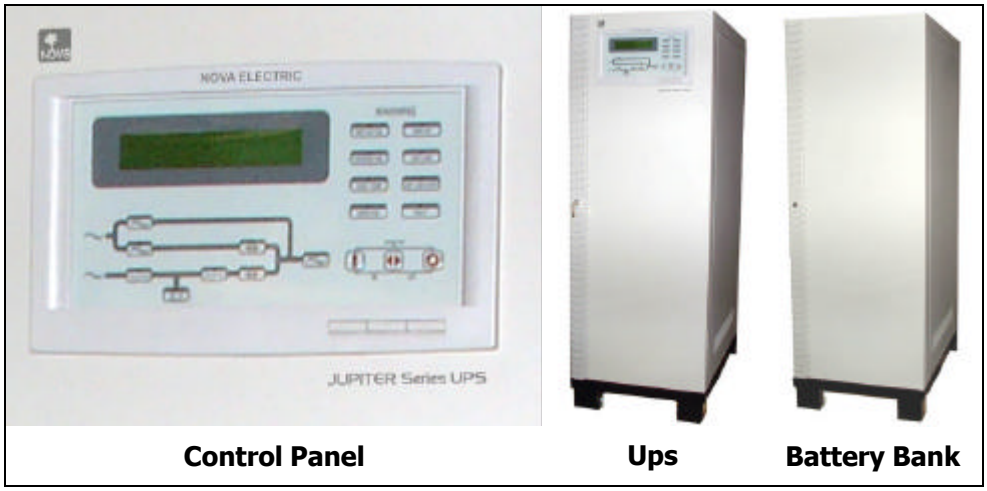
Nova Electric

NEW Jupiter Series Uninterruptible Power Supplies

10 KVA to 320 KVA

3 Phase, 50 Hz, 60 Hz, or 400 Hz, Sine wave.



Control Panel **Ups** **Battery Bank**

All Popular Input/Output Voltages and Frequencies are Available.

TYPICAL MODEL NUMBERS FOR DOMESTIC VOLTAGES:

60 Hz MODEL	KVA	IN/OUT (VAC)	Dimensions	Weight (Kg.)	Weight (Lbs.)
J11-10K3/6-120/208-120/208	10	120/208	63" (H) x 22" (W) x 31.5" (D)	290	638
J11-20K3/6-120/208-120/208	20	120/208	63" (H) x 22" (W) x 31.5" (D)	350	770
J11-30K3/6-120/208-120/208	30	120/208	63" (H) x 43.3" (W) x 31.5" (D)	450	990
J11-40K3/6-120/208-120/208	40	120/208	63" (H) x 43.3" (W) x 31.5" (D)	530	1166
J11-50K3/6-120/208-120/208	50	120/208	63" (H) x 43.3" (W) x 31.5" (D)	600	1320
J11-60K3/6-120/208-120/208	60	120/208	63" (H) x 43.3" (W) x 31.5" (D)	730	1605
J11-80K3/6-120/208-120/208	80	120/208	63" (H) x 43.3" (W) x 31.5" (D)	950	2090
J11-100K3/6-120/208-120/208	100	120/208	63" (H) x 43.3" (W) x 31.5" (D)	1200	2640
J11-120K3/6-120/208-120/208	125	120/208	63" (H) x 43.3" (W) x 31.5" (D)	1400	3080
J11-160K3/6-120/208-120/208	150	120/208	63" (H) x 43.3" (W) x 31.5" (D)	1700	3740
J11-200K3/6-277/480-277/480	200	277/480	63" (H) x 87.0" (W) x 31.5" (D)	2100	4620
J11-240K3/6-277/480-277/480	250	277/480	63" (H) x 87.0" (W) x 31.5" (D)	2300	5060
J11-300K3/6-277/480-277/480	300	277/480	63" (H) x 87.0" (W) x 315" (D)	2700	5940
J11-320K3/6-277/480-277/480	320	277/480	63" (H) x 87.0" (W) x 315" (D)	2800	6160

Weights & sizes do not include batteries. Batteries can be built into 10 to 60KVA models. (Size & weight will change slightly).

