www.borri.it

# SINGLE PHASE UPS
## from 1000 VA to 10 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.

# 1-PHASE UPS

from **1000 VA** to **10 kVA**

## Applications

Home office

Computers & Peripherals

Network & Server

Small data centre

### User-friendly

Easy installation and setup for immediate use.

### Intuitive LCD display

Providing easy-to-read UPS status and power information.

### Convertible design

Rack/Tower UPS's can be used in both tower and rack configurations.

Borri 1-phase UPS's Giotto, Galileo Plus, Leonardo and Leonardo Plus have been designed to prevent power interferences and to keep your small and medium equipment running.

# GIOTTO

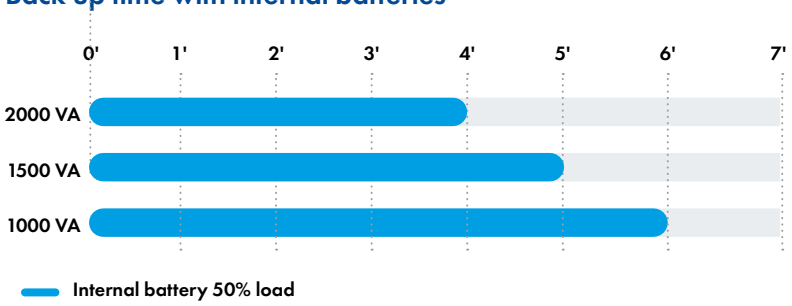
from 1000 VA — to 2000 VA

**Line interactive** 1-Phase UPS ideal for home and small office, computers and peripherals.

## Features and benefits

- User-friendly UPS ensuring compact protection for a wide range of needs with four output receptacles (IEC 320-C13) and one Schuko for high performance PC and peripherals.
- Instantaneous battery back-up power and electrical interference protection.
- Plug and Play installation easy to set up also for first-time users.
- Compact and noise-free running to be placed anywhere at home or office.
- Energy efficient ensuring lowest impact on energy costs.
- Intuitive LCD display provides easy-to-read UPS status and power information.
- Audible alarm alerts upon utility power and UPS status change.
- Easy User-replaceable battery.
- AVR technology stabilizing output voltage to protect your electronics over a wide range of mains quality issues.
- Advanced battery management extending battery life.
- Internet Modem / LAN protection via RJ-11/45 plug.
- USB communication port providing UPS management.
- Cold start for powering loads when mains are not available.
- User-friendly UPS management software free downloadable at www.borri.it/download (for more info see p.24/25).

## Back up time with internal batteries



## GIOTTO technical data

| **Rating (VA)** | | **1000** | **1500** | **2000** |
|---|---|---|---|---|
| **Nominal Power (W)** | | **600** | **900** | **1200** |
| UPS dimensions WxDxH (mm) | | 148x315x198 | | |
| UPS weight (kg) | | 9 | 10,5 | 11.8 |
| **Input** | | | | |
| Connection type | | IEC 320-C14 | | |
| Nominal voltage | | 230 Vac 1-phase | | |
| Voltage range | | 160 to 290 Vac | | |
| Frequency and range | | 50/60 Hz, 45 to 65 Hz | | |
| **Output** | | | | |
| Connection type | | 4 IEC 320-C13 and 1 Schuko | | |
| Nominal voltage | | 230 Vac 1-phase | | |
| Frequency | | 50/60 Hz | | |
| Wave form | | Simulated sine wave | | |
| **Battery** | | | | |
| Autonomy time (min.) ◊ | 50% load | 6 | 5 | 4 |
| | 100% load | 3 | 3 | 2 |
| **Connectivity and function extensions** | | | | |
| Front panel | | LCD, ON/OFF button | | |
| Communication | | **Included:** USB<br>**Compatible platforms:** Windows, Linux, Mac | | |
| **Environmental** | | | | |
| Operating temperature range | | 0°C to +40°C | | |
| Altitude (AMSL) | | < 1000 m without power reduction, > 1000 m with reduction of 0.5% per 100 m | | |
| Audible noise at 1 m (dBA) | | < 40 | | |
| **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 | | |
| Marking | | CE | | |

◊ Measurement conditions: optimised parameters, fully charged battery, 0.6 PF

# GALILEO PLUS

from **1000 VA** to **3000 VA**

## **On-line** 1-Phase UPS with Rack/Tower convertible design ideal for small and medium businesses, networks and servers.

