Working** in **Power

MasterNOVA

online UPS

MasterNOVA 30-100 (3/1)
MasterNOVA 250i - 600i (3/3)
MasterNOVA Pro 250 - 800 3/3)

- LOCAL AREA NETWORKS (LAN)
- SERVERS
- DATA CENTERS
- INTERNET CENTERS (ISP/ASP/POP)
- INDUSTRIAL PLCS
- EMERGENCY DEVICES (LIGHTS/ALARM)
- ELECTRO-MEDICAL DEVICES
- TELECOMMUNICATIONS DEVICES
- INDUSTRIAL APPLICATIONS

MasterNOVA

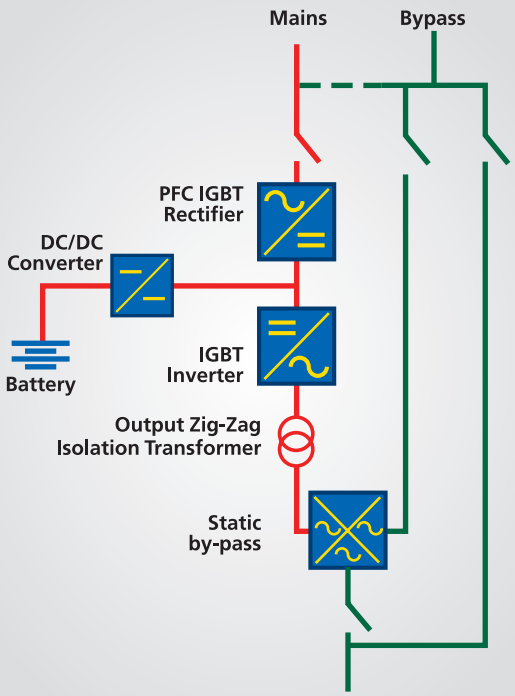
The **MasterNOVA** UPS is one of the best performing and reliable UPS from GTEC, providing power protection over a wide range of applications.

The **MasterNOVA** series offers the following range of products:
MasterNOVA 30, 40, 60, 80, 100kVA (3/1) 3 phase/ 1 phase
MasterNOVA 250i, 300i, 400i, 500i, 600i kVA (3/3) 3 phase/ 3 phase
MasterNOVA Pro 250, 300, 400, 500, 600, 800 kVA (3/3) 3 phase/ 3 phase

MasterNOVA uses the double conversion topology designed for VFI where the output is independent of its input supply. The load is continuously powered by Inverter with a filtered, stabilized and regulated sinewave supply for vital "mission-critical" load.

MasterNOVA's outstanding mechanical and electrical design results in the following features :

1. IGBT Rectifier to achieve sinusoidal current absorption to ≤3% distortion; 0.99 input PF (for 3/3 model only); robust and wide input voltage and frequency thus with good Diesel Generator compatibility.
2. Unity output power factor (PF 1) for MasterNOVA Pro model; and 0.9 PF output for the rest of MasterNOVA models.
3. Inverter output zig-zag isolation transformer for lowest output harmonic distortion and galvanic isolation between loads and Inverter.



MasterNOVA i & MasterNOVA Pro
Double-Conversion True On-line Technology

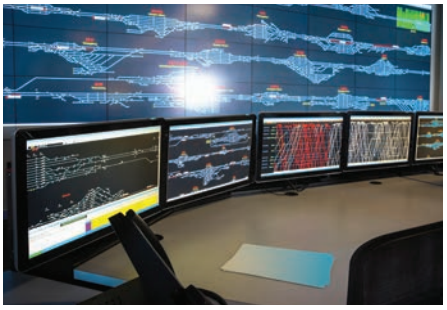
Main Features:

