

Uninterruptible Power Supply Systems



Global Technology
and Energy Company

Local Area Networks (LAN)
Servers
Data Centers
Internet Centers (ISP/ASP/POP)
Industrial PLCs
Emergency Devices (Lights/Alarms)
Electro-Medical Devices
Telecommunications Devices
Industrial Applications

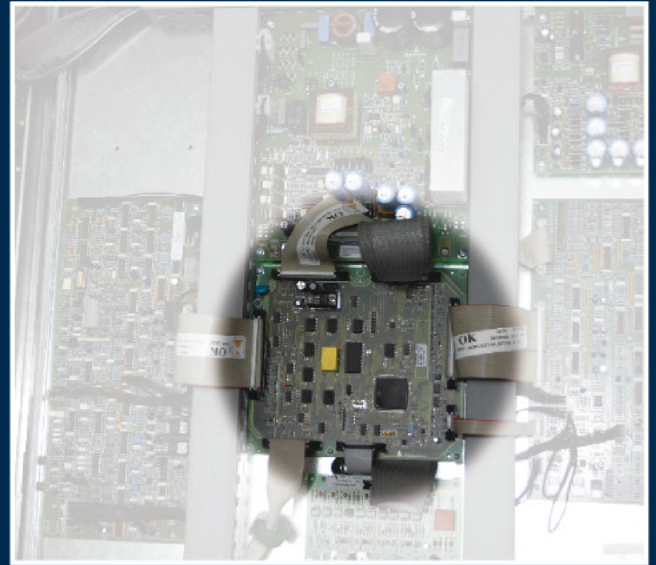


SUPREME *plus* on-line UPS

100 - 120 - 160 - 200 kVA
Standard 6P, 6P CN, 12P, 12P CN

The **Supreme Plus** power capacity range from 100-120-160-200 kVA three-phase models and uses double conversion on-line technology (VFI) with an isolation transformer on the inverter output.

The load is powered continuously by the inverter with a filtered, stabilised and regulated sinewave supply. The input and output EMI filters considerably increase the immunity of the load to mains disturbances and surges.



Digital Control

Supreme Plus provides maximum protection for vital 'mission critical' networks, security applications (electromedical) and industrial applications thanks to its outstanding mechanical and electrical design.

Supreme Plus is equipped with BATTERY PROTECTION. This helps to prolong battery life and performance. It has:

- *Two voltage level charging*
- *Temperature compensation charging*
- *Protection against deep discharge*
- *Self battery test*
- *Compatibility with open vented lead acid and NiCad battery.*



Main Features

- Reliable, filtered, stabilised and regulated sinewave output (double on-line conversion technology VFI according to EN50091-3 specifications) with filters for atmospheric disturbance suppression
- High reliability: IGBT technology, full microprocessor control with no-break static and manual bypasses
- High level diagnostics: event log with 128 messages, states, measurements and alarms - available from the built-in LCD in several languages
- The UPS may be configured with the RS232 serial port (flash upgradable)
- Reduced noise levels: high frequency inverter bridge used (>16 kHz: above audible range)
- Low loss high efficiency up to 94% in On-line mode utilizing IGBT technology and up to 98% in the other operating modes: "Economy Mode", Smart Active Mode, and Standby/Off Mode.
 - Economy Mode: uses Line Interactive (VI) technology to power less critical loads from the mains supply for certain periods. The function can be set from the front panel keypad or remotely using software

Ease of Installation and Simplified Maintenance

Supreme Plus UPS occupies only 800 x 800 (mm) foot print. It can be positioned against the wall, thanks to the upward ventilation.

