

"N" Series (True Sine Wave On-Line) Hospital Grade



DESCRIPTION:

This dual conversion UPS system is an advanced true Online Medical UPS which is intelligent microprocessor controlled. Dual Conversion converts the incoming AC supply to DC. The DC power is then used to charge the batteries and supply power to the inverter, which in turn, supplies the load. This dual conversion isolates the line from the AC supply and allows for wide input power variations on both frequency and voltage while keeping a constant, clean output. True Online offers zero cross-transfer time and a pure sine waveform output for delicate hospital devices. Designed to meet and exceed the safety standards set by UL and CSA, Always On UPS's ensures clean, reliable power when operating with unstable utility power sources, and provides the lowest leakage current in the industry. Sophisticated medical equipment such as ultrasound systems, Dialysis Machines, film processors, laboratory systems, and other health care devices need optimal power protection from noise, sags and surges. Optional battery packs can greatly extend the available backup time. Single phase output configurations range from 700VA to 20kVA, while our three phase systems range from 10kVA to 320kVA.

APPLICATIONS:

Among other applications, the N and TN11 Hospital Grade Series are designed to offer you premium system battery backup when you need it most, while at the same time meeting the hospital and dental office standards.

ADVANCED FEATURES:

Features include utility input power factor correction, self-diagnosis, an LCD display, a static bypass, smart power source monitoring and battery management, lightning, noise and surge protection, spike and transient protection, cold start/auto restart, a user selectable frequency, a generator mode and intelligent communications interface. SNMP and AS-400 adapters are available for network management. User replaceable batteries, emergency power off control, an isolation transformer and maintenance bypass switches are standard on the TN11 Series.

COMPLETE PROTECTION:

The N and TN11 Series UPS's are designed with comprehensive Spike, Transient and Surge protection, which prevent destructive hardware damage and extends system life. The high end EMI/RFI filtering design prevents electrical Common and Normal Mode noise from affecting computer operation, data or files, including when the UPS is in Bypass Mode.

OPERATING VOLTAGES AND FREQUENCIES:

The N and TN11 Series UPS's are designed to function at wide voltage and frequency variations. This wide input range makes the systems ideal for generator and problematic area applications. Also available is a frequency converter option allowing the user to select the output frequency at 50 or 60Hz.

COLD START:

The cold start function allows start from battery when AC is not present.

AUTO RESTART:

This user selectable feature allows the UPS to restart automatically when the utility becomes available, provided the UPS has been shutdown due to an extended blackout.

SELF-DIAGNOSIS AND INFORMATION INDICATORS:

Each Series UPS is equipped with a microprocessor that performs a self-diagnosis once a month to ensure continuous runtime. The microprocessor is able to identify failures, display the failure on the LCD display and send audio and visual alarms (off site monitoring).

SMART POWER SOURCE MONITORING AND BATTERY MANAGEMENT:

Via microprocessor-based electronics, the N and TN11 Series UPS's produce a strict true sine wave output regardless of the input. It also controls the on battery and low battery shutdown, which prevents full discharge, thereby extending the battery performance and battery life.

INTELLIGENT COMMUNICATION INTERFACE:

Each N and TN11 Series UPS is equipped with a RS232 and dry contact interface port, for which we provide various powerful management software programs. For the more complex network environment, we support Simple Network Management Protocol (SNMP), AS400 and others.

REMOTE SHUTDOWN AND EMERGENCY STOP:

Features include remote shutdown via communication port, emergency stop via contacts. An optional push button control is available.

OPTIONAL EXTENDED RUNTIMES:

To meet your back-up time requirements, we offer increased back-up time by simply adding additional hot pluggable battery cabinet(s).