- High AC/AC UPS efficiency with >95% at 75% load for MasterNOVA Pro; and >94% for the rest of the models.
- Low input current THDi ≤3% and close to unity input power factor (0.99 pf)
- Unique parallel technology for Centralized Parallel or Di-centralized (Distributed) Parallel solution
  1. Up to 8 units can be paralleled for (N+1) redundancy to achieve maximum reliability and power availability.
  2. Centralized Bypass Cabinet capacity range from 800-1200-1600-2000-3000kVA
  3. Energy saving mode allow automatic selection to turn-on or turn-off the paralleled UPS in the event of excess UPS capacity;
  4. UPS Group Synchronizer (UGS) and Parallel System Joiner (PSJ)
- DSP controller IGBT Rectifier and IGBT Inverter, guarantees maximum faster respond time; high performance and high quality power over all range of application.
- User friendly mimic panel; designed with 5" graphical display panels provides easy Humen-Machine Interfacing (HMI) and simplified navigaton; 6 LED's for quick glance of UPS status and 8 push buttons.
- Customized solution for IP31/ IP42 / Top Cable Entry cabinet.
- 6 operating modes: On-line / Standby-On (Eco) / Smart Active / Standby-Off / Frequency Converter / Stabilizer

Applications

Telecommunications

Manufacturing and Industrial



Transportation

Medical

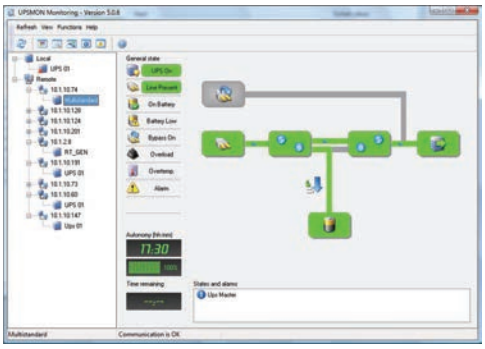
Data Centers

1. Medical & Health care application for Ultrasound, MRI machines; CT Scanners and X-ray machines.
2. Data Center and large server rooms application, such as: stock exchange, financial institutions.
3. Transportations application, such as: air & sea traffic controls; railways signaling and tunnel lightings.
4. Telecommunications
5. Manufacturing and Industrial application; such as: PLC & process controller; Robotics

- Excellent battery compatibility with valve regulated lead acid battery; Nickel Cadmium and Lead Acid Stationary battery type; outstanding Battery Care functions that
  1. Provides Cyclical and Two Level Charging user configurable, with Cyclical charging can enhance battery life span and reduce maintenance cost.
  2. Self battery health test automatically at regular interval, without compromising battery service life
  3. Slow discharge protection in the event of extreme low load.
  4. Battery temperature compensation charging.
  5. Maximize battery usage with common battery configuration up to 8 sets of UPS.
- Dual input from independent source and different neutral;
- As Emergency Power Supply for emergency lighting application, configure as Centralized Battery System.
- As Frequency Converter (FC) with 50Hz to 60Hz or vice versa; or as Voltage Stabilizer by disabling internal Static Bypass
- Backfeed protection, avoiding Inverter power is feeding back to mains supply.

DETAILED UPS PARAMETER DISPLAY

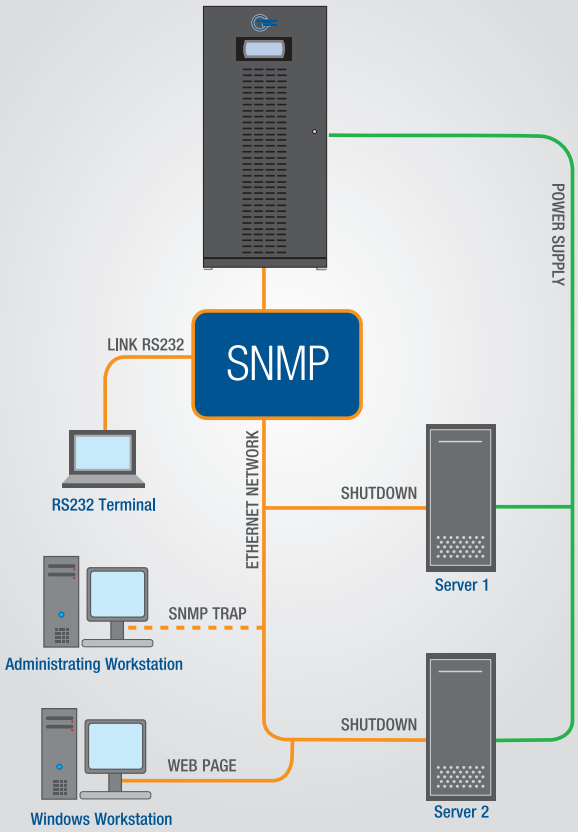
UPS Monitoring Software provides all the information required for first level diagnostics



