

JUPITER SERIES

FREESTANDING UPS

10 KVA to 450+ KVA

Three Phase 50 / 60 / 400 Hz Sine-wave
Single Phase available on special order

GALVANIC ISOLATED



OPTIONAL FEATURES SHOWN

APPLICATIONS

Nova UPSs are high-reliability power sources specifically designed for demanding applications in high shock, vibration, humidity, and EMI environments. They can be built to meet MIL-STD-810, MIL-STD-1399, MIL-STD-1472, MIL-STD-461, and other standards optionally.

- Military applications - vehicular, shipboard
- AC Power from vehicle battery
- Communications
- Shelters
- Utility Applications
- Emergency Lighting

FEATURES

- Complete input to output 'Galvanic' isolation.
- Almost silent high frequency operation
- Push button starting and stopping
- Diagnostic panel with LCD and LED display
- Soft start on inverter
- Maintenance free batteries
- True On-Line Operation
- Solid state transfer switch built-in
- Maintenance bypass switch built-in
- Overload and short circuit protection
- 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 20KVA
- Automatic dual rate battery charger (float charge and boost charge)
- Remote isolated dry relay contacts
- Available options to meet military specs



NOVA ELECTRIC

www.novaelectric.com

novasales@theallpower.com



ISO 9001

A Leader in UPS Technology since 1966 - 500VA-500+KVA

JUPITER SERIES FREESTANDING UPS

MONITORING FEATURES

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

FRONT PANEL LCD DISPLAY AND LED INDICATORS - These will report all UPS parameters, including input and output voltages, currents, frequency, DC voltage and many other functions.

LCD DISPLAY - Real time status, data, and historical events are displayed via the LCD display. The UPS parameters, real time clock, and buzzer alarm also can be set through this LCD. The LCD is backlit by LEDs for easy visuals.

STATUS LEDs - A series of LEDs representing all the important status information of the UPS provide information to the user. These LEDs are especially important when abnormal conditions occur. Since these LEDs are located behind the transparent window, the user can see them clearly without opening the door. LED descriptions are as follows:

- **UPS ON** – UPS is running normally.
- **UPS SS** – UPS static switch is on while the reserve static switch is opened (off).
- **SHORT CIRCUIT** – UPS output is in short circuit state.
- **FUSE / OVERTEMP SD** – UPS has shut down due to either fuse open or over temperature.
- **UPS FAIL SHUT DOWN** – UPS has shut down due to low UPS AC output voltage.
- **BYPASS ON SHUT DOWN** – UPS shut down due closed bypass breaker (while UPS running).
- **HIGH DC SHUT DOWN** – UPS shut down due to high DC bus.
- **OVERLOAD SHUT DOWN** – UPS shut down due to high overload of the UPS for a period greater than the UPS can accept. The UPS 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% of 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 specified range. Low battery shut down will occur soon.

BATTERY LOW SHUT DOWN – UPS shut down due to DC bus (or battery) lower than the acceptable DC voltage of the UPS.

HIGH DC – DC voltage over the acceptable DC voltage of the UPS.

EMERGENCY STOP – UPS shutdown activated by emergency stop switch.

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 shut down.

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

FUSE/TEMP - Either UPS 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 UPS is off due to abnormal conditions such as overload, short circuit, high DC, fuse over temperature, bypass breaker on emergency stop.

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

• **UPS IS OVERLOADED**

- *110% beep once every 3 seconds*
- *125% beep once every second*
- *150% beep twice every second*

• **UPS IS SHORT CIRCUITED** – Beeps continuously

• **FUSE OPEN** – 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 UPS is switched on or off to acknowledge to the user that his key entry is valid and accepted.

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COMMUNICATION OPTIONS

Some popular communications 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 separately.

OTHER OPTIONS

BATTERY DISCONNECT OPTION – The optional battery disconnect is offered to provide protection for the batteries. The NEC 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 or coil type isolators. This will enable the unit to receipt shock levels as specified in MIL-S-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-810 including shock, vibration, and humidity.