50 Hz MODEL	KVA	IN/OUT (VAC)	Dimensions	Weight (Kg.)	Weight (Lbs.)
J11-10K3/5-220/380-220/380	10	220/380	63" (H) x 22" (W) x 31.5" (D)	290	638
J11-20K3/5-220/380-220/380	20	220/380	63" (H) x 22" (W) x 31.5" (D)	350	770
J11-30K3/5-220/380-220/380	30	220/380	63" (H) x 43.3" (W) x 31.5" (D)	450	990
J11-40K3/5-220/380-220/380	40	220/380	63" (H) x 43.3" (W) x 31.5" (D)	530	1166
J11-50K3/5-220/380-220/380	50	220/380	63" (H) x 43.3" (W) x 31.5" (D)	600	1320
J11-60K3/5-220/380-220/380	60	220/380	63" (H) x 43.3" (W) x 31.5" (D)	730	1605
J11-80K3/5-220/380-220/380	80	220/380	63" (H) x 43.3" (W) x 31.5" (D)	950	2090
J11-100K3/5-220/380-220/380	100	220/380	63" (H) x 43.3" (W) x 31.5" (D)	1200	2640
J11-120K3/5-220/380-220/380	125	220/380	63" (H) x 43.3" (W) x 31.5" (D)	1400	3080
J11-160K3/5-220/380-220/380	150	220/380	63" (H) x 43.3" (W) x 31.5" (D)	1700	3740
J11-200K3/5-277/480-277/480	200	220/380	63" (H) x 87.0" (W) x 31.5" (D)	2100	4620
J11-240K3/5-277/480-277/480	250	220/380	63" (H) x 87.0" (W) x 31.5" (D)	2300	5060
J11-300K3/5-277/480-277/480	300	220/380	63" (H) x 87.0" (W) x 315" (D)	2700	5940
J11-320K3/5-277/480-277/480	320	220/380	63" (H) x 87.0" (W) x 315" (D)	2800	6160
Weights & sizes do not include batteries. Batteries can be built into 10 to 60KVA models. (Size & weight will change slightly).					

Features

- Complete input to output Galvanic isolation.
- High frequency almost silent operation
- Push button starting and stopping
- Diagnostic panel with LCD and LED display
- Soft start on inverter
- Overload & and short proof on charger and inverter
- Maintenance free batteries
- True on-line Operation
- Solid state transfer switch built in and standard at no additional charge
- Maintenance bypass switch built in and standard at no additional charge
- All electronics are built in modular front access and front removable sub assemblies for easy service and maintenance
- Batteries may be built into units up to 60KVA
- Automatic dual rate battery charger (float charge and boost charge)
- FCC class A approved
- Remote isolated dry relay contacts
- Available options to meet military specs

BATTERY LOW SHUTDOWN inverter shutdown due to DC bus (or battery) is lower than 295VDC (lower than the acceptable DC voltage of the inverter).

RECT AC FAIL Rectifier AC magnitude is out of range.

ROTATION ERROR Rectifier AC phase rotation is incorrect

RECTIFIER SHUTDOWN Rectifier shutdown due to DC bus too high (over 445VDC), will automatically restart 30 seconds after abnormal situation has been cleared.

HIGH DC DC voltage over 430 VDC and the bus voltage will be limited to this voltage

BOOST CHARGE The battery is being boost charged by the rectifier.

BATTERY TEST Battery is being tested (automatic feature of the UPS)

EMERGENCY STOP Inverter shutdown due to emergency stop switch pushed.

DATA LINE Blink when data is transmitted to or received from the communication port.

Warning LEDs.

When abnormal condition occurs, these LEDs will light to warn the user of the cause of the fault condition. Therefore all these LEDs are off under normal condition. These LEDs are:

RECT AC FAIL Rectifier AC input is abnormal either due to AC magnitude out of the range or phase rotation error; rectifier shutdown.

RESERVE FAIL Reserve AC input is abnormal either due to AC magnitude out of range or frequency out of range.

FUSE/TEMP - Either inverter fuse is open or over temperature has occurred.

OVERLOAD Output is overloaded by over 110%, 125% or 150%

HIGH DC This LED will light as long as the DC voltage is over 430VDC.

BAT LOW This LED will light when the DC voltage is lower than 320VDC.

BAT LOW STOP This LED will light when the DC voltage is lower than 295VDC, inverter on is inhibited.

FAULT The inverter is off due to abnormal conditions such as overload, short circuit, high DC, fuse over temperature, bypass breaker on emergency stop.

Since these LEDs are located behind the transparent window, the user can se them clearly without opening the door.