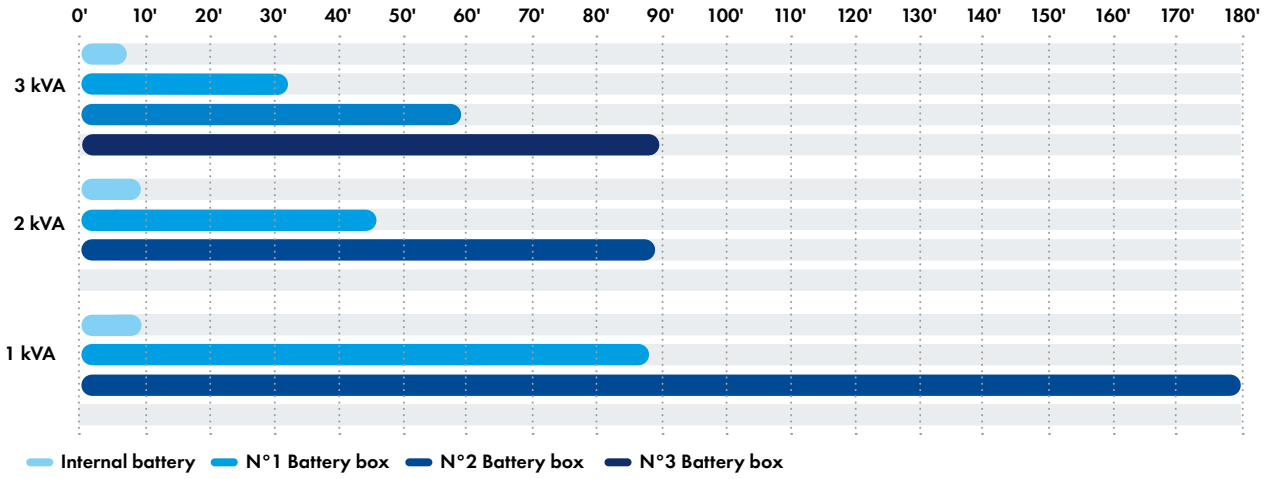
### Features and benefits

- On-line double conversion UPS from 1000 to 3000 VA.
- Rack/Tower convertible design with reversible screen to protect your investment when migrating from tower to rack-mount environment.
- Easy installation and set up, user-replaceable and upgradable battery.
- Intuitive reversible LCD display providing easy-to-read UPS status and power information.
- Audible alarm alerts upon utility power and UPS status change.
- Smart cooling system ensuring further energy savings.
- Active harmonic power quality control ensuring up to 0.99 input PF and THDi<3% for maximum compatibility with sources.
- Automatic self test and advanced battery management maximizing battery performance and extending battery life.
- Remote power off for immediate UPS shutdown in case of emergency.
- USB communication port providing UPS management.
- One slot auto-sensing communication cards.
- Cold start for powering loads when mains are not available.
- User-friendly UPS management software with alerts upon main power failures and system shutdown notification via SMS and email, free downloadable at www.borri.it/download (for more info see p.24/25).

### Main options

- SNMP card to send UPS status to BMS's by Ethernet connection and SNMP or ModBus over IP protocol to monitor UPS status by any internet browser from workstations and to receive SMS or e-mail alerts from the UPS on any portable device.
- Contact relay card to send UPS status to PLC's, SCADA's or AS400's by voltage free SPDT contacts.
- Battery extension box allowing additional autonomy time to be quickly added.
- Additional battery charger for external battery box.
- Rail kit Rack/Tower.
- External manual bypass.

