

Bragamoro AC UPS

Customizable double-conversion UPS system with galvanic isolation supporting long backup times.

The Bragamoro AC UPS is a rugged power backup system that keeps critical equipment running smoothly, even during power outages. Built for tough industrial environments like oil, gas, and power plants, it ensures continuous, stable electricity. Its flexible design allows full customization to meet any need.



Engineered for Demanding Environments

- Designed to operate reliably in temperatures from -10°C to +50°C, and up to +70°C in storage.
- Built for industrial sectors like oil & gas, petrochemical, and power generation where conditions are harsh and continuous power is critical.
- Equipped with IP42-rated enclosures and optional drip-proof shielding for protection in rugged environments.
- Operates effectively up to 2000 meters altitude with minimal de-rating.

Customizable, Intelligent Design

- Modular, thyristor-controlled three-phase system with scalable options for parallel operation.
- Offers adjustable output voltage between 70% and 130% to match different load profiles.
- Expandable through optional components like 12/18 pulse bridges, special colors, and alarm configurations.
- Supports both lead-acid and nickel-cadmium batteries with automatic/manual battery testing and a 20-year design lifespan.
- Configuration in accordance to customer request (Single, Parallel, Dual Redundant etc..)



Parallel Configuration with Central Bypass

Uncompromising Reliability

- Includes built-in isolation transformers on both input and bypass lines for maximum protection.
- Redundant fan ventilation system and electronic current limitation enhance operational stability.
- IGBT-based PWM inverter with output voltage distortion as low as 2% on linear loads.
- Protection features include overvoltage, phase failure monitoring, DC overvoltage shutdown, and ground fault alarms.

Advanced Monitoring & Communication

- 7" / 10" touch screen interface with real-time display of AC/DC measurements and over 1000 event logs.
- Built-in Modbus RTU and Modbus TCP-IP for seamless integration into remote monitoring systems.
- Includes remote control software and programmable potential-free contacts for alarm signaling.
- Displays all key operational data: input/output voltages, frequencies, load levels, temperature alerts, and battery status.

UPS input

Input Voltage (1 Phase)	120 V, 220 V, 230 V, 240 V (additional options available on request)
Input Voltage (3 Phase)	208 V, 380 V, 400 V, 415 V, 480 V, 600 V, 690 V (additional options available on request)
Rated Frequency	50/60 Hz +/- 10%
Input Power Factor	≥0.8
Input Voltage Tolerance	±15%
Current Distortion	THDi <3%(100% Linear load)
Bypass input voltage (1 Phase)	120 / 220 / 230 / 240 (and others)
Bypass input voltage (3 Phase)	380 / 400 / 415 / 480 / 600 / 690 (and others)

DC bus

Voltage	Range 1 (90 – 160Vdc), Range 2 (180 – 300Vdc), Range 3 (300 – 490Vdc)
DC ripple voltage	with battery capacity of 3x nominal current: ≤ 1% rms without battery: ≤ 2% rms, optional without battery: ≤ 1% rms
Charging current limitation	programmable

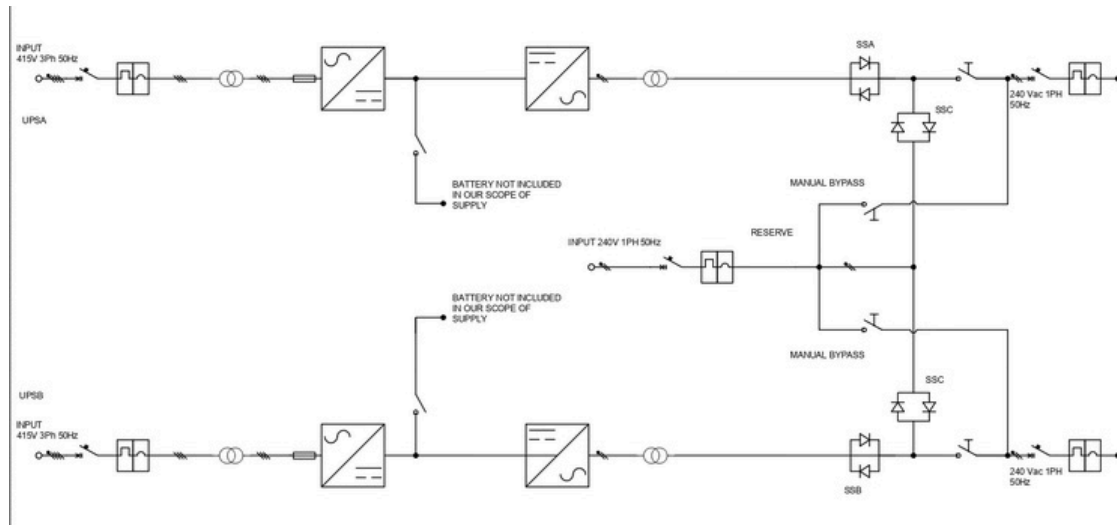
UPS output

Output Voltage (1 Phase)	120 / 220 / 230 / 240 (and others)
Output Voltage (3 Phase)	208 V, 380 V, 400 V, 415 V, 480 V, 600 V, 690 V (additional options available on request)
Voltage regulation Static within 0 – 100% load	+/- 1% static
Overload	125% for 10 min, 150% for 1 min, 200% for 100ms
Frequency	50/60 Hz
Inverter Efficiency	up to 94 % (depending on type)
Output THDu	Linear Load 2%, Non Linear Load 5%