BLOCK AND FUNCTIONAL DIAGRAMS

UPS Monitoring Software also displays the UPS in block format providing the user with information regarding operating status

Direct Connection with Ethernet Network



COMMUNICATION AND POWER MANAGEMENT SOLUTIONS

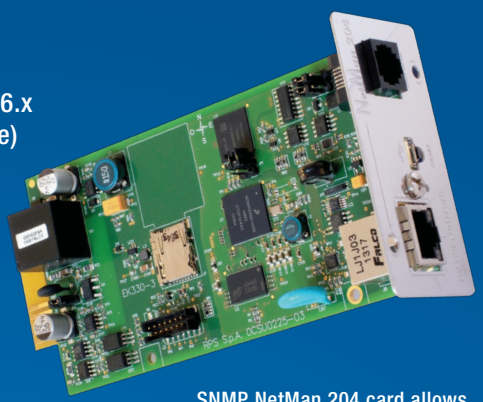
MasterNOVA series provides solutions for remote monitoring and power management.
With optional SNMP card and other GTEC's peripherals, UPS can be easily integrated into any medium and large-size Data Center; UPS status can be monitored by ModBus TCP/IP; Profibus DP Network; BACnet/ IP and GSM/WIFT ready by means of customized RTG100 dongle.

UPS Monitoring Software supports the following operating systems:

- Microsoft Windows 2000, Xp, 2003
- Microsoft Vista x86 and x86_64
- Microsoft 2008, 2012 x86 and x86_64
- Microsoft 7, 8 x86 and x86_64
- Novell NetWare 3.x, 4.x, 5.x, 6
- Mac OS X 10.x.x
- Linux kernel 2.4.x and 2.6.x
- VMware ESX 4.x (vSphere)
- VMware ESXi 4.x 5.x

Full version license software supports

- IBM AIX on RS6000 PowerPC
- HP UNIX
- SUN Solaris INTEL
- SUN Solaris SPARC
- SCO OpenServer 5
- SCO UnixWare
- Silicon Graphics IRIX
- DEC UNIX
- Compaq Tru64 UNIX
- Digital UNIX
- BSD UNIX
- NCR Unix
- FreeBSD UNIX
- Open VMS



SNMP NetMan 204 card allows management of UPS across LAN using any of the main network communication protocols: TCP/IP; ModBus TCP/IP; ProfiBus DP and BACnet/IP

TECHNICAL **ASSISTANCE** SERVICE

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 24x7 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.