### Back up time for **Rack/Tower UPS**



## GALILEO PLUS technical data

| **Rating (VA)** | | **1000*** | **2000*** | **3000*** |
|---|---|---|---|---|
| **Nominal Power (W)** | | **900** | **1800** | **2700** |
| UPS dimensions WxDxH (mm) | | (2U) 88x405x440 | (2U) 88x600x440 | |
| Battery cabinet dimensions WxDxH (mm) | | (4U) 176x405x440 | (2U) 88x600x440 | |
| UPS weight (kg) | | 16 | 29.5 | 30 |
| **Input** | | | | |
| Connection type | | IEC 320-C14 | | IEC 320-C20 |
| Nominal voltage | | 230 Vac 1-phase | | |
| Voltage range | | 180-300 Vac at full load | | |
| Frequency and range | | 50/60 Hz, 45 to 65 Hz | | |
| Power factor | | 0.99 | | |
| Current distortion (THDi) | | <3% | | |
| **Output** | | | | |
| Connection type | | 6 IEC C13 | | 6 IEC C13 + 1 IEC C19 |
| Nominal voltage | | 230 Vac +/-1% 1-phase | | |
| Frequency | | 50/60 Hz | | |
| Power factor | | 0.9 | | |
| Overload capability | | 105% continuous, 120% for 30 s, 150% for 10 s | | |
| Mode of operation | | On-line, Eco mode | | |
| Classification by IEC/EN 62040-3 | | VFI-SS-11 | | |
| **Battery** | | | | |
| Autonomy time internal battery (min.) | 50% load | 15 | 16 | 12 |
| | 100% load | 5 | 5 | 4 |
| **Connectivity and function extensions** | | | | |
| Front panel | | Display LCD, status LED, function keys | | |
| Communication | | Included: USB, EPO, RS232.<br>Optional: dry contact card, SNMP card.<br>Compatible platforms: Windows, Linux | | |
| **Environmental** | | | | |
| Operating temperature range | | 0°C to +40°C | | |
| Altitude (AMSL) | | <1000 m without power reduction, >1000 m with reduction of 1% per 100 m | | |
| Audible noise at 1 m (dBA) | | <50 | | |
| **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 | | |
| Test and performance | | IEC/EN 62040-3 | | |
| Marking | | CE | | |

*Rack/Tower

GALILEO PLUS **RACK 1 kVA**

GALILEO PLUS **RACK 2 kVA**

GALILEO PLUS **RACK 3 kVA**

GALILEO PLUS **TOWER 2-3 kVA** and battery box

# LEONARDO

from **6** kVA —— to **10** kVA

## High-power on-line

1-phase UPS with Tower design, ideal for networks and servers, small data centres.

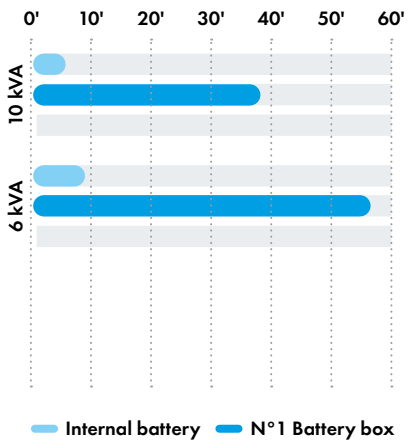
### Features and benefits

- On-line double conversion UPS from 6 to 10 kVA, with Tower design.
- Parallel redundant configuration maximizing the availability.
- Easy installation and set up, user replaceable and upgradable battery.
- Intuitive LCD display providing easy-to-read UPS status and power information.
- Audible alarm alerts upon utility power and UPS status change.
- Smart cooling system ensuring further energy savings.
- Active harmonic power quality control ensuring 0.99 input PF and THDi<3% for maximum compatibility with sources.
- Automatic self test and advanced battery management maximizing battery performance and extending battery life.
- Remote emergency power off to guarantee your piece of mind in critical applications.
- Internal manual bypass for safe and easy maintenance.
- RS232 communication port providing UPS management.
- Two slots auto-sensing communication cards.
- Cold start for powering loads when mains are not available.
- Borri Power Guardian user-friendly UPS management software with alerts upon main power failures and system shutdown notification via SMS and email, free downloadable at www.borri.it/download (for more info see p.24/25).