AUDIBLE ALARM The audible alarm will beep under either one of the following conditions:

INVERTER IS OVERLOADED-

> 110% beep once every 3 seconds

> 125% beep once every second

> 150% beep twice every second BACK-UP

> 320 VDC, beep once every three seconds

< 320 VDC, beep twice every second

< 295 VDC, no beeping (silence due the battery shutdown)

INVERTER IS SHORT CIRCUITED Beeps continuously

FUSE BROKEN Beeps continuously

HEAT SINK OVER TEMPERATURE Beeps continuously

HIGH DC SHUTDOWN Beeps continuously

BYPASS ON STOP - Beeps continuously

EMERGENCY ON STOP - Beeps continuously

The buzzer will also beep once every time the inverter is switched on or off to acknowledge to the user that his key entry is valid and accepted.

COMMUNICATIONS OPTIONS

We offer options for communications with this UPS series. Some popular options available at additional cost include the following:

UPSCAN: This is a hand held remote display and control module with LCD and LED display that can monitor via RS-485 UP to 99 UPS Units at a remote distance of up to 3,000 feet.

UPSCALL: This is a modem that will automatically dial out to a specified number when an abnormal situation occurs.

DCMON: This is a battery monitor module that will monitor all the batteries in each 29 battery string. This feature can provide information on a defective battery before problems cascade to other batteries in the total battery bank.

NETAGENT: This provides capability to monitor the UPS over the internet. It includes the appropriate additional SNMP card and microprocessor. The software required is provided by MEGATEC at additional cost.

Monitoring Features.

The UPS includes an RS232 communication option called UPSCOM. This is an RS232 connection to a PC that can monitor in real time the three phase information related to the UPS output and any abnormal conditions that have occurred. Standard commercially available software is required. The RS232 Feature is included at no additional charge.

Front Panel LCD display and LED indicators.

This will report all UPS parameters. These included input and output voltages, currents, frequency, battery voltage and battery current, as well as many other functions.

LCD Display.

Real time status, data or historical events are displayed and the LCD display. The UPS parameters, real time clock, inverter, buzzer also can be set through this LCD, The LCD is back lighted by LEDs.

Status LEDs.

24 LEDs representing all the important information of the UPS provide information to the user. These LEDs are especially important when abnormal conditions occur. LED descriptions are as follows:

INVERTER ON - Inverter is running normally.

INVERTER SS - Inverter static switch is on while the reserve static switch is opened (off).

SHORT CIRCUIT UPS output is in short circuit state.

FUSE / OVERTEMP SD Inverter has shutdown due to either fuse open or the temperature is too high.

INVERTER FAIL SHUTDOWN Inverter has shutdown due to inverter AC output voltage too low.

BYPASS ON SHUTDOWN Inverter shutdown due bypass breaker is closed when the inverter is running.

HIGH DC SHUTDOWN Inverter shutdown due to DC bus too high when the inverter is running.

OVERLOAD SHUTDOWN Inverter shutdown due to overload of the inverter for a period greater than the inverter can accept. The inverter will start after 7 seconds.

70% LOAD load connected to the output is over 70% of the UPS rating.

110% LOAD load connected to the output is over 110% oh the UPS rating.

125% LOAD - load connected to the output is over 125% of the UPS rating.

150% LOAD load connected to the output is over 150% of the UPS rating.

RESERVE AC FAIL reserve AC magnitude is out of range.

RESERVE FREQ FAIL reserve frequency is out of range.

BATTERY LOW DC bus (or battery) is lower than 320VDC, low battery shutdown will occur soon.

OTHER OPTIONS

BATTERY DISCONNECT OPTION

The optional battery disconnect is offered to provide protection for the batteries. The electrical code requires a disconnect near the batteries. We will mount this inside the battery enclosure if ordered.

SHOCK MOUNT OPTION

The UPS and battery cabinets can be shock mounted, using optional rubber on coil type isolators. This will be enable the unit to receipt shock levels as specified in MIL-5-901.

RUGGEDIZING OPTION

This option will add conformal coating and other additional internal structural members to allow the unit to meet many portions of MIL-STD-461.

TURN ON SERVICE OPTION

We offer a turn on service that will ensure the UPS has been properly installed and the full warranty is in effect (failures caused by incorrect installation are not covered by the warranty.) If this option is selected, the customer will also automatically receive an additional 3 months added to the warranty at no additional charge.

SPARE PARTS KIT OPTION.

