

## BORRI 4000

Three-phase, 10kVA to 250kVA

### The Global Solution of UPS for High Performance and Reliability

The BORRI 4000 brings a new level of quality and reliability to the art of power protection, offering the most advanced technology and ergonomic design. True on-line double conversion ensures your power is clean and available when you need it.

### Ease of Operation

The BORRI 4000 is easy to use. We know that when the power is down and the pressure is on, you need instant information at your finger tips. The BORRI 4000 has one easy to read mimic display which gives you the facts at a glance without the need to scroll through endless menus.

### The BORRI 4000 Talks your Language

Whether it's man or machine, the BORRI 4000 talks your language. The easy to use front panel can be mimicked remotely or connected to a PC. For automatic operation the BORRI 4000 can be interfaced to building management systems and network controlled via SNMP, Novell, Windows NT, Unix, DEC and IBM to name but a few. The connectivity software allows multiserver shutdown via one simple network connection.

### Multiple System Operation

The BORRI 4000 grows with your business thanks to Advanced Power Management (APM). As your network expands, rather than replacing your system, the BORRI 4000 may be paralleled with any other BORRI 4000 to give you increased uninterruptible power. Up to eight units of any power rating can be connected together to run in parallel, hot standby or cold standby.

### Customer Service

We know that your three-phase installation needs careful organisation. That's why our expert team is at your service to assist you in all aspects of the planning stage. After your system is up and running Powerware can offer a range of service plans that can be tailored to meet your needs.



### Product Snapshot

<b>Technology:</b>	Double conversion on-line class VFI-SS-111
<b>Power Rating:</b>	10kVA to 250kVA
<b>Voltage:</b>	208/208, 400/400 Vac
<b>Frequency:</b>	50/60 Hz

### Providing Power Protection for:

- Computer and data processing
- Telecommunications systems
- Industrial control and telecontrol process

### Environmental

- Small footprint
- Ergonomically designed
- High quality and reliability
- Low noise level
- CE marked
- ISO 9001 manufacturing
- Simple installation
- 12 month warranty

### Advanced technology

- True on-line double conversion
- IGBT technology
- Digitally controlled
- Best Progressive Battery Management (PBM) with temperature compensation
- Individual phase control of inverter voltage and current
- High frequency PWM giving instant response to changes in load conditions
- Integral static and manual bypass
- Distributed parallel system

### Connectivity

- User friendly front panel
- Remote monitoring panel
- RS-232 RS-485 interface
- EPO both local and remote
- Interface for all common operating systems
- SNMP protocol
- Voltage free contacts

# BORRI 4000 Options

## Customer options

- 12 pulse rectification
- Battery and distribution cubicles
- Cubicle ratings to IP54
- Galvanic isolation
- External bypass
- Top cable entry
- Battery earth fault monitoring
- Input filters to G5/3
- Separate input terminals

## Multiple Systems options

- Units of any power rating can be connected in any configuration
- Parallel up to eight systems
- Hot and Cold standby unlimited systems
- Advanced Power Management (APM) - automated autostart of systems with an increase in load
- Any combination of parallel, hot or cold standby connected as a single system (APM)

## External Battery Cabinets

Borri's line of modular battery cabinets are designed for use with the UPS models Borri 4000

Dimensioned to have the same height and depth the UPS model with which they are used.

Ease of access and servicing has been taken into account as all cabinets have front entry access.

All the battery cabinets are equipped with an automatic circuit breaker for over current protection, an auxiliary contact for the indication of the circuit breaker position and a trip coil to open the circuit breaker remotely in case of emergency power-off.

Main features of Borri battery cabinets:

- Matching with UPS (dimensions and colour)
- Modular design for 32 or 64 blocks or bigger
- Extractable steel trays
- Automatic circuit breakers for over current protection
- Auxiliary contact for monitoring
- Remote disconnection in case of emergency power-off
- Internal parallel (2 strings) or cabinets parallel up to 4 strings



External Battery Cabinets

# The BORRI 4000 talks your language

In these days of information overload, it is essential to get clear and accurate data in the format you use. The BORRI 4000 speaks your language from man to machine, or machine to machine.



Man to machine

## User Communication Panel

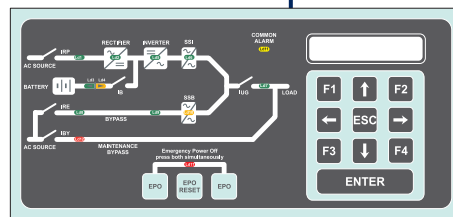
Provides all important status and alarm functions. The easy to follow mimic flow diagram and the LCD display give UPS status at a glance.