### Main options

- SNMP card to send UPS status to BMS's by Ethernet connection and SNMP or ModBus over IP protocol to monitor UPS status by any internet browser from workstations and to receive SMS or e-mail alerts from the UPS on any portable device.
- Contact relay card to send UPS status to PLC's, SCADA's or AS400's by voltage free SPDT contacts.
- Battery extension box allowing additional autonomy time to be quickly added.
- Additional battery charger for external battery box.
- Parallel kit.
- Rack PDU with external sockets and manual bypass switch.

### Back up time for **Tower UPS**



## LEONARDO technical data

| **Rating (kVA)** | | **6*** | **10*** |
|---|---|---|---|
| **Nominal Power (kW)** | | **5.4** | **9** |
| UPS dimensions WxDxH (mm) | | 290x645x748 | 290x645x748 |
| UPS weight (kg) | | 86 | 96 |
| **Input** | | | |
| Connection type | | Hardwired 2w (rectifier), 2w (bypass) | |
| Nominal voltage | | 230 Vac 1-phase | |
| Voltage range | | 160 to 280 Vac | |
| Frequency and range | | 50/60 Hz, 45 to 65 Hz | |
| Power factor | | 0.99 | |
| Current distortion (THDi) | | <6% | |
| **Output** | | | |
| Connection type | | Hardwired 2w | |
| Nominal voltage | | 230 Vac +/-1% 1-phase | |
| Frequency | | 50/60 Hz | |
| Power factor | | Up to 0.9, without power derating | |
| Overload capability | | 104% continuous, 150% for 160 seconds, >150% transfer to bypass | |
| Mode of operation | | On-line, Eco mode | |
| Classification by IEC/EN 62040-3 | | VFI-SS-11 | |
| **Battery** | | | |
| Autonomy time internal battery (min.) | 50% load | 25 | 17 |
| | 100% load | 9 | 6 |
| **Connectivity and function extensions** | | | |
| Front panel | | Display LCD, status LED, function keys | |
| Communication | | Included: USB, RS232 card, EPO.<br>Optional: dry contact card, SNMP card, RS485 card.<br>Compatible platforms: Windows, Linux, Mac | |
| **Environmental** | | | |
| Operating temperature range | | 0°C to +40°C | |
| Altitude (AMSL) | | < 1000 m without power reduction, > 1000 m with reduction of 0.5% per 100 m | |
| Audible noise at 1 m (dBA) | | < 50 | |
| **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 | |
| Marking | | CE | |

*Tower with internal battery

LEONARDO **TOWER 6/10 kVA**

**LCD DISPLAY** providing UPS information, including battery charge level, backup time and system status.

# LEONARDO PLUS

from 6 kVA —— to 10 kVA

## High-power on-line

1-phase UPS with Rack/Tower convertible design, ideal for servers, networks and small data centres.

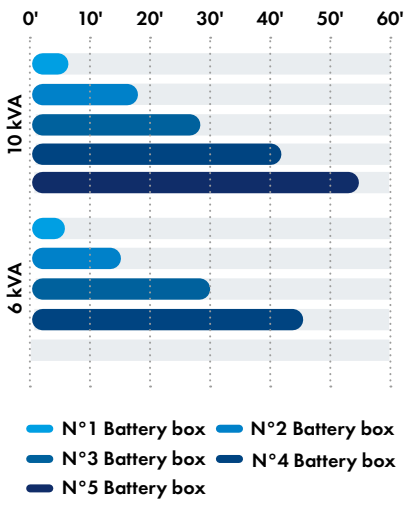
### Features and benefits

- On-line double conversion UPS from 6 to 10 kVA Rack/Tower.
- Rack/Tower convertible design with reversible screen to protect your investment when migrating from tower to rack-mount environment. Both UPS and display panel can be rotated.
- Easy installation and set up, user-replaceable and upgradable battery.
- Intuitive reversible LCD display providing easy-to-read UPS status and power information.
- Audible alarm alerts upon utility power and UPS status change.
- Smart cooling system ensuring further energy savings.
- Active harmonic power quality control ensuring up to 0.99 input PF and THDi<3% for maximum compatibility with sources.
- Automatic self test and advanced battery management maximizing battery performance and extending battery life.
- Remote power off for immediate UPS shutdown in case of emergency.
- USB communication port providing UPS management.
- One slot auto-sensing communication cards.
- Cold start for powering loads when mains are not available.
- User-friendly UPS management software with alerts upon main power failures and system shutdown notification via SMS and email, free downloadable at www.borri.it/download (for more info see p.24/25 ).