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.

DRIP SHIELD OPTIONS – This option offers protection against falling or dripping liquids.

CUSTOMIZED EPO – This feature can be customized to trip off current breakers or perform other inhibits depending customer needs.



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SPECIFICATIONS FOR JUPITER FREESTANDING UPS

FREESTANDING UPS		3-PHASE INPUT / 3-PHASE OUTPUT												
PHASE	KVA	10	20	30	40	50	60	80	100	120	160	240	300/320	
	Input Voltage (VAC)	Please Specify 120/208 220/380 230/400 240/415 277/480 220 3-Phase delta 240 3-Phase delta 380 3-Phase delta 480 3-Phase delta												
	Input Range	+/- 20% (>+20% is available upon request)												
	Input Frequency	Please Specify: 50 Hz or 60 Hz - 400 Hz (optional)												
	Input Frequency Range	+/- 5% (wider ranges offered, please consult factory)												
	Power Walk In	0% - 100% :20 sec												
	Voltage Regulation	1%												
	Efficiency	98%												
BATTERY	Rectification Type	6 Pulse Standard, 12 Pulse Optional								12 Pulse Standard				
	Battery Type	Maintenance free lead-acid batteries / 12V x 29pcs. (348 VDC Nominal)												
	Maximum Charge Current (A dc 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 3-Phase delta 240 3-Phase delta 380 3-Phase delta 480 3-Phase delta												
	Wave Form	Sinewave												
	Output Power Factor	0.8												
	Frequency Lock Range	+/- 5% (alternate ranges offered on special order)												
	Output Frequency (Free Running)	Please Specify: 50 Hz or 60 Hz or 400 Hz (crystal controlled) - 91.66, 100 or 250 Hz optional												
	Output Frequency (free running)	0.7 lead to lag												
	Phase Shift Under 100% Unbalanced Load	<0.5%												
	THD (Linear Load)	< 2%												
	Overload	<110%	Continuous											
		110-125%	15 minutes											
		125-150%	5 minutes											
		>150-170%	30 seconds											
		>170-200%	15 seconds											
STATIC SWITCH	Efficiency (100% Load)	93%			93.50%		94%		94.50%		95%			
	Voltage Range	Same as Main Rectifier Input. (Different voltages are available upon request)												
	Mains <-> Inverter	0 ms (True Online)												
	Overload	As per inverter rating plus >200% to 300% = 1 second												
OVERALL CHARACTERISTICS	Overall Efficiency	91%			91.50%		92%		92.50%		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	-10°C to +50°C (Extended ranges available)												
	Humidity	0%-95% (Non-condensing)												
	Altitude	<1500 m Above Sea Level												
	MTR	Less Than 30 minutes												
	IEC 62040-2	Yes for 220/380VAC 50Hz Models											No	
	EN50091-1,-2	Yes												
	Short Circuit Protection	Yes												
OVERALL CHARACTERISTICS	Lightning / EMC Filter	MOV / Input & Output (FCC CLASS A)												
	Galvanic Isolation	Input and Output True Galvanic Isolation												
	Remote Control / Communication Interface	Monitoring 1~99 Units simultaneously / Dry Contact, RS-232, RS-485 (Optional)												

