduce service and repair times. Even before an engineer arrives on site, a problem can be diagnosed via the LCD screen or through a software interface. The modular construction and layout means that all circuit boards are housed in a series of drawers that simply slide out at the front of the machine to expose the system's components so that removal and replacement of a drawer can be done in less than 10 minutes.



○ Battery Management

To offset the unavoidable process of battery decay, the B8000 incorporates a battery management system that is calibrated in accordance with most battery manufacturers' specifications. Should at some future point you wish to change the brand of battery, the B8000 can easily accommodate it, this includes Nicads.

High temperature is destructive and causes current ripple. The hotter the battery, the less it performs. The B8000 carefully monitors battery temperature and passes data back to the charger. Should the battery get warmer, the UPS will

automatically adjust its charging regime to reduce voltage. Any major battery problem will automatically be raised as an alarm, enabling a fast remedial solution

○ Mains Friendly



The B8000 is a transformerless UPS with the IGBT input and output controlled by DSP technology (Digital Signal Processor). How do the acronyms, IGBT, DSP affect you, the user? The combination of Isolated Gate Bipolar Transistors (IGBT) and Digital Signal Processing (DSP) enables the B8000 Series to have an almost negligible effect on the mains supply, providing less than three percent harmonic distortion.

This important and beneficial feature enables the generator to be downsized by as much as 50%. This may well help the user to fall outside the financial penalty bands relating to mains pollution that many EEC countries are currently considering.



○ Standard Properties

- Hi Level diagnostics via LCD screen or lap top
- Input power factor correction .99pf
- Low audible noise
- Back feed protection
- Green Mode
- Modular Construction
- High speed temperature compensated battery charge
- Light weight and compact.
- Front access
- Made in EEC



○ Optional Accessories

- Parallel capacity/ redundancy
- Isolation transformer
- External bypass
- External battery cabinets
- Battery switch box
- Battery thermal probe
- Transformers/ autotransformers for voltage adaption

○ Blade Server Compatibility

The B8000 is suitable for almost any type of load accepting a power factor of either 0.9 leading or 0.9 lagging (many other manufactures standard is .8pf).

This makes it ideal for applications with blade services or other devices where a leading power factor can offer a serious challenge - a challenge not met by all UPS.

○ Efficiency & Eco Friendly



The use of DSP, IGBT and tricore technology ensures that the B8000 offers AC/AC efficiency of >92%, which is typically around 7% to 8% better than conventional UPS and provides savings of 2.8kW per on hour on a 40kVA installation. Imagine a 2.5KW electric fire running in your office day in and day out. This is the potential saving you could make with the help of the B8000! Because the B8000 runs so efficiency, generating less heat, the air conditioning system can be down-rated on an almost pro-rata basis. This enables additional energy savings to be made and adds up to another big PLUS for the B8000.

“The B8000 runs so efficiently, the air conditioning can be down rated.”

BORRI B8000

TECHNICAL SPECIFICATIONS

POWER - KVA	10 kVA 3/1	15 kVA 3/1	20 kVA 3/1	10 kVA 3/3/	15 kVA 3/3	20 kVA 3/3	30 kVA 3/3	40 kVA 3/3
Capacity (kVA/kW)	10/8	15/12	20/16	10/8	15/12	20/16	30/24	20/16
Dimensions WxHxD (mm)	450x1200x650							
Weight (kg)	w/o battery	90	100	100	90	100	100	141
	with battery	250	260	260	250	260	260	141
Input/output connection	Hardwired (dual input)			Hardwired (optional dual input)				
Battery	Internal or external, 360 cells						External, 360 cells	
INPUT								
Nominal voltage	220/380, 230/400, 240/415 Vac three phase							
Voltage range	-20%, +10% from nominal							
Frequency	50/60 Hz (45-65 Hz)							
Power factor	0,99							
Current distortion (THDi)	3%							
OUTPUT								
Nominal voltage	220, 230, 240 Vac single phase			220/380, 230/400, 240/415 Vac three phase				
Frequency	50/60 Hz							
Voltage regulation	±1% static; ± 2% dynamic 100% load change, <10 ms recovery time							
PF acceptable without de-rating	Lagging to 0.9 leading							
Overload capacity	101-125% for 10 min (on-line); 126-150% for 1 min (on-line); 500% for 1 cycle (bypass)							
Efficiency	>92%							
EPS (Eco-mode)	>98%							
Options	Parallel capacity/redundancy; isolation transformer; external bypass; external battery cabinets, battery switch box; battery thermal probe; transformers/ autotransformers for voltage adaptation;							
USER INTERFACE								
Front panel	Graphical LCD display, mimic with LED's and keyboard							
Standard communication ports	RS232 serial port, USB port, Emergency Power Off input, battery switch monitoring port							
Optional	Web/SNMP, ModBus, relay, modem cards; remote panel; monitoring, managing and shutdown software							
ENVIRONMENTAL								
Operating temperature	0°C - +40°C							
Storage temperature	-10°C - +70°C							
Altitude	<1000 m							
Audible noise at 1 meter (dBA)	<60							
STANDARDS & CERTIFICATION								
Marking	CE							
Safety	IEC EN 62040-1							
EMC	IEC EN 62040-2							
Test and Performance	IEC EN 62040-3							
Quality	ISO9001 :2000							

The data and text contained within this brochure are for general information only and can not be deemed as definitive, specifications can change without notice.



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