www.borri.it

B9000FXS - B9600FXS

Transformer based 3-PHASE UPS from 60 to 800 kVA

English

YOUR CRITICAL POWER SOLUTION PARTNER.

Borri has been developing and building uninterruptible power systems since 1932 and is a global provider of power electronics systems and solutions for harsh industrial and demanding critical power requirements.

— Borri's R&D vast expertise in all facets of firmware, power electronics and mechanical design provides innovative solutions for tomorrows problems in Industrial and Critical Power applications.

— The company prides itself on its first-class service and superior engineering disciplines. To ensure sustained quality, Borri manages all its processes in house from feed studies to design, production and after sales service technology.

— Based in Bibbiena, Italy with over 15,000 m² production area, Borri operates across all five continents with subsidiaries in USA, Canada, UAE, India and Malaysia.

— Our strong trained and certified distributor network in every continents is able to provide on-site service support and technical guidance indicative of our own capabilities.

Critical Power Solutions

Designing and building mission critical UPS's 1- and 3-Phase up to 21 MW.

Industrial Power Solutions

Designing, engineering and building customised AC and DC power supply systems for harsh industrial applications.

Service

Borri team of experts support you to the highest standards no matter where you are in the world.

OUR DEDICATION TO SUSTAINABLE POWER

At Borri, our commitment to sustainability and energy efficiency drives our constant pursuit of innovation, cutting-edge design, and advanced technology.

Our mission is to make a positive impact on the environment by ensuring the sustainability of our Uninterruptible Power Supplies (UPSs) throughout their entire lifecycle.

Borri is dedicated to putting its environmental commitment into action throughout the organization.

This includes actively promoting a low carbon footprint culture among our team members and customers, as well as developing sustainable products. Our approach involves all internal processes, from daily activities to the design of new products, with the goal of minimizing pollution and waste while maximizing product performance with minimal carbon footprint.

RESPONSIBLE DESIGN

Responsible design is at the heart of sustainable solutions: from efficiency to durability, from easy maintenance to a responsible component selection. Our Research and Development (R&D) and Engineering teams daily work to incorporate sustainability into every aspect of our products. To demonstrate our commitment, we have chosen to certify our major critical power products through a 3rd-party declaration with the PEP Association. For instance, our Ingenio Max series (ranging from 200 to 600 kW) has undergone an independent verification process, assessing the environmental impact at every stage of the product's lifecycle.

Design for Sustainability criteria play a pivotal role in the PEP score, considering factors such as material selection, minimized bill of quantities, high operational efficiency, repairability and reusability, as well as packaging design and short routes shipping strategies, to name a few.
Borri has been ISO 14001 certified since 2011. The international standard "specifies the requirements for an environmental management system that an organization can use to enhance its environmental performance". Additionally, our entire UPS range complies with the IEC/EN 62040-4 Product Standard.

The PEP, or Product Environmental Profile, is a manufacturer's declaration of a product's sustainability, according to a specific protocol outlined by the European Company Eco Passport. This protocol includes a comprehensive life cycle assessment, evaluating, by means of a quantitative analysis, greenhouse gas emissions and other environmental impact indicators, according to a "cradle-to-grave" approach.
Customers can easily access this information online.

EMBRACING ENVIRONMENTALLY FRIENDLY PROCESSES

While product sustainability is crucial, Borri recognizes that environmental responsibility extends to our industrial processes and facilities. In line with our Group's E-less policy, we are dedicated to achieving annual reductions in energy consumption. Our efforts have included a thorough review and replacement of HVAC equipment, as well as the implementation of automatic lighting systems.

Some of our facilities feature a photovoltaic power plant, and we have ambitious plans to expand our solar power capacity and implement special energy storage systems for efficient utilization.

In our critical power testing area, where energy consumption can be significant, we have been using regenerative active loads since 2010. These loads enable us to massively reduce the energy typically consumed during testing of our Critical Power UPSs, which would otherwise be lost if using resistor-based loads.