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STANDARD PRODUCT LISTING FOR JUPITER FREESTANDING UPS

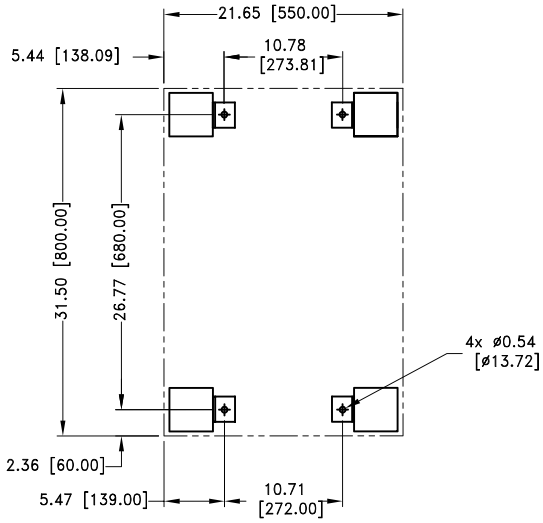
60 HZ MODEL	KVA	KW	IN/OUT (VAC)	DIMENSIONS (HxWxD)	UPS WEIGHT		BATTERY	RUN TIME (MIN)	BATTERY DIMENSIONS (HxWxD)	BATTERY WEIGHT	
					(Kg)	(Lbs)				(Kg.)	(Lbs.)
J11-10K3/6-120/208-120/208-10M	10	8	120/208	63" x 22" x 31.5"	300	660	HR1234 12V 29pcs	10	Internal	85	187
J11-20K3/6-120/208-120/208-10M	20	16	120/208	63" x 22" x 31.5"	400	880	HR1234 12V 58pcs	10	Internal	170	374
J11-30K3/6-120/208-120/208	30	24	120/208	63" x 22" x 31.5"	470	1034	12V 26AH 29pcs	9	63" x 22" x 31.5"	410	900
J11-30K3/6-120/208-120/208	30	24	120/208	63" x 22" x 31.5"	470	1034	12V 26AH 58pcs	24	63" x 22" x 31.5"	690	1520
J11-30K3/6-120/208-120/208	30	24	120/208	63" x 22" x 31.5"	470	1034	12V 75AH 29pcs	29	63" x 43.5" x 31.5"	1020	2245
J11-40K3/6-120/208-120/208	40	32	120/208	63" x 22" x 31.5"	530	1166	12V 26AH 29pcs	7	63" x 22" x 31.5"	410	900
J11-40K3/6-120/208-120/208	40	32	120/208	63" x 22" x 31.5"	530	1166	12V 26AH 58pcs	18	63" x 22" x 31.5"	690	1520
J11-40K3/6-120/208-120/208	40	32	120/208	63" x 22" x 31.5"	530	1166	12V 75AH 29pcs	23	63" x 43.5" x 31.5"	1020	2245
J11-50K3/6-120/208-120/208	50	40	120/208	63" x 22" x 31.5"	560	1232	12V 26AH 58pcs	13	63" x 22" x 31.5"	690	1520
J11-50K3/6-120/208-120/208	50	40	120/208	63" x 22" x 31.5"	560	1232	12V 75AH 29pcs	16	63" x 43.5" x 31.5"	1020	2245
J11-60K3/6-120/208-120/208	60	48	120/208	63" x 22" x 31.5"	630	1386	12V 26AH 58pcs	9	63" x 22" x 31.5"	690	1520
J11-60K3/6-120/208-120/208	60	48	120/208	63" x 22" x 31.5"	630	1386	12V 75AH 29pcs	13	63" x 43.5" x 31.5"	1020	2245
J11-80K3/6-120/208-120/208	80	64	120/208	63" x 43.5" x 31.5"	980	2156	63" x 22" x 31.5"	8	63" x 43.5" x 31.5"	1020	2245
J11-100K3/6-120/208-120/208	100	80	120/208	63" x 43.5" x 31.5"	1290	2838	12V 88AH 29pcs	6	63" x 43.5" x 31.5"	1130	2485
J11-120K3/6-120/208-120/208	120	96	120/208	63" x 43.5" x 31.5"	1400	3080	12V 100AH 29pcs	6	63" x 43.5" x 31.5"	1270	2795
J11-160K3/6-120/208-120/208	160	128	120/208	63" x 43.5" x 31.5"	1620	3654	12V 75AH 58pcs	7	63" x 2x(43.5)" x 31.5"	2040	4490
J11-200K3/6-277/480-277/480	200	160	277/480	63" x 87.0" x 31.5"	2450	5390	12V 88AH 58pcs	6	63" x 2x(43.5)" x 31.5"	2260	4970
J11-240K3/6-277/480-277/480	240	192	277/480	63" x 87.0" x 31.5"	2620	5760	12V 100AH 58pcs	6	63" x 2x(43.5)" x 31.5"	2540	5590
J11-240K3/6-277/480-277/480	240	192	277/480	63" x 87.0" x 31.5"	2620	5760	12V 75AH 87pcs	8	63" x 3x(43.5)" x 31.5"	3060	6730
J11-300K3/6-277/480-277/480	300	240	277/480	63" x 87.0" x 31.5"	2800	6160	12V 88AH 87pcs	8	63" x 3x(43.5)" x 31.5"	3390	7460
J11-320K3/6-277/480-277/480	320	256	277/480	63" x 87.0" x 31.5"	2960	6510	12V 88AH 87pcs	8	63" x 3x(43.5)" x 31.5"	3390	7460
J11-320K3/6-277/480-277/480	320	256	277/480	63" x 87.0" x 31.5"	2960	6510	12V 100AH 87pcs	8	63" x 3x(43.5)" x 31.5"	3810	8380

