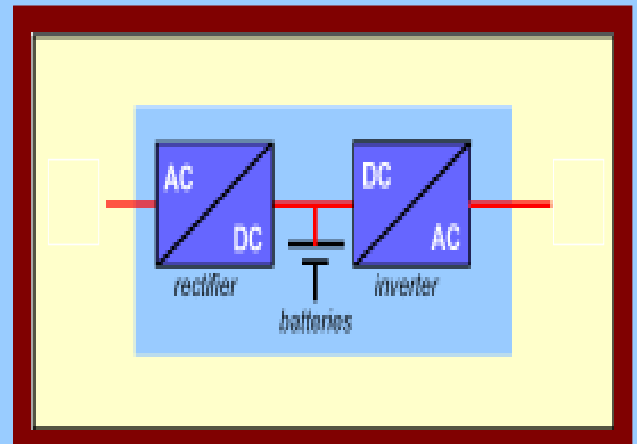


Advantages of **GX-II** SERIES

1. TRUE ONLINE ARCHITECTURE:

GX series is a true online system with double conversion topology. This provides an internally generated waveform isolating it from the input mains disturbances



2. BUILT IN ISOLATION

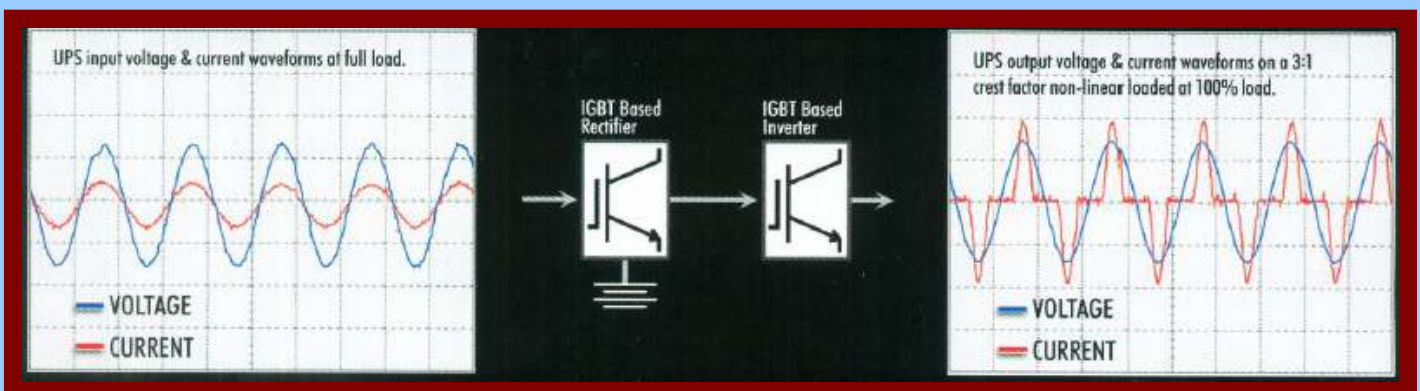
TRANSFORMER: The system incorporates a built in isolation transformer at the UPS output which provides galvanic isolation between the input and the load

3. FULLY DIGITAL CONTROL : The system has a powerful dual DSP controller providing digital control for both rectifier / charger block as well the inverter. Monitoring and diagnostics are microprocessor based. GX-II digital control loop gives the ultimate benefits to the users of the high precision predictive waveform control and diagnostics capabilities. The system provides excellent transient performance characteristics.



4. IGBT BASED PWM RECTIFIER / BATTERY CARGER : GX-II employs PWM converter using IGBTs for AC-DC conversion. It has an active power factor controller which improves the input power factor to near UNITY and limits the injected harmonic currents to less than 4%. This provides a great advantage to the users and eliminates the inherent problems of conventional systems like,

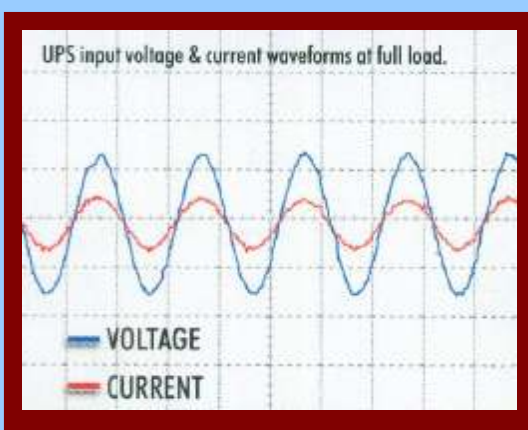
- Input cable heating
- Stray tripping of upstream breakers
- Over sizing of generators / main source
- Flickering of tube lights in the distribution network.
- Premature ageing of other equipments in the distribution networks.
- Malfunction / damage of sophisticated equipments connected in the same



5. IGBT BASED PWM INVERTER :

GX-II series employs highly reliable PWM inverter providing pure sinusoidal waveform with capability to support high crest factor loads / non-linear loads with very low distortion.