Borri actively participates in our Group's Corporate Social Responsibility Program, taking concrete steps to address the environmental challenges of our time. We remain committed to intensifying our efforts in support of a more responsible and sustainable future.

UPS **3-PHASE**

B9000FXS

from **60** kVA —— to **300** kVA

Applications

Small data centre

Medium data centre

Network & Server

Industrial controls & process automation

Medical equipment

Building automation

Rugged design and high reliability

Customisable UPS for specific process industry applications.

Minimum maintenance costs

Full front accessibility to all components and high material quality extremely reduce servicing.

Transformer based design

Reliable design with output isolation transformer for DC/AC galvanic protection.

Transformer-based UPS designed for safety and emergency systems, process control devices and machine tooling, critical infrastructures, medical equipment, small and medium data centres monolithic power protection.

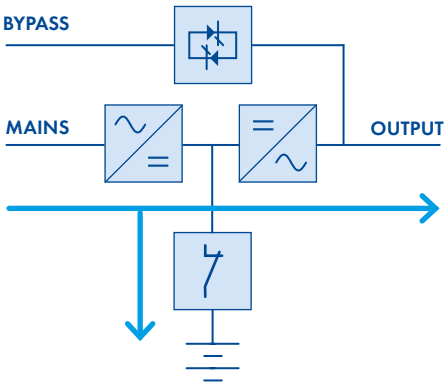
B9000FXS: reliable, rugged transformer based power solution.

Features and benefits

- Built-in inverter transformer for DC/AC galvanic protection of industrial type loads.
- Full IGBT technology and electronic PFC, ensuring 0.99 input PF and THDi<3% for maximum upstream sources compatibility.
- Front access to all critical components for easy maintenance.
- Hot connection/disconnection of parallel units for easy system resizing.
- Accurate battery management providing ripple current minimization charge current/voltage control as per batteries manufacturers' specifications and automatic/manual battery test for maximum battery expected life preservation.
- Dynamic Charging Mode (DCM) for maximum versatility in long autonomy and low charging time applications.
- Smart parallel management in load sharing, load synchronization of single UPS systems and load synchronization of two paralleled systems for optimum protection.
- Dual DSP plus microcontroller logics for top performance and reliability.
- CAN-bus based distributed parallel control ensuring high load sharing accuracy and no single point of failure in parallel systems.
- Comprehensive set of communication options for total remote monitoring of equipment operation.
- Fully compliant with all international product standards for maximum quality guarantee.

Dynamic Charging Mode (DCM)

The battery charging current can be set above the nominal, up to the DCM limit, in order to manage high capacity battery packs. The extra charging power is fed to the battery, as long as the load does not requires it. This is a firmware enabled feature.



Main options

- Backfeed protection bypass contactor.
- Bypass isolation transformer.
- Transformers/autotransformers for voltage adjustment.
- Battery voltage temperature compensation.
- External maintenance bypass wall-mounted box.
- Battery fuse switch wall-mounted box.
- Associated battery cabinets for long autonomy times.
- Parallel redundant up to 6 units or system redundancy.
- Load-sync option.
- Top cable entry.