CONTACT FACTORY FOR SINGLE PHASE MODELS

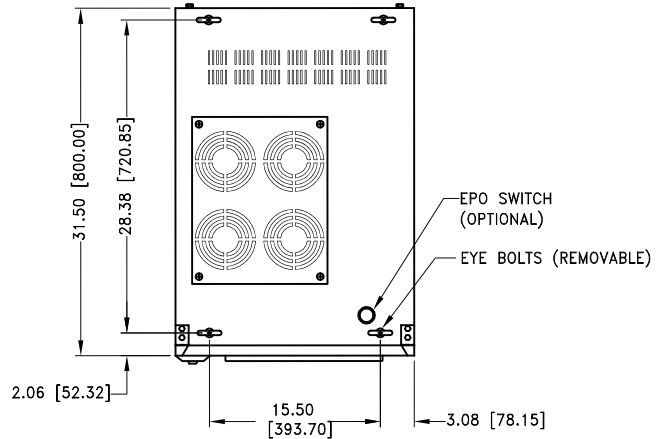
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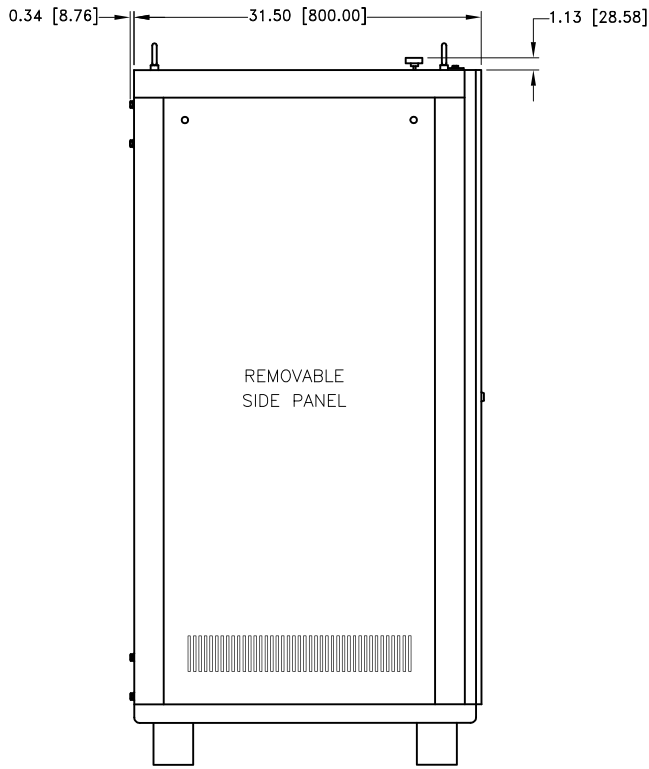
TYPICAL DIMENSION DRAWINGS (22" WIDE)