General data

Ambient temperature range for storage	From -20 to +70 °C
Ambient temperature range for operation	From -10 to +55 °C
Altitude above sea level	2000m
Allowable air humidity	20% to 90% (95% non-condensing)
Noise level standard n+1 Fan system	Normally <65dB
Degree of protection	IP 21.. IP 52 and others available upon request
Paint	RAL7035 (other RAL colours available upon request)
Cooling	Forced ventilation (two speed) with n+1 redundant, monitored Fans
Standards	IEC/EN 62040-1, UL 1778 / CSA 22.2-107.3, IEC/EN 62040-2, IEC/EN 62040-3

Typical Single Line Drawing



Wide Range of Batteries Supported

- Lead-acid, NiCd, Li-ion and sodium nickel batteries
- Support 110, 220, & 400 battery levels

Mechanical Structure

- Flexible configuration
- Up to IP 42 (higher on request)
- Seismic design robust cabinet up to 1.0 g (reinforcement upon request)

Transformer Accepting Wide Input Ranges

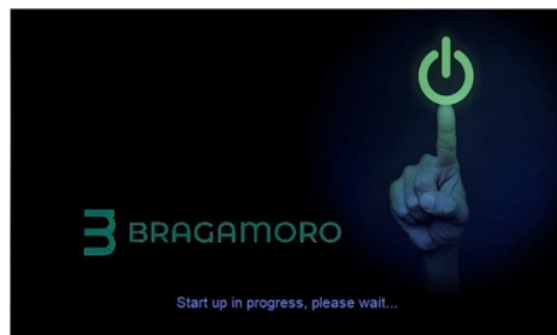
- Input & output transformers as standard
- Optional bypass transformer

Basic Configuration

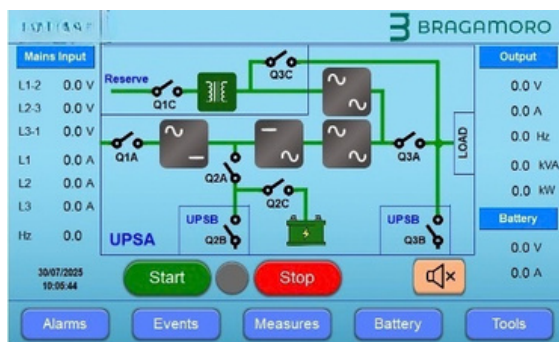
- Single UPS
- Rectifier input switch
- Input & output transformers
- Thyristor-controlled 6-pulse rectifier (supplies 100% load and charges the battery simultaneously)
- Bypass static switch EN
- Battery-capacity test (full discharge with current load)
- Human-machine interface with additional LEDs for direct alarm display and clear monitoring
- Bottom cable entry with ground terminal
- Ambient temperature ranges from -10 to +40 °C
- 3-position manual bypass switch
- Alarm relays for battery operation, common alarm and others

Optional Features

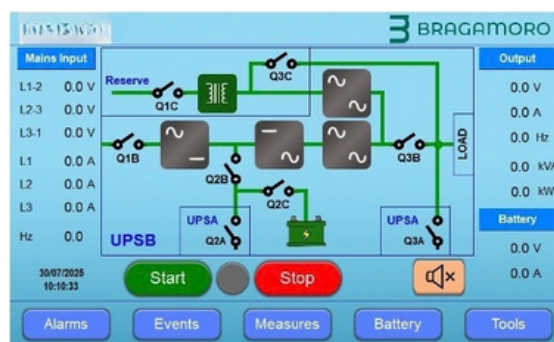
- Redundant/Parallel Load Sharing Configuration
- Redundant/Parallel Dual Configuration
- Input harmonic filter
- Higher System Ratings
- Bypass transformer or stabilizer
- Analog and digital meters
- Communication (NMC, RS-485 Modbus or TCP, IEC 61850)
- DC & AC ground fault alarm
- Battery protection (Fuse, MCCB)
- Battery temperature alarm
- Battery monitoring system
- Battery coupling
- Downstream distribution
- Converters (AC/DC, DC/DC)



Initial page for both UPS A and B



Home page for UPS A



Home page for UPS B

Operational Parameters

- Selectable second display language
- Bypass operation
- Boost charge
- Auto boost (equalize) charge
- Battery-capacity test
- Battery-monitor test (optional)
- Set date/time
- Customisable Logo

System Measurements

- Load in percentage of nominal kVA rating
- AC rectifier input voltage and current
- AC bypass input voltage
- Total DC current, battery voltage, and battery current
- Battery temperature (with optional sensor)
- AC Inverter current
- AC output voltage, current, and frequency
- AC output peak current

System Alarms

- Inverter ON / OFF
- Manual Bypass ON / OFF
- Alarm ON
- Input Power Failure
- Rectifier Failure
- Rectifier ON / OFF
- EA ON (UPS output static switch)
- EN ON (Bypass static switch)
- Boost (Equalize) charge ON
- EN inhibited (Bypass static switch)
- Fan failure
- Internal PSU fault
- Battery discharged
- System overtemperature
- EA inhibited (UPS output static switch)
- Battery disconnected
- Bypass Input Power Failure
- Inverter Fuse Blown
- Rectifier fuse blown
- Battery Operation