B9000FXS technical data

Rating (kVA)	**60**	**80**	**100**	**125**	**160**	**200**	**250**	**300**
Nominal Power (kW)	**54**	**72**	**90**	**112.5**	**144**	**180**	**225**	**270**
Dimensions WxDxH (mm)	815x825x1670					1217x853x1900		
UPS weight (kg)	570	600	625	660	715	970	1090	1170
Battery configuration	External, 300 to 312 cells, VRLA (other options)							
Input								
Connection type	Hardwired 3w (rectifier), 4w (bypass)							
Nominal voltage	400 Vac 3-phase (rectifier) ; 380/400/415 Vac 3-phase with neutral (bypass)							
Voltage tolerance	-20%, +15% (rectifier); ±10% (bypass)							
Frequency and range	50/60 Hz, 45 to 65 Hz							
Power factor	0.99							
Current distortion (THDi)	<3%							
Output								
Connection type	Hardwired 4w							
Nominal voltage	380/400/415 Vac 3-phase with neutral							
Frequency	50/60 Hz							
Voltage regulation	Static: ±1% ; Dynamic: IEC/EN 62040-3 Class 1							
Power factor	Up to 0.9, without power derating							
Overload capacity	Inverter: 125% for 10 min, 150% for 1 min, 199% for 10 s; bypass: 150% continuous, 1000% for 1 cycle							
Efficiency (AC/AC)*	Up to 98%							
Classification by IEC/EN 62040-3	VFI-SS-11							
Connectivity and function extensions								
Front panel	Graphic display, mimic LED panel and keyboard, local EPO							
Remote communication	Included: serial RS232 and USB; input terminal block for: remote emergency power off (REPO), battery circuit breaker aux. cont., external maintenance bypass circuit breaker aux. cont., diesel mode aux. contact. Optional: SNMP adapter (Ethernet), Web interface (Ethernet), ModBus-TCP/IP (Ethernet); ModBus-RTU (RS485); ModBus-RTU to PROFIBUS DP adapter; SPDT contact relay board; remote system monitoring panel; UPS managing and server shutdown software							
Optional function extensions	Isolation transformer; transformers/autotransformers for voltage adjustment; external maintenance bypass; custom battery cabinets; wall-mounted battery fuse switch box; battery thermal probe; parallel kit, top cable entry; load-sync; backfeed protection; other options on request							
System								
Protection degree	IP 20 (other options)							
Colour	RAL 7016 (other options)							
Installation layout	Wall, back to back and side by side installation allowed							
Accessibilty	Front and top access, bottom cable entry							

*according to IEC/EN 62040-3

Other features

Environmental	
Operating temperature range	0°C to +40°C
Storage temperature range	-10°C to +70°C
Altitude (AMSL)	< 1000 m without power reduction, > 1000 m with reduction of 0.5% per 100 m
Audible noise at 1 m (dBA)	< 62
Standards and certifications	
Quality assurance, environment, health and safety	ISO 9001, ISO 14001, ISO 45001
Safety	IEC/EN 62040-1
EMC	IEC/EN 62040-2
Environment aspects	IEC/EN 62040-4
Test and performance	IEC/EN 62040-3
Protection degree	IEC 60529
Marking	CE

UPS **3-PHASE**

B9600FXS

from **400** kVA —— to **800** kVA

Applications

Medium data centre

Network & Server

Industrial controls & process automation

Medical equipment

Building automation

Rugged design and high reliability

Customisable UPS for specific process industry applications.

Minimum maintenance costs

Full front accessibility to all components and high material quality extremely reduce servicing.

Transformer based design

Reliable design with output isolation transformer for DC/AC galvanic protection.

Transformer-based UPS designed for safety and emergency systems, process control devices and machine tooling, critical infrastructures, medical equipment, small and medium data centres monolithic power protection.

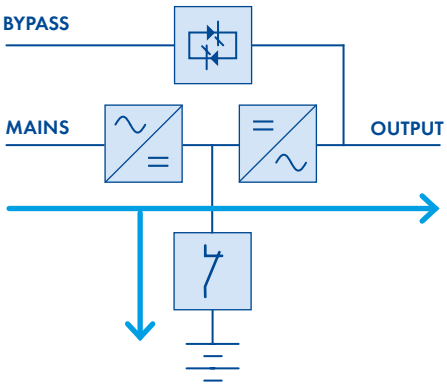
B9600FXS: reliable, high power transformer based power solution.