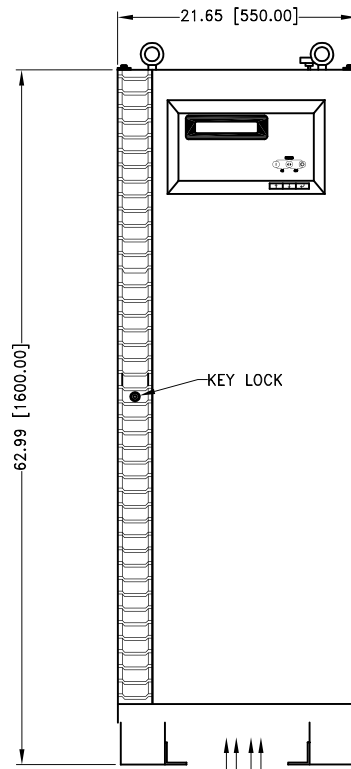
FOOT AND TIE DOWN BRACKET HOLE PATTERN



TOP VIEW



LEFT SIDE VIEW

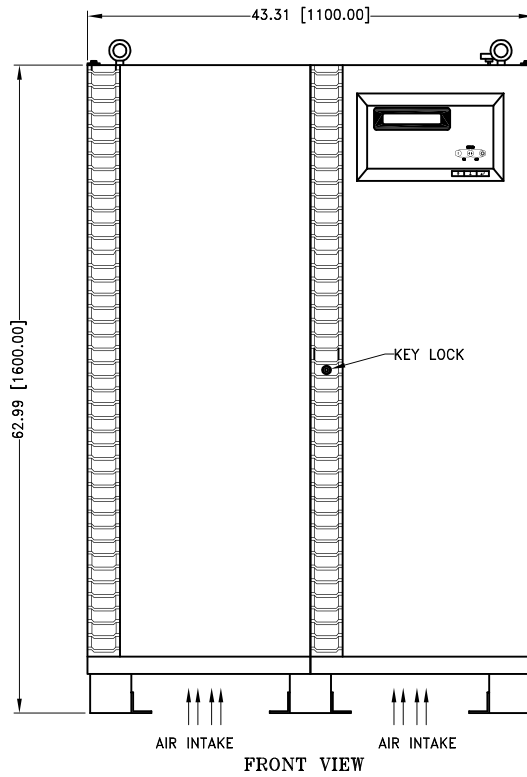
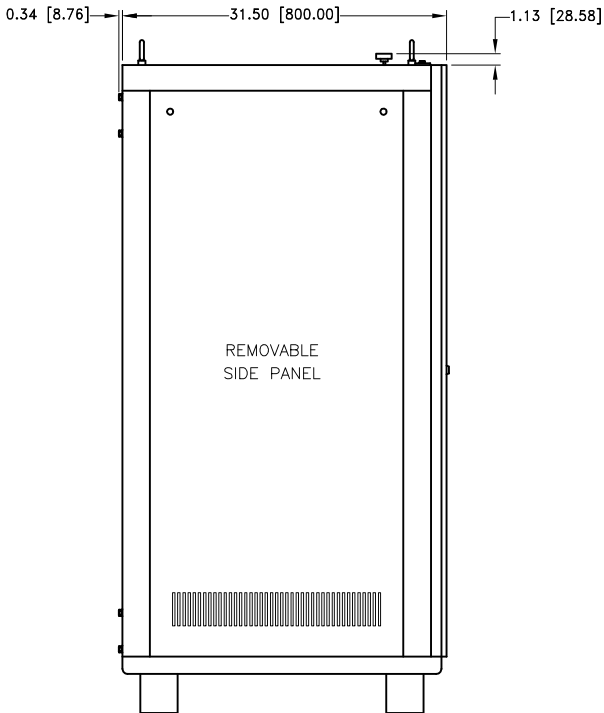
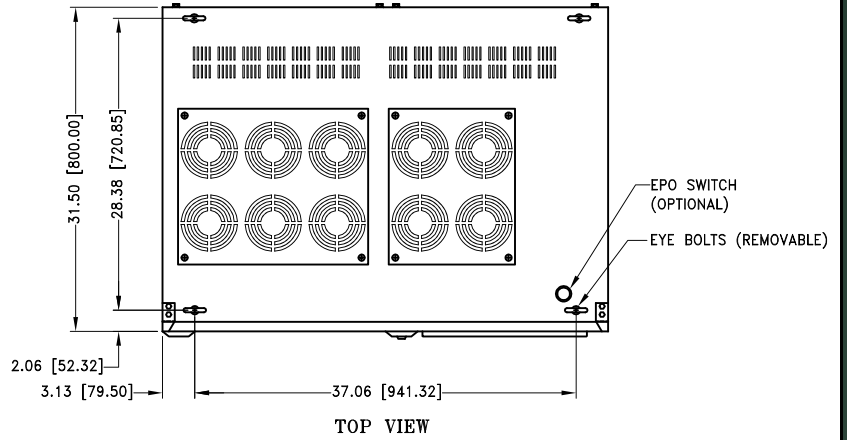
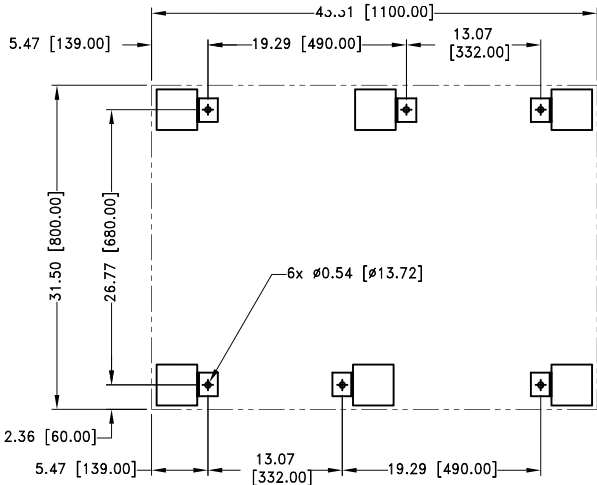