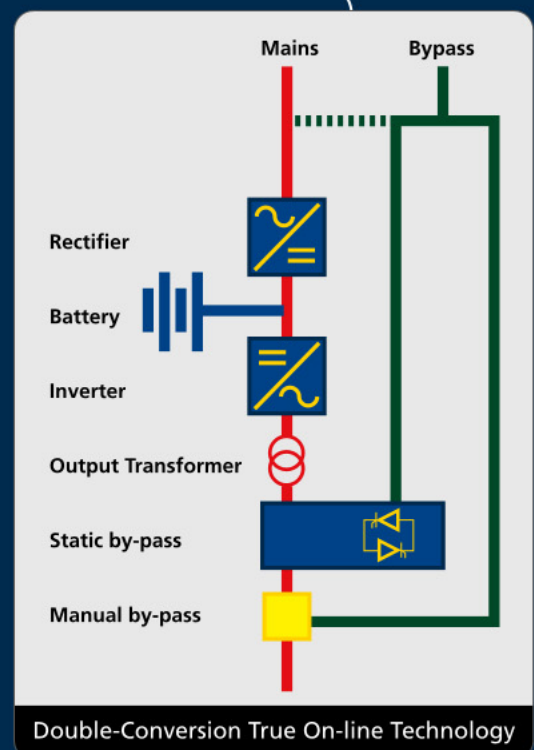
Access for maintenance is entirely from the front of the unit. Power and electronic components are easily accessible from the front for maintenance and repair work. This particular feature means that the MTTR (Mean Time to Repair) is typically less than 30 minutes.

A large amount of maintenance information is available from the front mimic panel and LCD. In addition, system operating parameters are software configurable via a local PC to allow new functions to be added or adjustments made to operating specifications.

100-200-160-200 kVA
Front Accessible for Simplified Maintenance



- Low harmonic pollution in the **Supreme Plus CLEAN** version the electronic digital control: (Optional)
 - very low distortion (THDi < 3%)
- Maximum reliability and power availability - connect up to 8 units in parallel or N+1 redundancy, UPS Group Synchroniser (UGS) and Parallel System Joiner (PSJ)
- High level battery reliability:
 - Automatic battery test
 - Recharge compensated for temperature
 - Battery care. Battery life span can be increased approximately by 20% more
- Emergency operation: the UPS can be set to operate only when the mains fails (for emergency lighting)
- Back feed protection: to avoid energy feeding back into the mains supply
- By pass may be deactivated to allow operation as a frequency converter (at 50 or 60 Hz), or as stabiliser
- Easy to maintain (front access).

