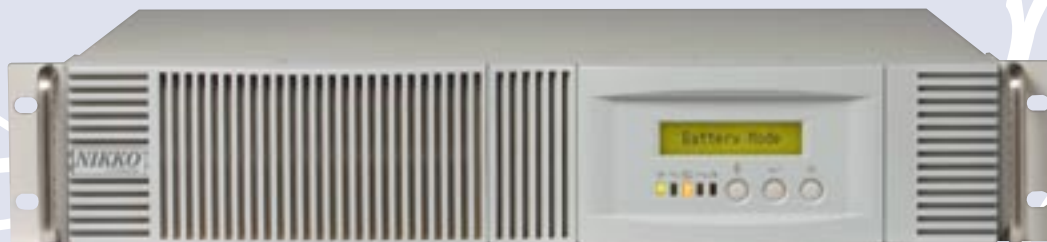


Vanguard UPS

Multi-function, On-line double conversion LCD UPS



UPS SYSTEMS

INDUSTRIAL DC SYSTEMS

INDUSTRIAL & EQUIPMENT BATTERIES

BATTERY CHARGERS

INVERTERS

EMERGENCY & EXIT LIGHTING

RENEWABLE ENERGY

INSTALLATION & SERVICE

- True on-line technology provides all power protection
- Pure sine-wave output with less than 3% THD
- Digital microprocessor controlled
- Cold start function (DC power on)
- Lightning and surge protection
- Short circuit and overload protection
- Battery Saver feature - UPS idle mode
- Three Stage Battery Charging
- Automatic battery charge in UPS off mode
- Battery replacement warning
- Auto diagnostics & battery check
- Schedule shutdown & reboot
- RS-232 comms port with monitoring software
- Load segmentation receptacles controllable*
- Fan speed auto control when load varies
- Extended back up time with battery pack
- History record of power failure events
- UPSMON plus software monitoring
- Hot swappable battery by user *
- Emergency Power Off function
- Optional Extension battery packs
- Support USB communication
- High efficiency mode selectable
- Battery remain time display
- Multiple language LCD display
- On line output voltage selected
- LCD display front panel
- SNMP Card slot
- Wide input voltage range
- Power factor correction
- Manual bypass setting
- Free run mode setting
- EMI/RFI noise filter

* available for model VGD-700~3000

NIKKO
by POWERCOM

DESIGN OVERVIEW

As Business becomes increasingly dependent on technology for even fundamental operations, the need for system availability is of paramount importance. The Nikko Vanguard series UPS is designed for those applications that need maximum protection in the 700VA - 10KVA range. With its high-frequency, double-conversion online topology, providing nonstop clean sine wave power, advanced communications and space-saving tower design, the Nikko Vanguard series is the ideal power solution for networks, web servers, telecommunications applications and other critical electronic equipment.

In addition to its proven design, the Nikko Vanguard series offer an advanced battery management system and sophisticated communications to provide maximum system availability. The battery management systems uses a three-stage charging technique that not only doubles the service life of batteries but optimizes charging time.

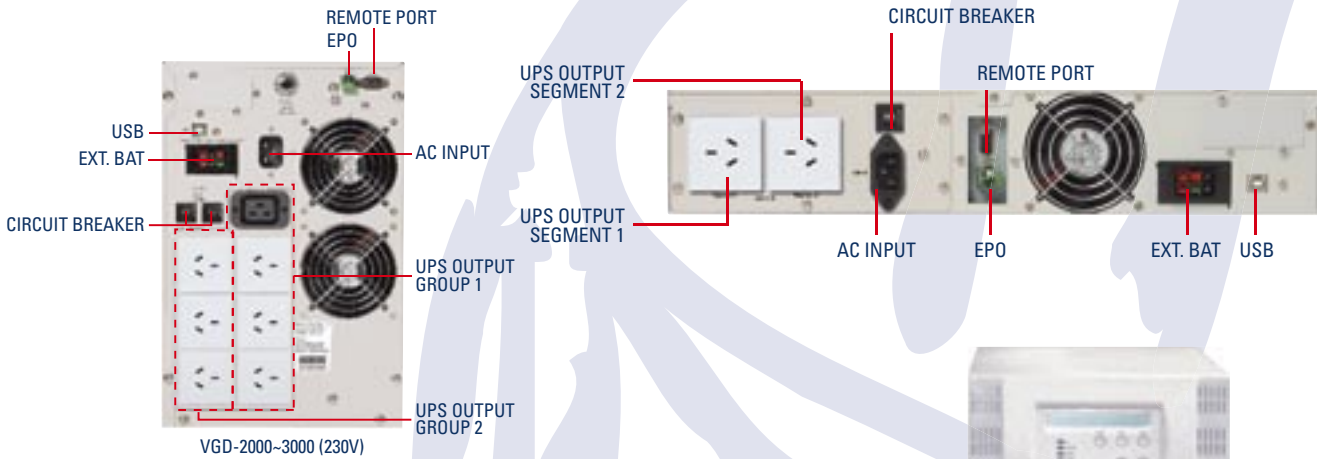
The Nikko Vanguard's communications are flexible, allowing for local, network or remote monitoring and management. The