FRONT VIEW

AIR INTAKE

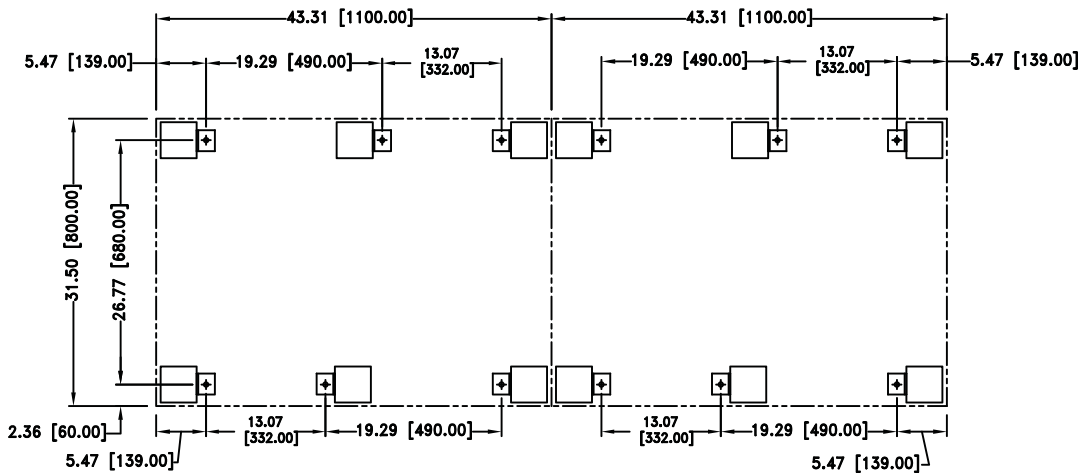
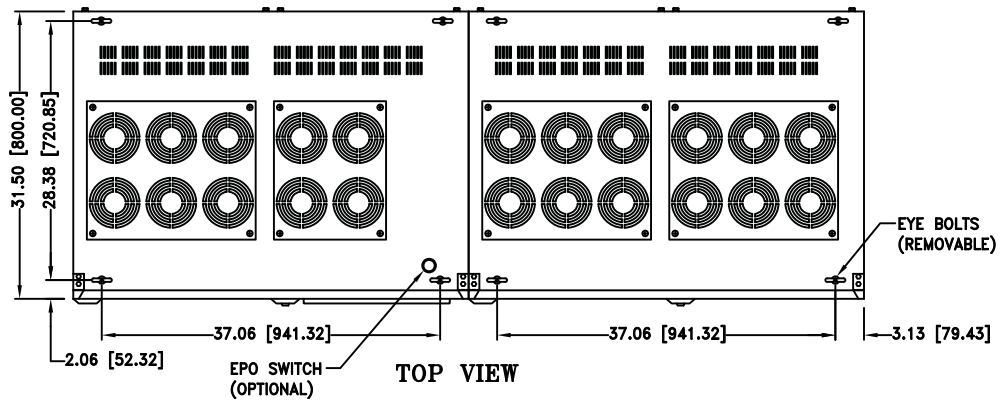
JUPITER SERIES FREESTANDING UPS