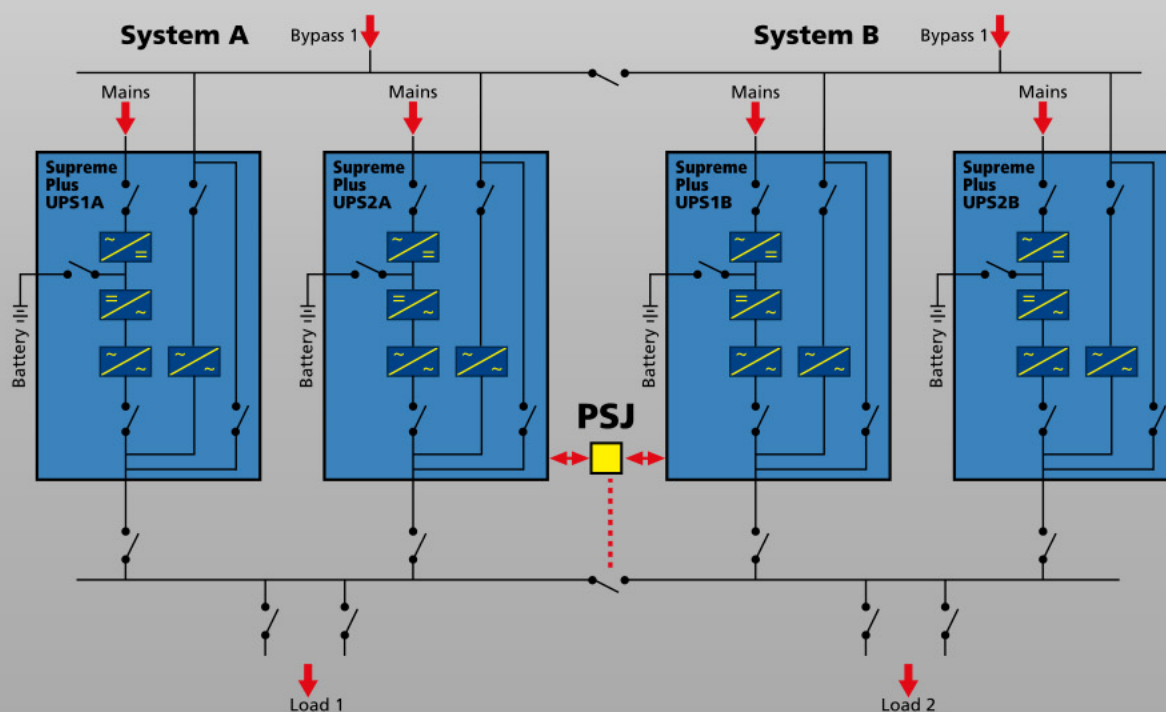


Flexible Configurations

Optional Product for Better Flexibility

Supreme Plus is suitable for application of all types, from IT to the most demanding industrial applications.

Thanks to the broad offer of accessories and options, complex configurations and architectures can be produced, guaranteeing a maximum availability of power supply for the most critical loads.

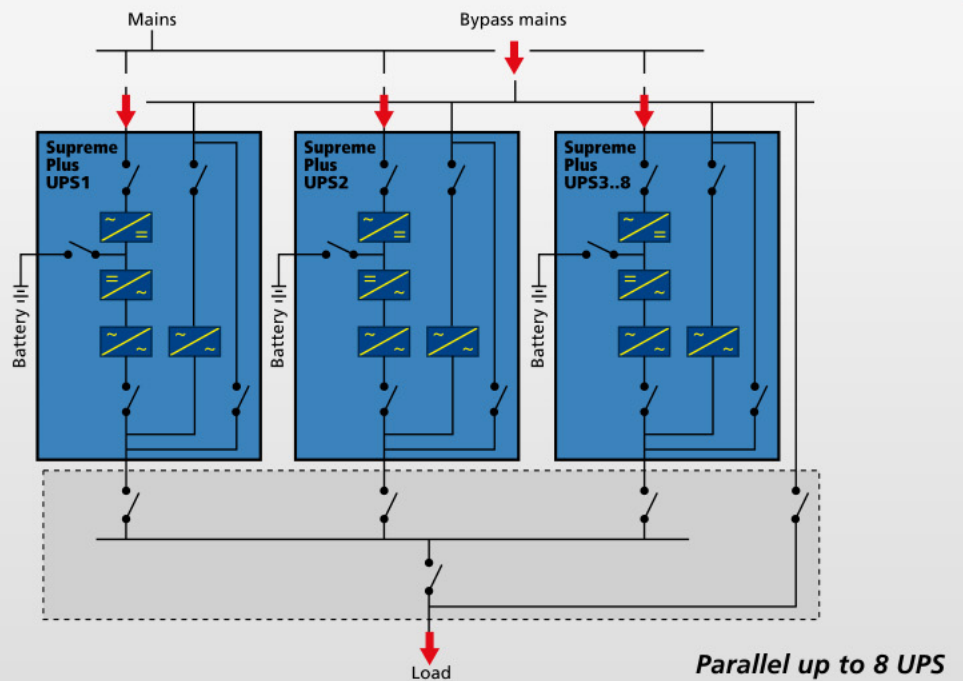


Distribution Redundancy: PSJ

The Parallel Systems Joiner (PSJ) enables the connection of two UPS groups operating in parallel configuration through a power coupling switch.