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Hospital Grade "N" Series (True Sine Wave On-Line)

N-SERIES	MODEL NO	GES-701N	GES-102N	GES-152N	GES-202N	GES-302N
GENERAL	MAXIMUM CAPACITY	700VA / 490W	1kVA / 700W	1.5kVA / 1050W	2kVA / 1400W	3kVA / 2100W
	UPC ORDER CODE (Receptacles/Plugs Only)	825433 30247	825433 30246	825433 30419	825433 30418	825433 30417
	UPC ORDER CODE (above + Isolation Transformer)	825433 30130	825433 30416	825433 30320	825433 30414	825433 30415
INPUT	NOMINAL VOLTAGE	120VAC (220VAC OPTIONAL)				
	VOLTAGE RANGE	60VAC/40% LOAD, 70VAC/70% LOAD, 80VAC-144VAC/100% LOAD				
	FREQUENCY WINDOW	45-65HZ (+/-2%, +/-5%, +/-7% - USER SELECTABLE)				
	SYNCHRONIZATION WINDOW	+/- 3 Hz				
	POWER FACTOR	0.97				
	PLUG (HOSPITAL GRADE)	5-15P		L5-20P**		L5-30P**
OUTPUT	OUTPUT VOLTAGE	100/110/115/120/127VAC (User Selectable)				
	VOLTAGE REGULATION	+/- 2%				
	MAX CURRENT @ 120VAC	5.8A	8.2A	12.4A	16.5A	24.7A
	FREQUENCY REGULATION	+/- 0.25Hz (BATTERY OR FREE RUN MODE)				
	VOLTAGE DISTORTION	<3% LINEAR LOAD, <5% NON LINEAR LOAD				
	TRANSIENT RESPONSE	4% (100% LOAD CHANGE)				
	OVERLOAD CAPACITY	125% FOR 1 MIN., 150% FOR 10 SEC.				
	CREST FACTOR	3:1				
	EFFICIENCY	86% NORMALLY, >98% (HIGH EFFICIENCY MODE)				
	TRANSFER TIME	ZERO				
	OUTLETS (HOSPITAL GRADE)	6-(5-15R)		10-(5-20R), 1-(L5-20R)**		8-(5-15R), 2-(5-20R), 1-(L5-30R)**
BATTERY	BATTERY TYPE	SEALED LEAD ACID – MAINTENANCE FREE				
	QUANTITY	2	3	3	6	6
	VOLTAGE	24VDC	36VDC	36VDC	72VDC	72VDC
	RECHARGE TIME	< 4 HOURS; RECOVERY = 90%, TYPICALLY				
	ADVANCED BATTERY MANAGEMENT	AUTO SELF-TEST, TEMPERATURE COMPENSATED 3-STAGE CHARGING, LOAD DEPENDENT DISCHARGE				
	BACKUP TIME - FULL LOAD	9 minutes	10 minutes	8 minutes	12 minutes	8 minutes
	EXTENDED RUN TIME	AVAILABLE WITH EXTERNAL BATTERY BANK				
PROTECTION	OUTPUT SHORT	YES				
	ABNORMAL VOLTAGE	YES				
	ABNORMAL FREQUENCY	YES				
	I/O NOISE PROTECTION	COMMON & NORMAL MODE NOISE SUPPRESSION				
	I/O SPIKE & TRANSIENT PROTECTION	YES				
INTERFACE	COMMUNICATION	RS 232 / DRY CONTACT (OPTIONAL SNMP OR AS400)				
	DISPLAY	LCD / LED – STATUS, READINGS AND SETUP PARAMETERS				
	AUDIBLE ALARMS	ON BATTERY, LOW BATTERY, OVERLOAD, FAULT				
ENVIRONMENT	OPERATING TEMPERATURE	0 – 40 °C (32 – 104 °F)				
	HUMIDITY	0 – 95% (NON-CONDENSING)				
	AUDIBLE NOISE	< 40 dBA AT 1 METER				
SAFETY APPROVAL	SAFETY	UL1778, CSA C22.2				
	EMI / RFI	FCC PART 15				
	SURGE / TANSIENT	IEEE C62.41 CAT A				
	LEAKAGE CURRENT	MEETS UL2601-1 (< 100 uA)				
PHYSICAL DATA	UPS WxDxH mm (in)	155x410x238 (6.0"x16.5"x9.4")			225x425x360 (8.9"x16.7"x14.2")	
	WEIGHT in kg (lbs)	13.5 (29.7)	16.2 (35.6)	17 (37.4)	31.6 (68.4)	32.5 (71.5)

* Isolation Transformer is in separate enclosure from the UPS.

** Standard plug and receptacles (Other Configurations available).

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