TYPICAL DIMENSION DRAWINGS (43.5" WIDE)

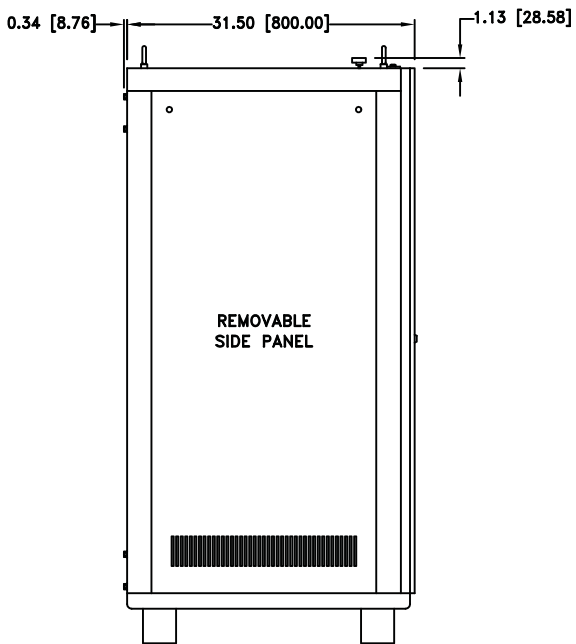


JUPITER SERIES FREESTANDING UPS

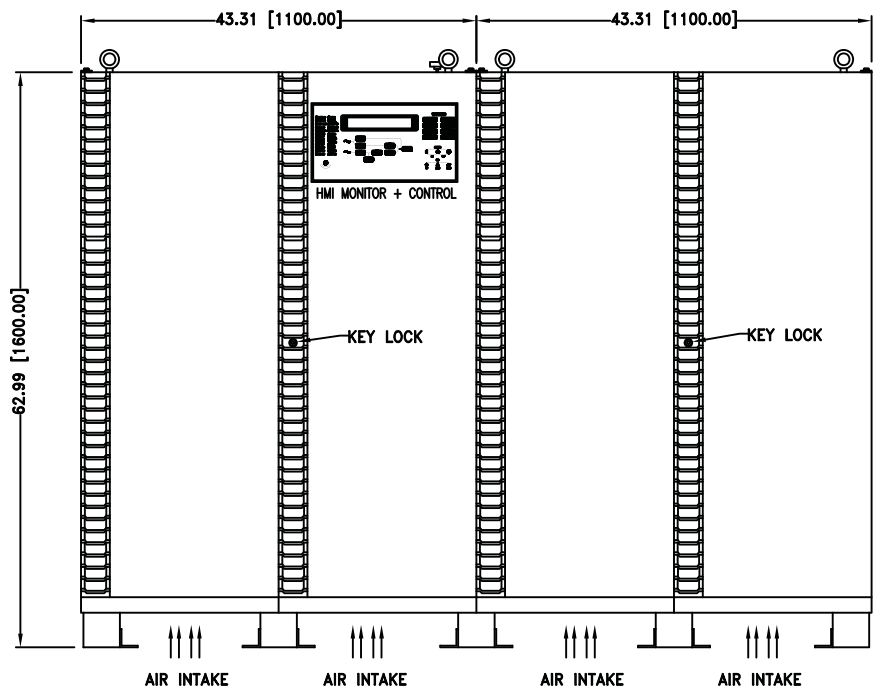
TYPICAL DIMENSION DRAWINGS (87" WIDE)