Features include:

- Progressive Battery Management (PBM)
- Battery low alarm
- Emergency off

Alarm and metering functions:

- Output voltage and current
- UPS voltage and current
- Frequency
- Autonomy in minutes



Machine to Machine

## Software Interface Options

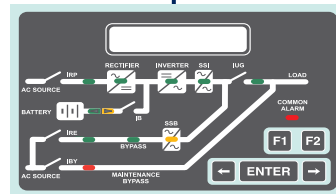
Software for automatic monitoring and shutdown for all common operating systems including:

- Novell/UNIX
- Windows NT
- DEC
- VMS/ULTRIX
- IBM
- SUN
- And many more



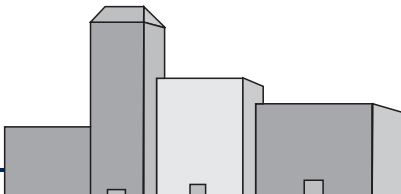
## Remote User Connection

Via an RS485 link, this option gives full remote monitoring and operating facilities up to a distance of 400m



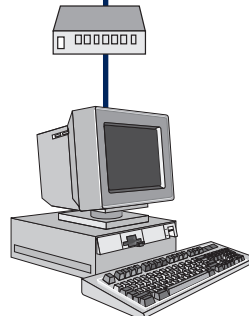
## Building Management Systems

Software and volt-free contacts for intelligent building networks.



## Remote Monitoring

Part of the BORRI 4000 global communications package is the ability to dial out to a pager system or service network and display warning messages from any remote location



# Specification

Rating (kVA)	10-15-20-30	40-60	80-100-120	160-200	250
Capacity (kVA/KW)	10/8, 15/12, 20/16, 30/24	40/32, 60/48	80/120, 100/80, 120/96	1600/128, 200/160	250/200
Dimensions HxWxD ( mm)	1470x560x835	1470x560x835	1470x825x835	1825x1220x925	1825x1220x925
Weight (kg)	310-385	440-510	669-745	1175	1300
Input connection	Hardwired	Hardwired	Hardwired	Hardwired	Hardwired
Output connection	Hardwired	Hardwired	Hardwired	Hardwired	Hardwired
Battery	Internal or external	External			
<b>Operational</b>					
Nominal Input voltage (VAC)	220/380, 230/400, 240/415 VAC three phase				
Input voltage range	342 to 477 VAC				
Operating frequency	50/60 Hz (+-10%)				
Input Power factor	0,83 lag (nominal full load) ; 0,9 with filter				
Input current distortion (THD)	27% 6p, 10% 12p, 5% 12p + filter				
Nominal Output voltage	220/380, 230/400, 240/415 VAC three phase				
Output voltage regulation	±1% static; ±5% dynamic at 100% load change, <50 ms recovery time				
Overload capacity	125% for 10 min, 150% 5sec (online three-phase); 170% for 10 min, 200% 5sec (online one-phase); 2000% for 20 msec (bypass), 130% continuous (bypass)				
Efficiency ( 98% with Efficiency Optimiser)	>90%	>91%	>91%	>93%	>93%
Option	Parallel capacity/redundancy and hot-standby systems; isolation transformers, 12 pulse, input filters, separate input terminals, external bypass, external battery cabinets, transformers/autotransformers for voltage adaption, top cable entry, frequency converters				
<b>User interface</b>					
LCD-display	LCD display showing status, measurements of performance, alarms and event log.				
LED	LEDs + mimic display				
Standard communication ports	1xRS232 for local support; AS/400 relays; 2xrelay contacts: EPO signal, General UPS alarm; Remote Emergency Power Off				
Optional	RS232 extension, SNMP/WEB, Remote UPS display panel, 9 relay Outputs; additional measures				
<b>Environmental</b>					
Operating temperature	0°C to +40°C				
Storage temperature	-25°C to +85°C				
Altitude	< 1000 m				
Audible noise at 1 meter (dBA) (According to ISO 3747)	58	60	61-62	70	70
<b>Certification</b>					
Markings	CE				
Safety	EN 50091-1				
EMC	EN 50091-2				

Powerware solutions available from small offices to data centres, including UPSs (300 VA - 625 kVA), power management software and service.

## EUROPE/MIDDLE EAST/AFRICA LOCATIONS:

### Factory address

Via 8 Marzo, 2  
52012 Bibbiena - Soci (AREZZO)  
Tel. +39-0575-535.1  
Fax +39-0575-561 802  
<http://www.borri.it>

<http://www.emea.powerware.com>

### DENMARK

Tel. +45 3677 7910  
<http://www.powerware.dk>

### FINLAND

Tel. +358 9 452 661  
<http://www.powerware.fi>  
E-mail: [infoemea@psd.invensys.com](mailto:infoemea@psd.invensys.com)

### FRANCE

Tel. +33 1 60 12 74 00  
<http://www.powerware.fr>

### GERMANY

Tel. +49-7841-66 60  
<http://www.powerware.de>

### ITALY

**Milan Office**  
Tel. +39 2 66 04 05 40  
<http://www.powerware.it>

### NORWAY

Tel. +47 23 03 65 50  
<http://www.powerware.no>

### SWEDEN

Tel. +46 8 598 940 00  
<http://www.powerware.se>

### UK

Tel. +44 (0) 1753 608 700  
<http://www.powerware.co.uk>