Features and benefits

- Built-in inverter transformer for DC/AC galvanic protection of industrial type loads.
- Full IGBT technology and electronic PFC, ensuring 0.99 input PF and THDi<3% for maximum upstream sources compatibility.
- Front access to all critical components for easy maintenance.
- Included backfeed bypass contactor for complete protection and operators' safety without additional installation costs.
- Hot connection/disconnection of parallel units for easy system resizing.
- Accurate battery management providing ripple current minimization charge current/ voltage control as per batteries manufacturers' specifications and automatic/manual battery test for maximum battery expected life preservation.
- Dynamic Charging Mode (DCM) for maximum versatility in long autonomy and low charging time applications.
- Smart parallel management in load sharing, load synchronization of single UPS systems and load synchronization of two paralleled systems for optimum protection.
- Dual DSP plus microcontroller logics for top performance and reliability.
- CAN-bus based distributed parallel control ensuring high load sharing accuracy and no single point of failure in parallel systems.
- Comprehensive set of communication options for total remote monitoring of equipment operation.
- Fully compliant with all international product standards for maximum quality guarantee.

Dynamic Charging Mode (DCM)

The battery charging current can be set above the nominal, up to the DCM limit, in order to manage high capacity battery packs. The extra charging power is fed to the battery, as long as the load does not requires it. This is a firmware enabled feature.



Main options

- Manual bypass.
- Bypass isolation transformer.
- Transformers/autotransformers for voltage adjustment.
- Battery voltage temperature compensation.
- Battery fuse switch wall-mounted box.
- Associated battery cabinets for long autonomy times.
- Parallel redundant up to 6 units for system redundancy.
- Load-sync option.
- Top cable entry.

B9600FXS technical data

Rating (kVA)	**400**	**500**	**600**	**800**
Nominal Power (kW)	**360**	**450**	**540**	**720**
Dimensions WxDxH (mm)	1990x950x1920	2440x950x2020		3640x950x1920
UPS weight (kg)	1955	2482	2535	3600
Battery configuration	External, 300 to 312 cells, VRLA (other options)			
Input				
Connection type	Hardwired 3w (rectifier), 4w (bypass)			
Nominal voltage	400 Vac 3-phase (rectifier); 380/400/415 Vac 3-phase with neutral (bypass)			
Voltage tolerance	-20%, +15% (rectifier); ±10% (bypass)			
Frequency and range	50/60 Hz, 45 to 65 Hz			
Power factor	0.99			
Current distortion (THDi)	<3%			
Output				
Connection type	Hardwired 4w			
Nominal voltage	380/400/415 Vac 3-phase with neutral			
Frequency	50/60 Hz			
Voltage regulation	Static: ±1% ; Dynamic: IEC/EN 62040-3 Class 1			
Power factor	Up to 0.9, without power derating			
Overload capacity	Inverter: 125% for 10 min, 150% for 1 min, 199% for 10 s; bypass: 150% continuous, 1000% for 1 cycle			
Efficiency (AC/AC)*	Up to 98%			
Classification by IEC/EN 62040-3	VFI-SS-11			
Connectivity and function extensions				
Front panel	Graphic display, mimic LED panel and keyboard, local EPO			
Remote communication	Included: serial RS232 and USB; input terminal block for: remote emergency power off (REPO), battery circuit breaker aux. cont., external maintenance bypass circuit breaker aux. cont., diesel mode aux. contact. Optional: SNMP adapter (Ethernet), Web interface (Ethernet), ModBus-TCP/IP (Ethernet); ModBus-RTU (RS485); ModBus-RTU to PROFIBUS DP adapter; SPDT contact relay board; remote system monitoring panel; UPS managing and server shutdown software			
Optional function extensions	Isolation transformer; transformers/autotransformers for voltage adjustment; maintenance bypass switch in extended cabinet or wall-mounted box; custom battery cabinets; wall-mounted battery fuse switch box; battery thermal probe; parallel kit; top cable entry; load-sync; other options on request			
System				
Protection degree	IP 20 (other options)			
Colour	RAL 7016 (other options)			
Installation layout	Wall, back to back and side by side installation allowed			
Accessibilty	Front and top access, bottom cable entry			