6. VERSATILE HIGH PERFORMANCE SYSTEMS:



GX-II is a versatile high performance machine, GX-II works reliably on all kinds of loads like computers, medical equipments and systems, CNC machines, complex industrial loads like motors, pumps, instrumentation loads etc., loads could be of leading power factor or lagging power factor. GX-II can be built to work with any kind of batteries like SMF, Tubular, Plante or Nickel Cadmium etc., System provides adequate fault clearing capability. systems can be built to meet complex customer specification requirements for industrial applications. GX-II can be configured in various configuration like STANDALONE / HOTSTANDBY / PARALLEL etc.,

7. ENHANCED BATTERY LIFE:

GX-II Battery Chargers provide precise and optimum charging for the batteries. The ripple current to the battery is major curse for all batteries. GX-II provides excellent control of ripple current to the batteries, thus enhancing the battery life by over 50% compared to conventional systems



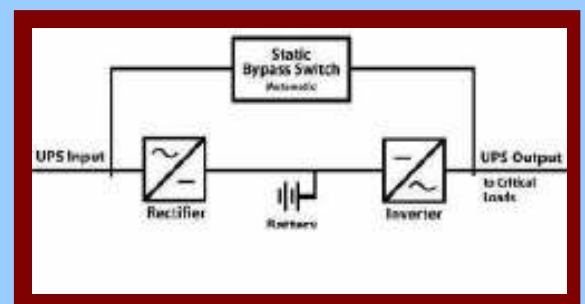
8. HIGH PROTECTION & DIAGNOSTICS:



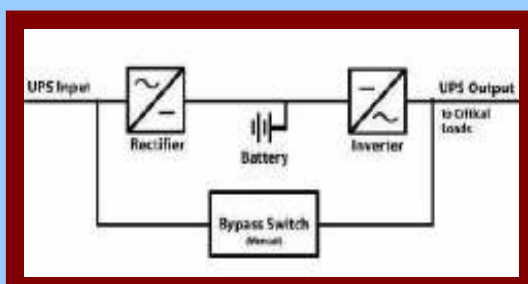
GX-II systems are robust systems with various built-in electronics protections as well with switchgear protections to protect the loads and the system. The protection includes electronic short circuit protection, input / output breakers, DC breakers, input phase reversal protection, battery deep discharge protection etc., The system has processor based diagnostics for detailed monitoring and diagnostics. The systems is SNMP compatible with optional remote communication and monitoring facilities.

9. SYNCHRONISED STATIC BYPASS SWITCH :

GX-II has a synchronized static bypass switch built-in. The static switches are adequately rated to support high overload levels and to clear faults in the load circuits.



10. MANUAL BYPASS SWITCH:



GX II comes with MAKE BEFORE BREAK manual bypass switch, which provides users the convenience bypassing the load to alternate source without break, during maintenance shutdown or emergency situations.

GX-II SPECIFICATIONS

dubasUPS

TOPOLOGY

Converter	DSP controlled, IGBT based PWM converter with builtin active power factor controller.
Inverter	DSP controlled, IGBT based PWM inverter.
User interface	Micro controller based LCD / LED display

INPUT

In put voltage	415V [380 / 400 v optional]
AC power input	3 ϕ – 3wire
Power factor	>0.99
Harmonic current	<5%
Voltage range	352 – 456 v [Other operating range is optional] Lowest operating voltage: -45%
Frequency range	50Hz, +/- 10%

BYPASS INPUT

In put voltage	415V [380 / 400 v optional]
AC power input	3 ϕ – 4wire
In put voltage range	+/- 10%

CHARGER

Charging type	Constant voltage, current controlled
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OUT PUT

Voltage	3 ϕ , 415V or 1 ϕ , 230V Optionally other voltage settings available
AC power output	3 ϕ – 5wire(3 ϕ + N+G) for 3 ϕ O/P system 1 ϕ – 3wire (1 ϕ +G)
Voltage transient response	+/- 5% (10-100% linear load)
Transient recovery time	<15ms
Waveform	Pure sine wave
Voltage distortion -Linear load	THD<2%
Voltage distortion -Nonlinear load	THD<5%

Rated Power factor	0.7
Crest factor	3:1
Frequency sync. range	50Hz +/- 3Hz [Settable]
Frequency regulation (Async mode)	+/- 0.1%
Phase displacement (for 3 ϕ output systems)	120 +/- 1deg (balanced load or unbalanced load)
Voltage unbalance rate at 100% unbalance load	+/- 2% (battery in float charge state)
Frequency slew rate	<1Hz/s
Overload capability (inverter)	110%<load 125%, transfer to bypass mode after 10 +/- 0.1min 125%<load 150%, transfer to bypass mode after 1min: when load >150%, transfer to bypass mode after 200ms
Overload capability (bypass)	150% rated current continuously
Transfer time (normal mode)	0(sync transfer), 15ms(async transfer)
Audible noise at 2 m	50 to 70 db depending on rating
Insulation resistance	5M ohm (500vdc)
Dielectric strength	Input to earth , output to earth 1500vac for 1 min
Protection index	IP20
Manual bypass	Built in manual bypass facility
INSTALLATION	
Cable access mode	bottom
LCD display	LCD display showing status, measurements of performance, alarms. Voltage : I/P, O/P, DC Current : I/P, O/P, DC Frequency : I/P, O/P Power : I/P, O/P

USER INTERFACE	
LED	LED indication showing status. <u>Indication detail</u> : Mains on, Converter on, Battery on charge, Inverter on, Load on inverter, Bypass healthy, Load on battery, DC low pre alarm, Load on bypass, Converter trip, I/P under / over voltage , I/P over loaded low, Inverter trip,,Inv under /over voltage, Inverter over load ,over temp
Standard communication ports	RS-232 or RS-485 for local support, SNMP compatible.
Protection	I/P : under / over voltage, over load DC : under / over voltage, dc charging current O/P : under / over voltage, over load, short circuit
Optionals	Parallel capacity/redundancy and hot-standby systems, external battery cabinets, transformers/ autotransformers for voltage adaptations, top cable entry, frequency converters, , Potential free contacts. Remote indication panel
ENVIRONMENTAL	
Operating temperature	0 to 40 ° c
Storage temperature	-10 to +65 ° c
Altitude	< 1000m

Disclaimer: As a part of continuous improvements, specification are subject to change without notice.