FOOT AND TIE DOWN BRACKET HOLE PATTERN



LEFT SIDE VIEW



FRONT VIEW

JUPITER SERIES FREESTANDING UPS

RELIABILITY AND SERVICEABILITY (MTBF & MTTR)

Reliability is a feature that is designed and integrated into every piece of equipment that carries the Nova Electric name. This is accomplished by utilizing state of the art circuitry which substantially reduces the total number of components (especially heat producing components). The result is greater efficiency, high reliability and low cost.

A study of installed units has indicated an MTBF of over 100,000 hours! MTBF figures are based upon ground fixed normal 25-degree ambient temperature and proper and preventive maintenance.

The MTTR for all items offered is approximately 30 minutes. Part of the maintenance and repair philosophy of the units is to use the BIT equipment to aid in fault isolation. At that point, a decision is made to either replace an LRU or a component within the power supply with a spare. The construction methods used throughout the JUPITER Series provide for user friendly service. All circuit boards are plug in and are easily accessed from the front of the system. Power modules are designed on slide out trays for easy access to all power semiconductors and similar power components. The MTTR value specified is based upon proper training of local maintenance technicians and engineers.

QUALITY CONTROL

Nova Electric operates under a program of Continuous Quality Improvement (CQI,) as evidenced by its ISO-9001 Quality Management Systems Standard Certification and decades of compliance to formal Quality Control systems and procedures that remain in compliance with MIL-I-45208A inspection and MIL-STD-45662A calibration requirements. ISO registration was granted in 1997 by Underwriters Laboratories (UL) after first assessment. Operators are certified to J-STD-001A and IPC-A-610B Class 2 (formerly MIL-STD-2000) for soldered assemblies. Instructors certified by the DOD to MIL-STD-2000 Category C are on staff. Our COTS products benefit from the same rigorous QC procedures as original developed for our military customers.

Copies of our current ISO Certificate and Factory Quality Control Manual are available upon request.

MILITARY AND RUGGED COMMERCIAL (COTS) DESIGNS

All of Nova Electric's products feature robust construction quality and rugged designs. They are suitable for demanding military, industrial, and commercial applications. Most products can be equipped to meet MIL-STD-461, MIL-STD-810, MIL-S-901, MIL-STD-167, MIL-STD-1399, MIL-STD-1472, and other important specifications as required. Please consult the factory about your specific application.

GOVERNMENT QUALITY ASSURANCE

Our Quality Assurance Department will be glad to work with the designated Government Quality Assurance Representative (GQAR) on government or military projects.

WARRANTY

All Nova Electric products are warranted against defects in material and workmanship for a period of one year from shipping date. Our obligation includes replacing, repairing, or adjusting products (excluding fuses) that prove to be defective during the warranty period. This warranty is fully transferable. If a product is sold to a manufacturer for use in a product for resale, the complete warranty is in force, providing the power system is sold as original equipment. Nova Electric assumes no liabilities for consequential damages of any kind through the use of misuse of its products by the purchaser or others. No other obligations are expressed or implied. Batteries used with or contained within Uninterruptible Power Supply Systems are sold with a "pass-along" battery warranty from the battery manufacturer. On site warranty repair is available at extra cost to cover the cost of travel to the work location. Extended warranties are also available - please consult the factory for details.