*according to IEC/EN 62040-3

Other features

Environmental	
Operating temperature range	0°C to +40°C
Storage temperature range	-10°C to +70°C
Altitude (AMSL)	< 1000 m without power reduction, > 1000 m with reduction of 0.5% per 100 m
Audible noise at 1 m (dBA)	< 62
Standards and certifications	
Quality assurance, environment, health and safety	ISO 9001, ISO 14001, ISO 45001
Safety	IEC/EN 62040-1
EMC	IEC/EN 62040-2
Environment aspects	IEC/EN 62040-4
Test and performance	IEC/EN 62040-3
Protection degree	IEC 60529
Marking	CE

SERVICE & MAINTENANCE

Borri service team is committed to providing unparalleled expertise and support, ensuring the safeguarding of our customers' investments. Promptly addressing any failures or anomalies in the client's systems, we strive to minimize economic and operational impact in the shortest time.

Our highly trained team of expert, certified technicians and engineers carry out both preventive and corrective maintenance activities on all Borri UPS, STS models and batteries. By doing so, we guarantee uninterrupted system operation, mitigating any downtime and maintaining peak performance levels.

From installation and commissioning to maintenance and tailored training at Borri facilities or on site our comprehensive support extends to the highest standards.

At Borri Service, we are focused on customer peace of mind and our goal is to set up the best value-added protection package, to minimize economic and time losses due to site shutdowns along the system entire life cycle.

How we can assist you

Planning, installation, commissioning

Many thousands of systems have been globally installed, with on-site support and technical guidance provided by our team of skilled and experienced engineers.

Maintenance

Preventive maintenance guarantees uninterrupted operation, optimized system efficiency and life expectancy.

Analytical tests

Borri undertakes a series of analytical tests in order to guarantee higher efficiency and continuity to your system operation.

Battery tests

Batteries have a limited time life and their proper maintenance is of high importance to guarantee availability to the UPS and avoid potential failures.

Repair & spare parts

All spare parts supplied by Borri are original, tested and guaranteed to be fully compatible with the equipment.

Training

Borri offers distributors and customers training programs that can be held in Borri training center or on-site.

Maintenance plans for your critical equipment

Features	SERVICE CALL	LIGHT (ONMA)	BUSINESS (ONSI)
1 yearly preventive maintenance visit	•	•	•
Priority service (8 working hours)	•	•	•
Unscheduled maintenance visit (included labour costs and travel expenses)	Flat rate	•	•
Technical updates		•	•
Spare parts (batteries, capacitors, fans not included)			•
Additional preventive maintenance visit	Optional	Optional	Optional
Maintenance outside standard work hours	Optional	Optional	Optional
8 h response time (24/7)		Optional	Optional
4 h response time (24/7)		Optional	Optional

www.borri.it

BORRI HEADQUARTERS AND FACTORY

Borri S.p.A

Via 8 Marzo, 2
52011 Bibbiena (AR)
Italy
Tel. +39 0575 5351
Fax +39 0575 561811
info.borri.it@legrand.com

BORRI SUBSIDIARIES AND SERVICE CENTRES

Americas

Borri Power (US) Inc.

9000 Clay Road, Suit 104
Houston, Texas, 77080
USA
Tel. +1 346 212 2686
Fax +1 346 980 8875
info.borripower@legrand.com

India

Borri Power India Pvt. Ltd.

Plot No. 69, Ground Floor
Nagarjuna Hills, Panjagutta
Hyderabad, 500 082
India
Tel. +91 40 2335 4095
info.borri.it@legrand.com

Asia Pacific

Borri Asia Pacific
Engineering Sdn. Bhd.

No.13, Jalan Serendah 26/41,
Sekitar 26, Seksyen 26,
40400 Shah Alam, Selangor
Malaysia
Tel. +60 3 5191 9098
Fax +60 3 5103 8728
sales@borri-asia.com

Middle East and Africa

Borri Power
Middle East FZCO

1-151, Techno Hub
PO Box: 342036
Dubai Silicon Oasis, Dubai UAE
Tel. +971 4 3200528
Fax +971 4 3200529
info.borri.it@legrand.com

Extract from
OMG60326revD | 01-2025