Nikko Vanguard includes the latest version of the UPSMON Software Suite, which provides power monitoring and shutdown software.

With the Vanguard, Nikko delivers a best-in-class power solution for maximum system availability and peace of mind. That means your critical systems keep working.

Even when presented with the most severe power problems, the Nikko Vanguard series output remains within a remarkable +/-2% of nominal voltage

- critical system always receives steady and clean power. In addition, the Nikko Vanguard series transfers to backup mode with no break in power, making it the perfect UPS for equipment in environments plagued by poor power. The Nikko Vanguard will protect you from power failures, power sags, power surges, under-voltage electrical line noise, over-voltage, frequency variation, switching transient, and harmonic distortion.



SPECIAL FEATURES :

1. 15 LCD Display: Easy viewing of UPS status from LCD panel including:

O/P Voltage	O/P Load (%)	Battery Charge (%)
O/P Frequency	O/P Watt (W)	Temperature (°C)
I/P Voltage	O/P VA	Battery Pack Number
I/P Frequency	O/P Currency (A)	Rating (VA)
Battery Voltage	Back Up Time (Min.)	CPU Version

2. 14 UPS parameter settings:

O/P Voltage Set	Manual Bypass	Site Failure Set
I/P Frequency Set	Outlet Segment Set	Language Selection
I/P Bypass Set	Battery Test	Generator Option Set
Free Run Set	Silence Mode Set	RS232 Control
High Efficiency Mode	Battery Cabinet Set	



VGD-6KVA & 10KVA models



Front-mounted control panel

3. SNMP Card slot

4. Extended Battery Pack (EBC)

5. USB port

Connecting the UPS to your computer is accomplished through the USB port on the back of your computer. USB compliant hardware and operating system will be necessary including installation of a UPS driver. The serial port cannot be used when using the USB port. The USB cable is standard and can be bought separately.

6. EPO port (emergency power off)

A customer-supplied switch located remotely can be used to open the EPO connection and allows UPS output receptacles to be switched off. Since the EPO shuts down the equipment immediately, orderly shutdown procedures are not followed by any power management software.

7. Load segments (700 - 3000 VA)

The power management software controls the sets of receptacles known as

load segments which provides organized shutdown and startup of the equipment. Less critical equipment can be turned off during power outages saving battery power for critical loads.

The load group status can be viewed from the LCD display and can be changed if necessary. These load segments are usually handled with the UPS management software.

SPECIFICATIONS:

Tower model (with LCD display) Temperature	VGD-700	VGD-1000	VGD-1500	VGD-2000	VGD-3000	VGD-6000	VGD-10000	
19" rack-mount model	VGD-700-RM	VGD-1000-RM	VGD-1500-RM	VGD-2000-RM	VGD-3000-RM			
INPUT	Capacity (VA)	700VA	1000VA	1500VA	2000VA	3000VA	6000VA	
	Capacity (W)	490W	700W	1050W	1400W	2100W	4200W	
	Voltage/Load	208V, 220V, 230V, 240V (100V, 110V, 115V, 120V, 127V models on request)						
	Voltage Regulation Range	240V models - 160V - 276V for 100% load, 140V - 276V for 70% load, 120V - 276V for 0 - 40% load						
	Frequency	50/60 Hz Auto Sensing						
OUTPUT	Voltage (on battery)	208V, 220V, 230V, 240V +/-2% (Selectable Output Voltage) [100V, 110V, 115V, 120V, 127V models on request]						
	Frequency (on battery)	50/60 Hz +/-0.5%						
	Transfer Time	0 ms						
	Overload Recovery	Auto transfer to UPS						
	AC to AC Efficiency	87 %						
	High Efficiency mode (AC to AC)	> 95 %						
	UPS Design Technology	On-Line/Fully digitized microprocessor controlled						
	Output Wave Form	Sinewave						
	Harmonic distortion	< 3% of T.H.D. at linear load						
	Crest Factor	3 : 1						
PROTECTION & FILTERING	Surge Protection	240V (IEECC61000-4-5 level 3) [120V (IEEE C62.41) models on request]						
	Overload Protection	125% for 1 minutes and 150% for 10 seconds						
	Short Circuit Protection	UPS output cut off immediately or input fuse/circuit breaker protection						
SYSTEM DISPLAY/WARNING	Visual Display (LED model)	UPS on(green), line-mode(green), battery mode(yellow), bypass(yellow), fault(red)						
	Visual Display (LCD model)	Input/output voltage, input/output frequency, on-line mode, back up mode, battery capacity, load level						
	Audible Alarm (Battery back-up)	Beep every 5 sec						
	UPS Fault	Continuous beeping sound and LCD display						
BATTERY	Communication	RS-232 Serial Port and USB						
	Type	Sealed, maintenance-free lead acid batteries						
	DC Voltage (V) Battery (Tower)	24V/12V7.2AHx2	36V/12V7.2AHx3	36V/12V9AHx3	72V/12V7.2AHx6	72V/12V9AHx6	240V/12V7.2AHx20	240V/12V9AHx20
	DC Voltage (V) Battery (2U)	24V/12V7.2AHx2	36V/12V7.2AHx3	36V/12V9AHx3	72V/12V7.2AHx6	72V/12V9AHx6	N/A	
	Typical Recharge Time to 90%	4 hours						
	Management	Self-test, adjustable battery transfer points and alarm settings						
	Battery Protection	Cut off without draining any current when battery is low						
	Cold Start (DC start)	YES						
	Back Up Time (Tower model)	7 min	7 min	6 min	7 min	6 min	7 min Full load/15min Half load	
	Back Up Time (RM model)	7 min	7 min	6 min	7 min	6 min	N/A	
PHYSICAL	Input Inlet	IEC 320 (240V) (NEMA 5-15 (120V)on request)					Hardwire	
	Receptacles	IEC 320 (240V) (NEMA 5-15 (120V)on request)					Hardwire	
	Total Receptacles (UPS+Surge/Surge Only)	4 (240V) 6 (120V)			8 (240V) 12 (120V)			Hardwire
	Tower Dims. mm WxDxH	152x420x238			225x425x360			257x590x570
	Tower Net Weight kg	13.5	16.2	17.0	31.1	33.0	86.0	112.0
	Tower Shipping Weight kg	15.5	18.2	19.0	33.6	35.5	97.0	122.0
	19" Rack Dims. mm WxDxH	428x425x84 2U			428x635x84 2U			N/A
	19" Rack Net Weight kg	14.6	17.1	18.1	31.6	32.5	N/A	
19" Rack Shipping Weight kg	16.0	19.3	20.1	33.8	35.7	N/A		
ENVIRONMENT	Operating Temperature	0 - 40°C						
	Storage Temperature	-20 - 50°C						
	Altitude	3,500 metres max.						
	Audible Noise (1m distance)	<40dBA					<55dBA	
Relative Humidity	0 - 95% humidity, non-condensing							
CONFORMANCE	Safety	UL 1778, CE						
	EMC (EMS/EMI)	IEC 61000-4, FCC Part 15, CISPR 22						
	Warranty	2 years						