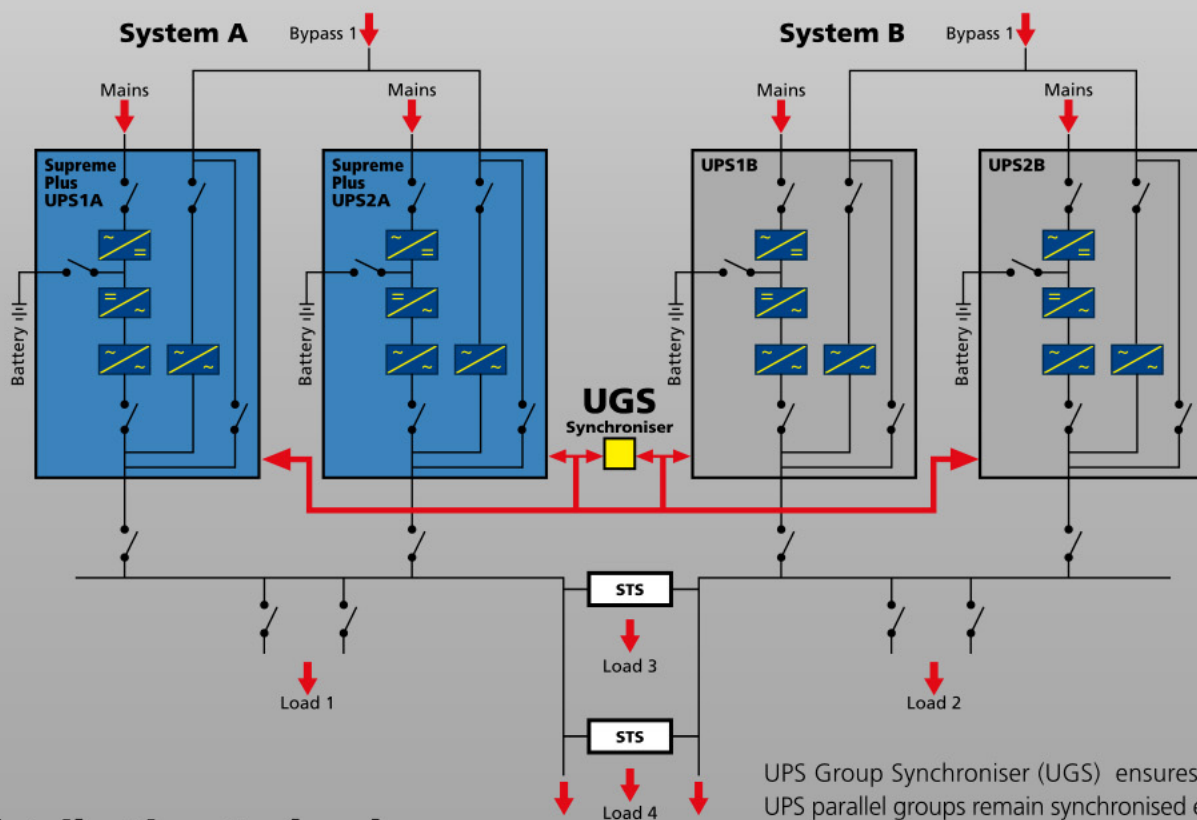
The Slave Group is permanently synchronised to the Master Group. Should one of the UPS in one of the parallel groups fail, the PSJ will automatically connect the remaining UPS to the other group.

UPS Redundancy: Parallel



mission critical and large scale industrial applications

Distribution Redundancy: UGS



UPS Group Synchroniser (UGS) ensures 2 or more UPS parallel groups remain synchronised even during a mains supply failure.

The UGS also enables Supreme Plus to be synchronised with an independent power source and even with different rating.

Supreme Plus UPS Specification

MODELS	Supreme Plus 100	Supreme Plus 120	Supreme Plus 160	Supreme Plus 200
POWER (kVA) / (KW)	100 / 80	120 / 96	160 / 128	200 / 160
INPUT				
Nominal Voltage	380 - 400 - 415 Vac three phase			
Voltage Tolerance	+ 20%, -25%			
Frequency	45 ÷ 65 hz			
Power Factor	0.9 to 0.96 depending on options			
Current Distortion	≤ 3% with Clean Version			
Soft Start	0 to 120s selectable			
Standard Fittings	Back Feed Protection; separable bypass line			
BATTERY				
Type	Vented acid / VRLA AGM / GEL / NiCd			
Residual Ripple on Voltage	< 1%			
Temperature Compensation	- 0,5 Vx °C			
OUTPUT				
Number of Phases	3 phase + N			
Nominal Voltage	380 - 400 - 415Vac three phase + N			
Static Stability	± 1%			
Dynamic Stability	± 5% in 10msec			
Voltage Distortion with Linear Load	< 1%			
Voltage Distortion with Distorting Load	< 3% (According to IEC62040-3)			
Frequency:				
Without Mains Present	50 tor 60 Hz configurable (± 2%, selectable from ±1% to ±5%)			
Without Mains Present	± 0.05%			
Waveform	Sinusoidal			
Crest Factor	3:1			
Overload	110% for 60' ; 125% for 10' ; 150% for 1'			
ENVIRONMENTAL				
Remote Reports	Voltage-free contacts			
Remote Commands	ESD and bypass			
Communication	Double RS232 + Remote Contacts + 2 Communication Interface Slots			
Efficiency	Up to 94%			
Dimensions (LxDxH):				
Standard	800x800x1900			
6P + CN	1070x800x1900			
12P	1070x800x1900	1200x800x1900		
12PCN	1070x800x1900	1200x800x1900		
Weight (Kg)	600	650	750	800
Noise Level	60 to 65 dBA@1m			
Operating Temperature	0°C / +40°C			
Relative Humidity	< 95% non condensing			
Index of Protection	IP20			
Color	RAL 7035			
Standards	Directives EEC 73/23 - 93/68 - 89/336 Safety IEC EN 62040 - 1; EMC IEC En 62040 - 2; Performance IEC EN 62040 - 3			
Classification as per IEC 62040-3	(Voltage Frequency Independent) VF1-SS-111			