MasterNOVA 3 Phase Input/ 1 Phase Output

	Technical Specification				
Models	30 (3/1)	40 (3/1)	60 (3/1)	80 (3/1)	100 (3/1)
	INPUT				
Rated Voltage & Range (V)	400Vac 3 phase +20% -25%				
Frequency & Range	50Hz/ 60Hz auto sensing, 45Hz to 65Hz				
Input power factor & THDi	≥0.9 & ≤5% with CN option				
	BYPASS				
Rated Voltage (V)	230Vac (selectable from 220V to 240V), ±15% (adjustable from ±10% to ±25%)				
Frequency & Range (Hz)	50Hz / 60Hz auto sensing ±2%. (Selectable from ±1% to ±6%)				
	BATTERY				
Type	VRLA battery; Vented lead acid battery & NiCad battery				
Charging Method	Two level & Cyclic charging according to EN 50272-2				
Ripple voltage	Approximately 0%				
	INVERTER OUTPUT				
Rated Power	30kVA/ 27kW	40kVA/ 36kW	60kVA/ 54kW	80kVA/ 72kW	100kVA/ 90kW
Rated Voltage & Stability (V)	220V / 230V / 240V, Single phase ±1%				
Frequency & Stability (Hz)	50Hz/ 60Hz ±0.05% at free running; ±2% at synchronized mode (adjustable ±1% to ±6%)				
Dynamic Stability (V)	±5% within 20ms to standard EN62040-3, class 1				
Overload	110% for 60mins; 125% for 10min; 150% for 60sec				
	ENVIRONMENTAL DATA				
Operating Temperature	0° to 40°C				
Relative Humidity	<95% non condensing				
Colour	RAL 7035 light grey				
Efficiency	Up to 98% at ECO mode				
Compliance Standard	European Directive LV2006/95/EC, EMC 2004/108/EC, Safety: IEC EN62040-1; EMC: IEC EN62040-2; Performance & Test: IEC EN62040-3				
Noise level @ 1m (dBA)	62				63
Dimension L x D x H (mm) 6 Pulse	555 x 740 x 1400		800 x 740 x 1400		800 x 800 x 1900
CN version	825 x 740 x 1400		1070 x 740 x 1400		-
Weight (kg)	290	340	440	520	650
UPS Monitoring Software with optional SNMP Card	**Standard software supports:** Microsoft Windows 2000, Xp; 2003; Vista x86 and x86_64; 2008, 2012 x 86 and x 86_64; Microsoft 7, 8 x86 and x86_64 / Novell NetWare 3.x, 4.x, 5.x, 6 / Mac OS X 10.x.x / Linux kernel 2.4.x and 2.6.x / VMware ESX 4.x (vSphere) / VMware ESXi 4.x 5.x **Full license software optional** IBM AIX on RS6000 PowerPC / HP UNIX / SUN Solaris INTEL; SPARC / SCO OpenServer 5; UnixWare / Silicon Graphics IRIX DEC UNIX / Compaq Tru64 UNIX / Digital UNIX / BSD UNIX / NCR Unix / FreeBSD UNIX / Open VMS				

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

MasterNOVA i 3 Phase Input/ Output (full IGBT UPS)

	Technical Specification				
Models	250i	300i	400i	500i	600i
	INPUT				
Rated Voltage & Range (V)	400Vac, 3 phase ±20%				
Frequency & Range	50Hz/ 60Hz auto sensing, 45Hz to 65Hz				
Input power factor & THDi	≥0.99 & ≤3%				
	BYPASS				
Rated Voltage (V)	380V / 400V / 415V ±15% (adjustable from ±10% to ±25%)				
Frequency & Range (Hz)	50Hz / 60Hz auto sensing ±2%. (Selectable from ±1% to ±6%)				
	BATTERY				
Type	VRLA battery; Vented lead acid battery & NiCad battery				
Charging Method	Two level & Cyclic charging according to EN 50272-2				
Ripple voltage	Approximately 0%				
	INVERTER OUTPUT				
Rated Power (kVA/ kW)	250 / 225	300 / 270	400 / 360	500 / 450	600 / 540
Rated Voltage & Stability (V)	400V 3 phase + N (selectable 380V & 415V) ±1%				
Frequency & Stability (Hz)	50Hz/ 60Hz ±0.05% at free running; ±2% at synchronized mode (adjustable ±1% to ±6%)				
Dynamic Stability (V)	±5% within 20ms to standard EN62040-3, class 1				
Overload	110% for 60mins; 125% for 10min; 150% for 60sec				
	ENVIRONMENTAL DATA				
Operating Temperature	0° to 40°C				
Relative Humidity	<95% non condensing				
Colour	RAL 7035 light grey				
Efficiency	Up to 98% at ECO mode				
Compliance Standard	European Directive LV2006/95/EC, EMC 2004/108/EC, Safety: IEC EN62040-1; EMC: IEC EN62040-2; Performance & Test: IEC EN62040-3				
Noise level @ 1m (dBA)	68	70 - 72			
Dimension L x D x H (mm) 6 Pulse	1000 x 850 x 1900	1500 x 1000 x 1900		2100 x 1000 x 1900	
Weight (kg)	1095	1550	1720	2525	2700
UPS Monitoring Software with optional SNMP Card	**Standard software supports:** Microsoft Windows 2000, Xp; 2003; Vista x86 and x86_64; 2008, 2012 x 86 and x 86_64; Microsoft 7, 8 x86 and x86_64 / Novell NetWare 3.x, 4.x, 5.x, 6 / Mac OS X 10.x.x / Linux kernel 2.4.x and 2.6.x / VMware ESX 4.x (vSphere) / VMware ESXi 4.x 5.x **Full license software optional** IBM AIX on RS6000 PowerPC / HP UNIX / SUN Solaris INTEL; SPARC / SCO OpenServer 5; UnixWare / Silicon Graphics IRIX DEC UNIX / Compaq Tru64 UNIX / Digital UNIX / BSD UNIX / NCR Unix / FreeBSD UNIX / Open VMS				