### Main options

- SNMP card to send UPS status to BMS's by Ethernet connection and SNMP or ModBus over IP protocol to monitor UPS status by any internet browser from workstations and to receive SMS or e-mail alerts from the UPS on any portable device.
- Contact relay card to send UPS status to PLC's, SCADA's or AS400's by voltage free SPDT contacts.
- Battery extension box allowing additional autonomy time to be quickly added.
- Additional battery charger for external battery box.
- Rail kit Rack/Tower.
- External manual bypass.

### Back up time for Rack/Tower UPS



## LEONARDO PLUS technical data

| **Rating (VA)** | | **6000*** | **6000**** | **10000**** |
|---|---|---|---|---|
| **Nominal Power (W)** | | **6000** | **6000** | **10000** |
| UPS dimensions WxDxH (mm) | | (4U) 176x680x440 | (2U) 88x680x440 | (3U) 132x680x440 |
| Battery cabinet dimensions WxDxH (mm) | | - | (2U) 88x680x44 | (3U) 132x680x440 |
| UPS weight (kg) | | 60 | 25 | 26 |
| **Input** | | | | |
| Connection type | | Hardwired 2w | | Hardwired 3w (rectifier, bypass, neutral) |
| Nominal voltage | | 230 Vac 1-phase | | |
| Voltage range | | 170-288 Vac at full load | | |
| Frequency and range | | 50/60 Hz, 45 to 65 Hz | | |
| Power factor | | 0.99 | | |
| Current distortion (THDi) | | <3% | | |
| **Output** | | | | |
| Connection type | | Hardwired 2w<br>8 IEC C13, 2 IEC C19 | Hardwired 2w | |
| Nominal voltage | | 230 Vac +/-1% 1-phase | | |
| Frequency | | 50/60 Hz | | |
| Power factor | | 1 | | |
| Overload capability | | 105% continuous, 120% for 30 s, 150% for 160 ms | | |
| Mode of operation | | On-line, Eco mode | | |
| Classification by IEC/EN 62040-3 | | VFI-SS-11 | | |
| **Battery** | | | | |
| Autonomy time internal battery (min.) | 50% load | 8 | External battery | External battery |
| | 100% load | 5 | External battery | External battery |
| **Connectivity and function extensions** | | | | |
| Front panel | | Display LCD, status LED, function keys | | |
| Communication | | Included: USB, EPO, RS232.<br>Optional: dry contact card, SNMP card, Modbus protocol<br>Compatible platforms: Windows, Linux | | |
| **Environmental** | | | | |
| Operating temperature range | | 0°C to +40°C | | |
| Altitude (AMSL) | | < 1000 m without power reduction, > 1000 m with reduction of 1% per 100 m | | |
| Audible noise at 1 m (dBA) | | < 50 | | |
| **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 | | |
| Test and performance | | IEC/EN 62040-3 | | |
| Marking | | CE | | |