Option: CN for 5% THDi, 12P for 8% THDi & 12PCN for 3% THDi; Remote Monitor Panel; Communication Software & Accessories; Isolation transformer; Parallelable to 8 units

Note: UPS specification and data may subject to change for improvement without prior notice

TECHNICAL ASSISTANCE SERVICES

UPService, our technical assistance facility uses highly trained engineers to provide a reliable and competent technical support and after-sales service.

UPService can provide customers with:

- A dedicated **CALL CENTRE** for connection to the UPService organisation. UPService personnel are always available and ready to provide advice and assistance regarding UPS installation, maintenance, fault finding and repair.

• FAST & READY

A fast repair on site is guaranteed through the use of state-of-the-art UPS technology and the professionalism of the UPService personnel and Authorised Assistance Centres.

UPService guarantees that failed parts are replaced with original ones, tested and updated in order to maintain the safety, reliability and operating characteristics of the UPS.

• COMMISSIONING AND START-UP

UPService can provide assistance during commissioning and startup of the UPS equipment on-site with additional training during handover to site personnel.

UPService engineers can also verify site suitability, analyse and advise on potential problems, and disconnect and relocate equipment. UPService recommend that all hardwired installations are commissioned by UPService engineers.

- **MAINTENANCE CONTRACTS** can be provided by UPService to minimise response times and repair costs. Contracts range from periodic inspections to comprehensive cover including labour and materials.

- The **TELEGUARD** software package provides remote 24 x 7 UPS supervision. TeleGuard can interrogate G-TEC UPS connected to a local telephone line to check on their operating logs and system status.

Should the UPS report an alarm condition, the UPService Call Centre is immediately notified and a dedicated customer response activated. Routine site reports can be sent automatically to customer personnel.

- UPService organises regular **TECHNICAL TRAINING COURSES** for UPS operators and installers.

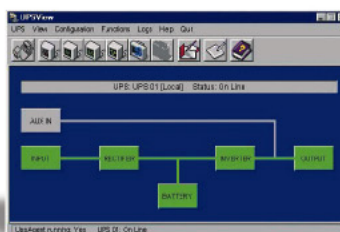
Communication and Power Management Solutions

ADVANCED COMMUNICATION

- Compatible with **TELEGUARD** for remote maintenance
- Advanced, multi-platform communication, for all operating systems and network environments: **PowerShield²** supervision and shut-down software included, with SNMP agent, for Windows 95, 98, 2000, Me, XP, Mac OSx, 9.x, Linux, NT 4.0, Novell operating systems. The UPS is equipped with a cable for direct connection to the PC (Plug and Play)
- Can also provide shut-down software for: IBM AIX; Free BSD; BSDI UNIX; BSD/OS; Unixware; SCO Openserver; Solaris; SUN; DEC; Compaq True64; HP UNIX; SGI Irix MIPS; NCR UNIX
- Double RS232 serial port
- Network adapter slot for SNMP agent
- EPO (Emergency Power Off) shut down input contact
- Remote control panel (optional)



DETAILED UPS PARAMETER DISPLAY
Powershield² provides all the information required for first level diagnostics.



BLOCK AND FUNCTIONAL DIAGRAMS
Powershield² also displays the UPS in block format providing the user with information regarding the operating status.