We offer a spare parts package that includes one of each board, spare fuses, spare semiconductors, and spare fans. These spare part kits are priced lower when ordered with the initial order then if they are ordered later on.

Specifications for the Nova Jupiter 3 Phase UPS Series

PHASE	3-Phase Input/ 3-Phase Output												
KVA	10	20	30	40	50	60	80	100	120	160	240	320	
INPUT RECTIFIER													
Input Voltage (VAC)	Please Specify |120/208 |220/380 |230/400 |240/415 |277/480 |220 3delta |240 3delta |380 3delta |480 3delta												
Input Range	± 20% (>±20% is available upon request)												
Input Frequency	50/ 60 ± 5Hz												
Power Walk In	0% - 100% :20 sec												
Efficiency	98%												
Voltage Regulation	1%												
Rectification Type	6 Pulse Standard, 12 Pulse Optional								12 Pulse Standard				
BATTERY													
Battery Type	Maintenance free lead-acid batteries / 12V x 29pcs. (348VDC Nominal)												
Maximum Charge Current (Adc Selectable)LO,MED,HI	4	8	12	16	25	26	32	45	50	65	100	130	
Battery Start	Yes, UPS can be started without AC source.												
INVERTER													
Output Voltage (VAC)	Please Specify |120/208 |220/380 |230/400 |240/415 |277/480 |220 3delta |240 3delta |380 3delta |480 3delta												
Wave Form	Sinewave												
Output Power Factor	0.8												
Frequency Lock Range	50 / 60 Hz ± 3Hz												
Output Frequency (free running)	50 / 60 Hz ± 1Hz (crystal controlled)												
Phase Shift Under 100% Unbalanced Load	<0.5%												
THD (Linear Load)	< 2%												
Overload <110%	Continuous												
Overload 110-125%	15 minutes												
Overload 125-150%	10 minutes												
Overload >150%	1 minute												
Efficiency (100% Load)	93%	93%	93%	93.5%	93.5%	94%	94.5%	94.5%	95%	95%	95%	95%	
STATIC SWITCH													
Voltage Range	Same as Main Rectifier Input. (Different voltages are available upon request)												
Mains <-> Inverter	0 ms (True Online)												
OVERALL CHARACTERISTICS													
Overall Efficiency	91%	91%	91%	91.5%	92%	92%	92.5%	92.5%	93%	93%	93%	93%	
Maximum Heat Dissipation (kw)	0.7	1.4	1.9	2.6	3	3.5	4.6	5.4	6.5	8.7	13	17.4	
BTU/h @ Full Load	2.4K	4.8K	6.5K	8.9K	10.3K	12K	16K	19K	22K	30K	45K	60K	
Audible Noise	<65 dBA (at 1m)						<67dBA (at 1m)						
Temperature	0-40ºC (32-104ºF) (Other ranges available)												
Humidity	0%-90% (Non-condensing)												
Altitude	<1500 m Above Sea Level												
EN50091-1, -2	Yes												
Short Circuit Protection	Yes												
Lightning / EMC Filter	MOV / Input & Output (FCC CLASS A)												
Galvanic Isolation	Input and Output True Galvanic Isolation												
LED, LCD, Audible Alarm	Yes												
Remote Control / Communication Interface	Monitoring 1~99 UPS simultaneously / Dry Contact, RS-232, RS-485												

NOVA ELECTRIC

America's leading manufacturer of UPS uninterruptible power supply, inverters, DC-AC inverters, and frequency converters for military, commercial, and industrial applications.

Premium UPS: from 500 VA to 320 KVA. Available: Single and three phase, rack mount and freestanding, ruggedized, militarized, true on line and line-interactive standby (SBS), many voltage / frequency combinations and options. Parallel redundant systems available.

DC-AC Inverters: from 100 VA to 100 KVA. Lightweight, Compact, Pure Sinewave design. Available: Many nominal DC input voltage ranges between 11 VDC and 750 VDC, single and three phase, 50 Hz, 60 Hz, and 400 Hz, Rack-mount, Ruggedized / militarized models and many options including solid state transfer switches available. Special frequencies for rail transit and train signaling available.

Solid State Frequency Converters: from 120 VA to 300 KVA. Available: Single and three phase, 50 Hz, 60 Hz, and 400 Hz, rack-mount, Ruggedized / militarized models and many options available. Special frequencies for rail transit and train signaling available.

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