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MasterNOVA Pro 3 Phase Input/ Output (full IGBT UPS)

	Technical Specification					
Models	250	300	400	500	600	800
	INPUT					
Rated Voltage & Range (V)	400Vac, 3 phase ±20%					
Frequency & Range	50Hz/ 60Hz auto sensing, 45Hz to 65Hz					
Input power factor & THDi	≥0.99 & ≤3%					
	BYPASS					
Rated Voltage (V)	380V / 400V / 415V ±15% (adjustable from ±10% to ±25%)					
Frequency & Range (Hz)	50Hz / 60Hz auto sensing ±2%. (Selectable from ±1% to ±6%)					
	BATTERY					
Type	VRLA battery; Vented lead acid battery & NiCad battery					
Charging Method	Two level & Cyclic charging according to EN 50272-2					
Ripple voltage	Approximately 0%					
	INVERTER OUTPUT					
Rated Power (kVA/ kW)	250 / 250	300 / 300	400 / 400	500 / 500	600 / 600	800 / 800
Output power factor	1					
Rated Voltage & Stability (V)	400V 3 phase + N (selectable 380V & 415V) ±1%					
Frequency & Stability (Hz)	50Hz/ 60Hz ±0.05% at free running; ±2% at synchronized mode (adjustable ±1% to ±6%)					
Dynamic Stability (V)	±5% within 20ms to standard EN62040-3, class 1					
Overload	110% for 60mins; 125% for 10min; 150% for 60sec					
	ENVIRONMENTAL DATA					
Operating Temperature	0° to 40°C					
Relative Humidity	<95% non condensing					
Colour	RAL 7035 light grey					
Efficiency	>95% for On-line / Up to 99% at ECO mode					
Compliance Standard	European Directive LV2006/95/EC, EMC 2004/108/EC, Safety: IEC EN62040-1; EMC: IEC EN62040-2; Performance & Test: IEC EN62040-3					
Noise level @ 1m (dBA)	68	70 - 72				
Dimension L x D x H (mm) 6 Pulse	1000 x 1000 x 1900	1500 x 1000 x 1900		2100 x 1000 x 1900		3200 x 1000 x 1900
Weight (kg)	1300	1680	2020	2790	3031	3950
UPS Monitoring Software with optional SNMP Card	**Standard software supports:** Microsoft Windows 2000, Xp; 2003; Vista x86 and x86_64; 2008, 2012 x 86 and x 86_64; Microsoft 7, 8 x86 and x86_64 / Novell NetWare 3.x, 4.x, 5.x, 6 / Mac OS X 10.x.x / Linux kernel 2.4.x and 2.6.x / VMware ESX 4.x (vSphere) / VMware ESXi 4.x 5.x **Full license software optional** IBM AIX on RS6000 PowerPC / HP UNIX / SUN Solaris INTEL; SPARC / SCO OpenServer 5; UnixWare / Silicon Graphics IRIX DEC UNIX / Compaq Tru64 UNIX / Digital UNIX / BSD UNIX / NCR Unix / FreeBSD UNIX / Open VMS					

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