*Rack/Tower with internal battery **Rack/Tower without internal battery

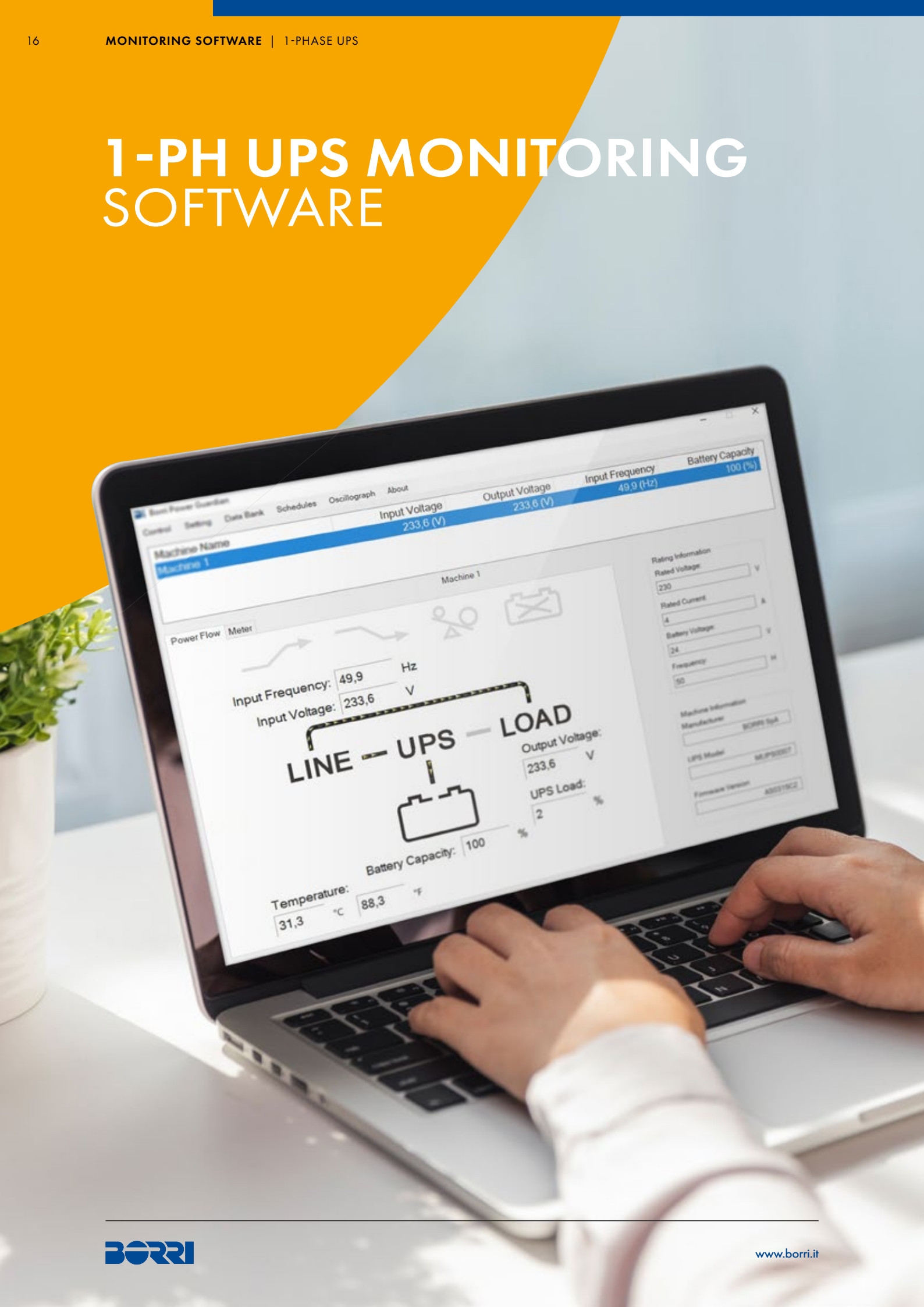
LEONARDO PLUS **RACK 6 kVA**
w/o internal battery

LEONARDO PLUS **RACK 6 kVA**

LEONARDO PLUS **RACK 10 kVA**

LEONARDO PLUS **TOWER 10 kVA**
and battery box

# 1-PH UPS MONITORING SOFTWARE



**Free user-friendly** UPS software, providing monitoring of the UPS status and automatic safe system shutdown during power outages.


## Features and benefits

- Fast, easy installation and configuration via USB or RS232 even for first-time users.
- Automatic orderly application and system shutdown.
- Preventing potential data corruption and hardware damage.
- Alerts on main power failures and system shutdowns notification via SMS and email.
- Automatic self-test of UPS and battery status ensuring early detection of anomalies.
- UPS parameters and power status at a glance. It summarizes graphically and numerically power problems such as blackouts or electrical noise over time and UPS information such as input and output voltage, frequency, temperature, loads and battery capacity.
- Customised settings for tailor-made solutions.

**Download Borri free software at www.borri.it/download**

**Extract from**
**OMG60326revD | 01-2025**

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